

7100
A512
Hort.

JANUARY

1908

AMERICAN HOMES - AND GARDENS -

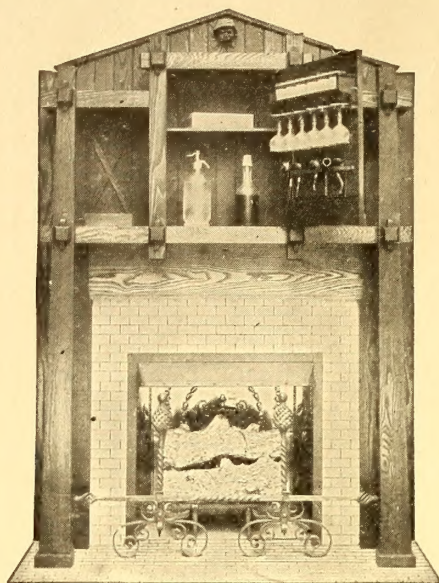


Vol.5
No.1

MUNN & CO
PUBLISHERS
361 Broadway New York

Price
25c.

III



MISSION MANTEL FOR DEN

Artistic Mantels

OUR CATALOGUES contain 130 designs, including Mission, Colonial, White, Mahogany & Oak. Everything, from the very cheapest to the best.

Fireplace Hardware and Tiling of every description.

Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.

Unity Building
Chicago, Ill.

306 Main Street
Jacksonville, Fla.

Factory, Knoxville, Tenn.

Koll's Patent Lock Joint Columns



are perfect columns. They meet perfectly every requirement of art, beauty, strength and durability. They are just what you want in your new home.

We have the most complete factory in the world used exclusively for the manufacture of wood columns, pilasters and capitals. Our facilities for making and handling Koll's Patent Lock Joint Columns in all sizes are perfect.

These columns are the most popular and practical columns made, because they are more beautiful, stronger and more durable than any other kind. We also manufacture a superior line of railings, cornices, balusters and other porch materials. Write to-day for our illustrated Catalog A.

HENRY SANDERS CO.

805-1005 Elston Ave., Chicago

Eastern Office: 1123 Broadway, New York

516 Pages, 107 Engravings

NOW READY

Price, Four Dollars

Industrial Alcohol

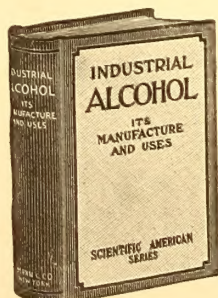
ITS MANUFACTURE AND USES

A Practical Treatise based on Dr. Max Maercker's "Introduction to Distillation" as revised by Drs. Delbrück and Lange

COMPRISING

Raw Materials, Malting, Mashing and Yeast Preparation, Fermentation, Distillation, Rectification and Purification of Alcohol, Alcoholometry, The Value and Significance of a Tax-Free Alcohol, Methods of Denaturing, Its Utilization for Light, Heat and Power Production, A Statistical Review, and the United States Law

By JOHN K. BRACHVOGEL, M.E.



THE value and significance of a tax-free alcohol have been so widely discussed in the press and periodical literature of the entire country, that it is unnecessary to emphasize the great importance of the subject, especially to our agricultural and industrial interests. For years we have been far behind the nations of Europe in this regard, and in consequence our literature has been sadly lacking in authoritative works covering this phase of industrial activity. This book was designed with the especial purpose of filling this want, and it is the latest and most comprehensive work of its kind which has been published in this country.

Few in number are those to whom this book would not prove of interest and value. The farmer, the manufacturer, the power producer, the householder, will all find that denatured alcohol is of such importance to them, that its use and introduction will effect savings and economies which were hitherto impossible of accomplishment.

FOR SALE AT ALL BOOKSTORES

Do you Appreciate the Advantages in Using Tiling in Home Building?

Its Durability saves the cost of repairs and replacing. A tiled floor or wall never has to be oiled, varnished, painted or papered. Dirt or liquid matter of any kind will not stain it. The steel nails of the shoe cannot scratch or wear it.

Its Sanitary Qualities and the facility with which it can be cleaned gives assurance that the bathroom, kitchen, butler's pantry, laundry, vestibule and other places where it is used will always be in a clean, sanitary condition.

It's Decorative Possibilities permit the execution in tiling or ceramic mosaic of any possible design or color scheme on the floor or wall.

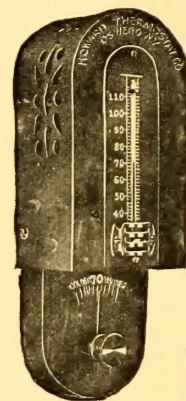
Tiling is fire-proof, germ-proof, water-proof, damp-proof and vermin-proof.

For interesting booklets on Tiling, distributed free, write

INFORMATION BUREAU OF THE TILE INDUSTRY

300 Cerreran Building

Washington, D. C.



SPRAGUE

Electric Damper and Valve Regulator
70°—or any

heat desired

Regulates Your Heat Just as You Want It Night and Day.

Adjust to

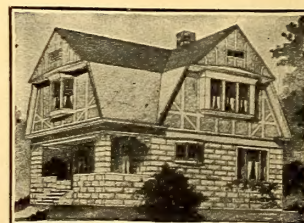
Heat Desired

IT'S AUTOMATIC
EVEN, HEALTHFUL HEAT
WITH REDUCED COAL BILLS

This Heat Regulator is easily applied to all Hot Water, Steam, Hot Air or Natural Gas Heaters. It is guaranteed for 10 years and sold on merits. Thousands in use 25 years and still working. Cannot give out with reasonable care. Saves running up and down stairs. Prevents accidents by fire. Cannot forget the dampers and Cannot Run Down and Leave Front Draft Damper Open. This feature is strongly covered by letters patent and is positively not found in any other Thermostat. Coal saved pays for Regulator; therefore, it costs you nothing. Always the best. **Thirty Days' Free Trial. Catalogue Free.** A delay may mean the loss of your house by fire. Write the Manufacturers

HOWARD THERMOSTAT CO., 24 West 1st St., Oswego, N. Y.

SEDGWICK THE ARCHITECT



Send One Dollar For

A Beautiful Book
BEST HOUSE PLANS

It Contains 150 Designs
MEDIUM COST
HOUSES
\$1,000 to \$10,000

Two Supplements Included
Send 10c. postage for new
Improved Portfolio of
Modern Churches.

This Handsome House Cost \$3,500.00; Complete Plans \$15.

1028 H Lumber Exchange, Minneapolis, Minn.



Sporting and Pet Dogs
For Sale

Also Pigeons, Poultry, Pheasants, Rabbits, Ferrets, Cattle, Sheep and Swine. Send ten cents for 88 page catalogue.

Keystone State Kennels, Dept. 5A, Reading, Pa.

This Target-and-Arrow Old Style Tin Roof

was put on 24 years ago

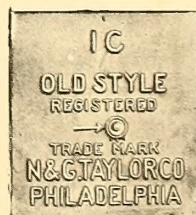


THIS BUILDING is occupied by Messrs. Weil & Wolf, merchants at Houston, Texas. The roof, which is our "Target-and-Arrow Old Style" tin, was laid in 1883. It is sound and tight today and in all the twenty-four years it has been on it has required repairing but once. This was around the skylight, where the water had worked through the wood and under the tin.



The Old Beth Israel Temple at Houston was roofed with "Target-and-Arrow" tin in 1869. The tin remained on the building, without repairs, until the roof was wrecked by the storm of 1900—the same storm that destroyed Galveston.

These instances indicate what you can expect in the way of durability from "Target-and-Arrow Old Style" tin. Prospective builders and property owners should send for two booklets: "A Guide to Good Roofs" and the "Tin Roofers' Hand Book."



Reg. U. S. Patent Office.
There are 250 imitations of
this brand. Look for the
Target-and-Arrow trade-
mark on the genuine "Old
Style."

N. & G. TAYLOR COMPANY (Established 1810) **PHILADELPHIA**

BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.

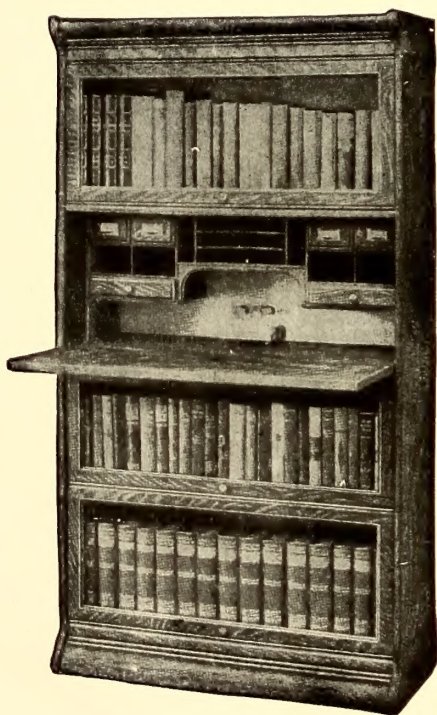


Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont

This \$30.00 Book Case and \$22.50 in Cash Are Yours



For 75 Subscriptions you can win this \$30.00 Book Case and \$22.50 in Cash

IF YOU WILL SECURE 75 SUBSCRIPTIONS TO THE

METROPOLITAN MAGAZINE

Everybody Can Win This Prize!
There are Hundreds of Others
from which to Choose

Every Subscription Taken Means a Prize and a Cash Commission For You

Pianos, Automobiles, Gasoline Launches, Boats, Cameras, Canoes, Kodaks, Typewriters, Jewelry, Silverware, Bicycles, Trip to Japan, Trip to Europe, Three Weeks' Vacation at the Greatest Pleasure Resort in the World. These are some of the prizes to be given away this season.

Don't Fail to Investigate At Once Our Big Offers

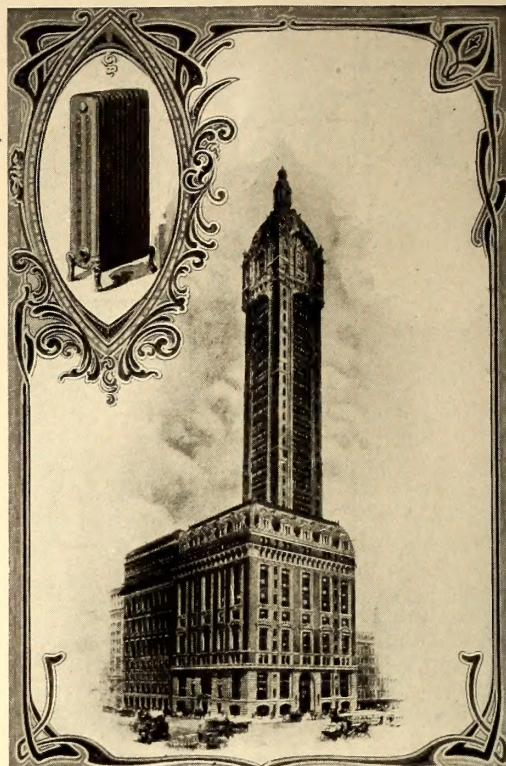
There are twenty series of unprecedented premium offers. Each series consists of several prizes of which you can take your choice. There are enough prizes for all.

THE METROPOLITAN MAGAZINE is launching the greatest Subscription Campaign ever inaugurated in the history of the publishing business. We are offering a wonderful series of valuable prizes and liberal commissions this season to representatives who secure subscriptions for the Metropolitan Magazine.

THE PRIZES ARE NOT COMPETITIVE

THE METROPOLITAN MAGAZINE

Dept. A.H.G., 3 WEST 29th STREET
NEW YORK



Kinnear Pressed Radiators

Selected for

THE SINGER BUILDING, NEW YORK

Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

On the Wall—Off the Floor
Out of the Way

If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.

Write for Catalog "D" for any desired information.

THE PRESSED RADIATOR CO.
PITTSBURGH, PA.

PREVENTS DRAFTS, DUST AND WINDOW RATTLING.

IVES' PATENT
Window Stop Adjuster.



PATENTED.

The only Stop Adjuster made from one piece of metal with solid ribs and heavy bed that will not cup, turn or bend in tightening the screw. Manufactured only by The H. B. IVES CO., New Haven, Conn., U. S. A. (Fifty-page Catalogue Mailed Free.)

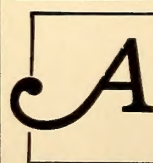
LIVE GAME

The celebrated Hungarian and English Partridges and Pheasants, the large Hungarian Hares, all kinds of Deer, Quail, etc., for stocking purposes.

Fancy Pheasants, Ornamental Waterfowl and Live Wild Animals of every description.

Write or Price List

WENZ & MACKENSEN, Dept. N., YARDLEY, PA.

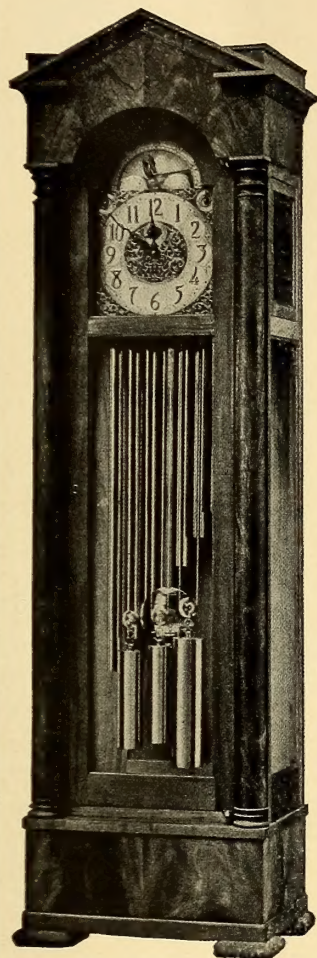


We will send
AMERICAN HOMES &
GARDENS

and Scientific American
for one year to one address for

Regular Price
Six Dollars

FIVE DOLLARS



HALL CLOCKS

That are beautiful in design, finest in construction, richest in tone of chimes and superior time-keepers are some of the reasons that have made our business grow so rapidly.

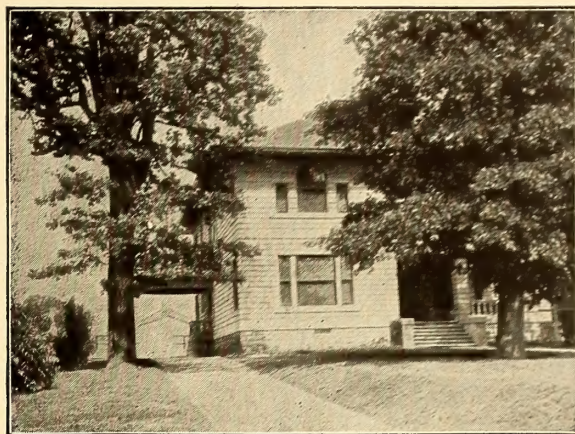
Waltham Clocks

have a standard of value, whether it is a Hall Clock, "Banjo," Marble Clock, or Regulator.

Nothing Better at Any Price

If your local jeweler does not sell our line send direct for our new illustrated catalogue

Waltham Clock Company
WALTHAM, MASS.



This Beautiful Residence was built of Concrete Blocks made on

The Hercules Machine

If you are going to build any kind of a structure, from an ordinary stable to a handsome residence, you ought to sit down right now and send for our catalog.

It will tell you a great many things about concrete construction that are worth knowing.

It will tell you about the Hercules Concrete Block Machine—and show you many illustrations of residences, apartment houses, churches, business blocks and manufacturing plants built of blocks made on the wonderful Hercules.

Concrete is cheaper than wood or brick; it will last longer, and when the blocks are made on the Hercules great architectural beauty can be attained.

Send for catalog to-day, it's free to you.

Century Cement Machine Co.

180 W. Main St., ROCHESTER, N. Y.

Inexpensive Country Homes

A Practical Book for Architects, Builders, and Those Intending to Build

A HANDSOME CLOTH-BOUND PORTFOLIO, consisting of 88 pages, about 11x14, printed on heavy plate paper, and containing 43 designs, with floor plans of practical, tasteful and comfortable country homes, ranging in cost from \$1,000 to \$5,000 complete. The designs have been carefully selected, as embodying the best efforts of various architects throughout the country. Every one of the houses has already been built, and all of the illustrations are half-tone engravings, made direct from photographs of the completed structures, taken specially by the SCIENTIFIC AMERICAN artists. In many cases two perspective views of the same house are shown. Several illustrations of inexpensive stables are also included among the designs.

The location of the dwellings, the cost, owners' and architects' names and addresses are given, together with a description of the dwelling, thus enabling, if desired, a personal inspection of the dwelling or direct correspondence with the architect or the owner.

ARCHITECTS, BUILDERS, AND THOSE INTENDING TO BUILD

will find many new and valuable suggestions among the up-to-date designs illustrated in this handsome portfolio.

PRICE \$2.00 POSTPAID

MUNN & CO., 361 Broadway, New York

Do You Want Absolute Fire Protection

Do you want a window that will positively stand every test? Are you willing to spend two cents and five minutes to find out the positive truth about

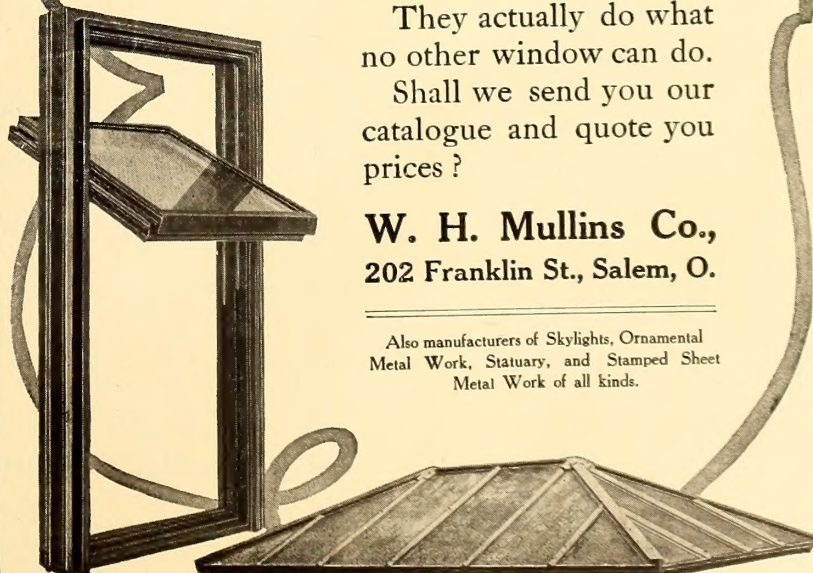
Mullins Fireproof Windows

They actually do what no other window can do.

Shall we send you our catalogue and quote you prices?

W. H. Mullins Co.,
202 Franklin St., Salem, O.

Also manufacturers of Skylights, Ornamental Metal Work, Statuary, and Stamped Sheet Metal Work of all kinds.



❧ Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

❧ The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

❧ If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO

JUST PUBLISHED THE NEW AGRICULTURE

By

T. BYARD COLLINS

8vo. Cloth. 376 Pages

100 Illustrations

Price, \$2.00, Postpaid



HIS new and valuable work sets forth the changes which have taken place in American agricultural methods which are transforming farm life, formerly so hard, into the most independent, peaceful and agreeable existence. Farm life to-day offers more inducements than at any previous period in the world's history, and it is calling millions from the desk. The present work is one of the most practical treatises on the subject ever issued. It contains 376 pages and 100 illustrations.

In brief, the Contents are as follows

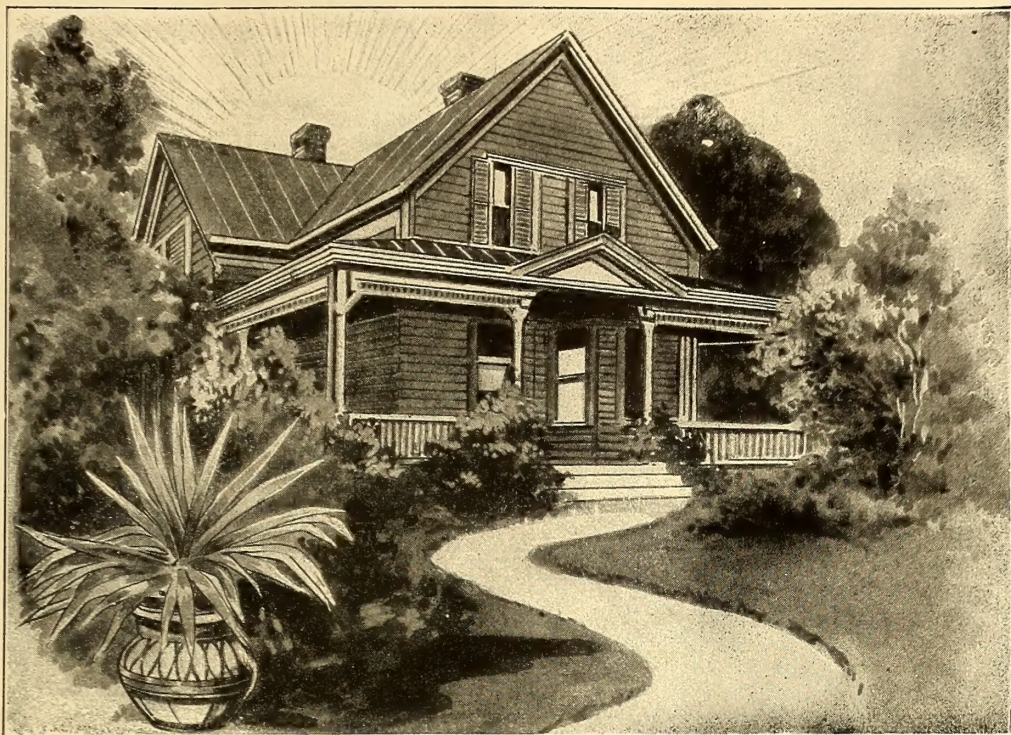
- CHAPTER I. This chapter contains a general statement of the advantages of farm life.
- CHAPTER II. Deals with the vast systems of irrigation which are transforming the great West, and also hints at an application of water by artificial means in sections of the country where irrigation has not hitherto been found necessary.
- CHAPTER III. Gives the principles and importance of fertilization and the possibility of inoculating the soil by means of nitrogen-gathering bacteria.
- CHAPTER IV. Deals with the popular awakening to the importance of canals and good roads, and their relation to economy and social well-being.
- CHAPTER V. Tells of some new interests which promise a profit.
- CHAPTER VI. Gives a description of some new human creations in the plant world.
- CHAPTER VII. Deals with new varieties of grain, root and fruit, and the principles upon which these modifications are effected and the possibilities which they indicate.
- CHAPTER VIII. Describes improper methods in agricultural practice.
- CHAPTER IX. Devoted to new machinery by which the drudgery of life on the farm is being eliminated, making the farm a factory and the farmer the manager of it.
- CHAPTER X. Shows the relation of a body of specialists to the American farmer, who can have the most expert advice upon every phase of his work without any expense whatever to himself.



MUNN & CO., Publishers



361 Broadway, NEW YORK



DISCRIMINATING PEOPLE WILL FIND IN

RUBEROID RED ROOFING

A LASTING, WEATHERPROOF, FIRE-RESISTING COVERING, COMBINED WITH A LASTING BEAUTY. IT IS

*The Only Permanent Roofing
With a Permanent Color*

The well-known qualities of Ruberoid Roofing serve as a protection from the heat of the summer and the cold of the winter, while its deep red hue lends a touch of color to the surroundings. Suitable for all buildings. Color guaranteed for five years. Contains no tar or paper. Will not melt, rot or corrode. Insist upon having the genuine. Look for the name "RUBEROID" stamped on the back. Write for samples and prices.

THE STANDARD PAINT COMPANY

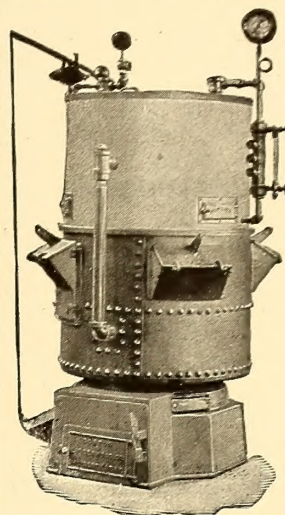
Sole Manufacturers

General Offices: 100 WILLIAM STREET, NEW YORK

Branches: Chicago, St. Louis, Kansas City, Philadelphia, Atlanta, Boston

GORTON

SIDE FEED BOILERS SIDE FEED

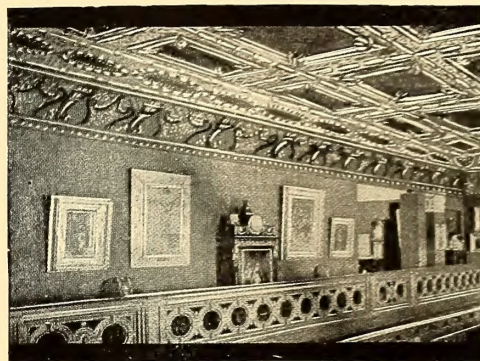


For Steam
and
Hot Water
Heating

Insure a
Warm
Building
Day
and Night in
Coldest
Weather

Send for
Catalog

GORTON & LIDGERWOOD CO.
96 LIBERTY STREET, NEW YORK
Old Colony Bldg., Chicago 77 Oliver St., Boston



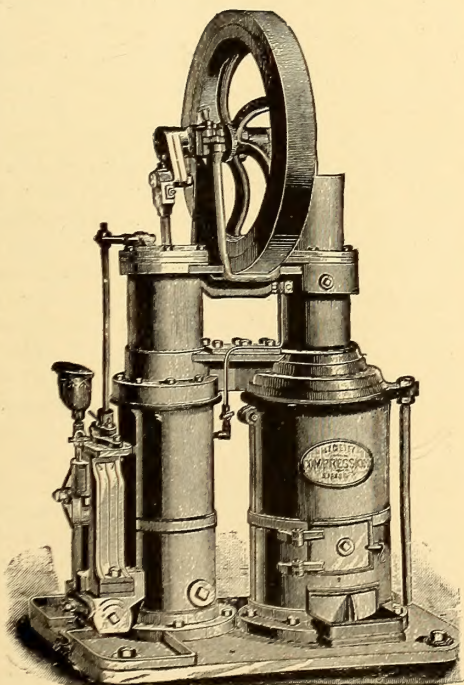
THE NEW CEILING AND SIDE WALL ON THAT ROOM

What shall it be? **Steel**, of course—because it is the most **modern**, **sanitary** and **inexpensive**, practically **lasts forever**.

Write to-day, giving dimensions and particulars. We will go into the matter with you thoroughly.

"When it has the **ELLER** trade-mark, it's the **best** in steel."

ELLER MFG. CO.
CANTON, OHIO



Improved Rider Hot Air Pumping Engine

AND

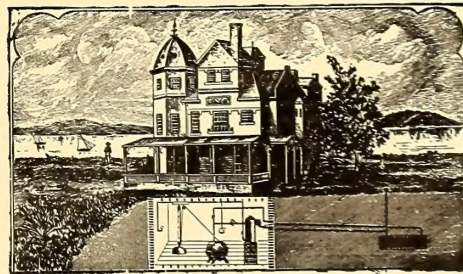
Improved Ericsson Hot Air Pumping Engine

PRICES GREATLY
REDUCED

Send for Catalog "E" to nearest office

Rider-Ericsson Engine Co.

35 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



Our remarkable recent inventions enable us to offer the public an intensely brilliant

Smokeless Gas

at much less cost than city gas, better, safer and cheaper than electricity, and costing but one-fourth as much as acetylene.

**Most Durable and Least Expensive
Apparatus to Maintain**

in effective perpetual operation. Gives services of lighting, cooking and heating. Fullest satisfaction guaranteed, and easy terms. The very apparatus for suburban homes, institutions, etc. We construct special apparatus also for fuel gas for manufacturing, producing gas equivalent to city gas at 50 cents per 1000 cubic feet, and made to respond to very large demands; also for lighting towns, etc.

C. M. Kemp Mfg. Co., Baltimore, Md.

Eleven Years Old

and, as from
the beginning

The Authority

on House Planning, Interior Decoration and Gardening. The question "How can I do the best with what I have?" is answered by those who have made the *Home* in its various phases a life study.

A Hundred Dollars

worth of information in each number! The department of "Questions and Answers" alone is easily worth the price of an entire year's subscription.

AVOID SUBSTITUTES

The House Beautiful

was the first magazine to devote itself exclusively to the house and its appointments. The rest followed and naturally are not "just as good."

SAMPLE COPY FREE

Write to-day for a copy of the magazine that never disappoints, that in an easy-to-read style tells you what you ought to know about building your house, decorating it, renovating it, furnishing it. Its teachings have saved costly furnishings from being vulgar; and on the other hand thousands of inexpensive houses are exquisite examples of superb taste from its advice. It gives information regarding the whole house from cellar to garret. Everything illustrated.

When you write for a sample copy,
ask for our

**Special Offers to House Beautiful
Subscribers**

\$\$ MONEY \$\$

for House Beautiful Representatives

Thirty-eight agents averaged \$150 per month in the last three months. We offer no prizes but pay maximum commission for one or a thousand orders. We want agents—men and women—in every community. Write to-day for our special offers. Others are making big money, why not you?

Circulation Department, House Beautiful
Republic Building, Chicago

STUDY ARCHITECTURE

EASY LESSONS OR STEPPING-STONE TO ARCHITECTURE

BY THOMAS MITCHELL

A SIMPLE TEXT-BOOK telling in a series of plain and simple answers to questions all about the various orders, as well as the general principles of construction. The book contains 92 pages, printed on heavy cream plate paper, and illustrated by 150 engravings, amongst which are illustrations of various historic buildings. The book is 12mo in size and is attractively bound in cloth.

PRICE, FIFTY CENTS, POSTPAID
MUNN & CO., 361 Broadway, NEW YORK

ALCOHOL

ITS MANUFACTURE ITS DENATURIZATION ITS INDUSTRIAL USE

The Cost of Manufacturing Denatured Alcohol in Germany and German Methods of Denaturization are discussed by Consul-General Frank H. Mason in Scientific American Supplement 1550.

The Use, Cost and Efficiency of Alcohol as a Fuel for Gas Engines are ably explained by H. Diedrichs in Scientific American Supplement 1596. Many clear diagrams accompany the text. The article considers the fuel value and physical properties of alcohol, and gives details of the alcohol engine wherever they may be different from those of gasoline or crude oil motor.

The Production of Industrial Alcohol and Its Use in Explosive Motors are treated at length in Scientific American Supplement 1581, valuable statistics being given of the cost of manufacturing alcohol from farm products and using it in engines.

French Methods of Denaturization constitute the subject of a good article published in Scientific American Supplement 1599.

How Industrial Alcohol is Made and Used is told very fully and clearly in No. 3, Vol. 95, of the Scientific American.

The Most Complete Treatise on the Modern Manufacture of Alcohol explaining thoroughly the chemical principles which underlie the process, without too many wearisome technical phrases, and describing and illustrating all the apparatus required in an alcohol plant, is published in Scientific American Supplements 1603, 1604 and 1605. The article is by L. Baudry de Saunier, the well-known French authority.

In Supplements 1607, 1608 and 1609 we publish a digest of the rules and regulations under which the United States Internal Revenue will permit the manufacture and denaturization of tax-free alcohol.

ANY SINGLE NUMBER of the SCIENTIFIC AMERICAN or SUPPLEMENT

will be sent for 10 cents by mail. The entire set of papers above listed will be mailed on receipt of \$1.10. Order from your newsdealer or from Munn & Co., Publishers, 361 Broadway, New York

JUST PUBLISHED

THIRD EDITION OF KIDDER'S Churches and Chapels

By F. E. KIDDER, Architect

This edition has been thoroughly revised by the author, and enlarged, many new designs being added, including several new designs for Catholic churches. There are 120 illustrations in the text and more than 50 full-page plates. The book contains a large number of plans and perspectives of churches of varying costs. Besides this there is much concise and practical information relating to planning and seating; details of Construction, Heating and Ventilation, Acoustics, etc., making it in its present form : : :

*The Best American Book on
Church Design and Construction*

One oblong quarto volume. Price, net, \$3.00

Munn & Co., 361 Broadway, New York City



ITALIAN GARDENS. After drawings by George S. Elgood, R. I. With Notes by the Artist. New York: Longmans Green & Co. Plates, 52; pages, 160. Price, \$12.00 net.

This beautiful and sumptuous volume is a distinct contribution to the literature and illustration of Italian gardens. It is one of those rare books to which the word exquisite can be rightly applied and without reservation. Italian gardens have been frequently pictured in photographs and drawings, but not before in colored reproductions on the scale adopted in this book. The illustrations at once command attention, both by reason of their number and because of their color; for each of the fifty-two plates are colored reproductions of paintings by the author of the book, paintings of distinct charm and beauty in themselves, and charmingly reproduced in a very careful and delightful manner. One gets quite the quality of the original paintings from these beautiful plates, which at once indicate the progress of modern color printing and set a standard by which similar work must, for some time to come, be judged.

The "Notes" with which the artist-author modestly describes his text on his title page, amounts to very much more than the fragmentary material this word suggests. He has not, indeed, undertaken a treatise on Italian gardens as a whole, but his text is entirely adequate and is much more than a running commentary on the illustrations. All told, twenty-six gardens are described and illustrated in this book, of which one belongs to Pompeii, six in Rome, Frascati, Viterbo and Florence; two to Tuscan villas other than Florence, and five to north Italy. For more than a quarter of a century the author had been drawing and painting Italian gardens, and ample as is the present sheaf of illustrations as pictures of his present subject, they represent but a small portion of the material actually accumulated. Many of the earlier drawings, he tells us, passed beyond his control, hence some familiar gardens are absent from the list. This, however, need not be deplored, for there is more than enough given us, and the statement is made only by way of explanation.

No one needs, in this day, to be informed of the beauty and extent of the great gardens of Italy. A multitude of books, and an endless stream of travelers, has made them, in a sense at least, if not actually, familiar to many persons. The number of these great pleasure grounds is so great, their extent so wide, their interest so varied, that every new set of photographs yields additional interest and uncovers new delights. But the most faithful photograph is without the charm of reality and, of course, is wanting in color and atmosphere. This deficiency Mr. Elgood has now supplied for the gardens he presents in this book. The result is not only a novelty in the presentation of its subject, but possesses a real value in displaying, in a thoroughly sympathetic way, the color beauties of the Italian gardens. Mr. Elgood's book is, therefore, notable in many ways. Its pictures are charming and delightful transcriptions of many portions of some of the best of Italian gardens presented in the work of a thoroughly capable artist, and they present the real and

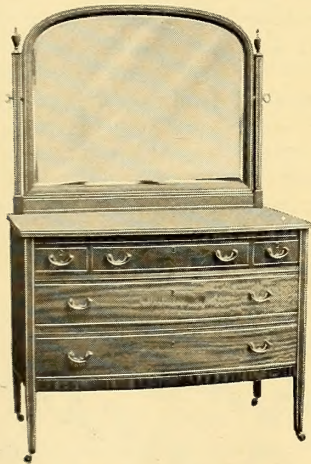
(Continued on page ix)

Sheraton Furniture

THE term "Renaissance" is usually applied to the great classic revival which, beginning in Italy in the fifteenth century, gradually spread throughout Europe, but the eighteenth century had also its Renaissance in France to express itself in Louis XVI style; in England it made itself felt in the work of Robert and James Adam and in the furniture of Heppelwhite and Sheraton.

To the Adam brothers was really due the reaction that took place both in architecture and furniture making. The brothers did not create the style which bears their name but they adapted to English conditions a style as old as ornament itself and which had already gained a footing in France.

The influence of the Adam brothers on the furniture makers of their time was very marked. The later work of Heppelwhite, and more especially of Sheraton, was largely shaped by them. Sheraton did not imitate; he was too great for that; but he embodied in his furniture a feeling for simplicity which he himself was generous enough to attribute to the brothers. In this country the Adam type of furniture is best known by the work of Thomas Sheraton. Heppelwhite's



"Sheraton Bureau," model from Berkey & Gay Furniture Co., Grand Rapids, Mich.

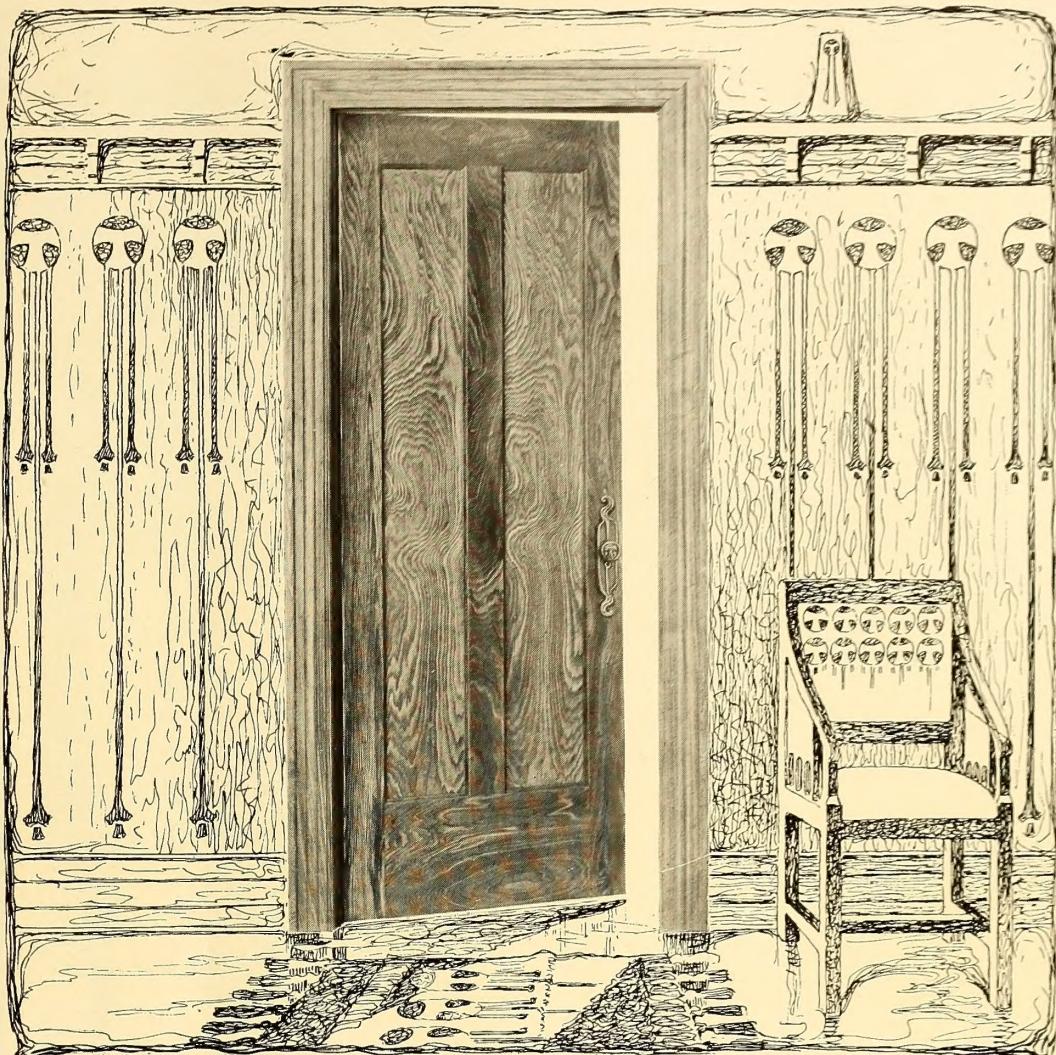
furniture also shows a strong Adam influence. The characteristics of the Adam style were, to quote an old writer, "simplicity, elegance, slenderness and low relief."

Chippendale won most of his laurels by his exquisite carving and the masterly way he applied ornament to form. This statement refers to his best work, which was executed before he adopted his rococo methods. His early work was strongly influenced by the Dutch and his later efforts by the French. The English designer has never been at his best when copying the Frenchman.

To-day, the fancy of collectors, particularly in this country, turns to the designs of Sheraton and Heppelwhite. The designs of these great furniture makers are often confused and there is some foundation for it. Both used the long, tapering leg, and both made a most effective use of inlay. Sheraton's inlay, as we find it in America, is often in the form of slender lines sunk in a mahogany surface; lines of holly, hawthorn, satinwood, boxwood or kingwood. He obtained masterly effects with inlay, often in the simplest manner possible. Heppelwhite usually chose more elaborate patterns, but clung to a simple and beautiful form of construction. The fluted leg is generally attributed to Sheraton, and the plain tapering one to Heppelwhite, but Sheraton made use of the taper just as he sometimes did of the shield back for his chairs. With Heppelwhite the shield-shaped chair was his most common form. When Heppelwhite used the plain, tapering leg he added the spade-foot, which Sheraton never did.

In looking for reproductions of Sheraton's work it would be hard to find anything better for a bedroom than the bureau which we illustrate. It has the charm and refinement necessary for a room which above all should be simple and dainty in its appointments. This furniture expressed the spirit of the best work of the late eighteenth century, and a careful examination of its construction will show that painstaking regard for detail which was the hall-mark of the handicraft of that day. In a room decorated in the style of the period, where wall-hangings, curtains, and floor coverings have been chosen to harmonize, it would be possible to obtain by the use of this bureau and the pieces which accompany it, a very attractive Sheraton bedroom.

Note. The model for this article is from Berkey & Gay Furniture Co., Grand Rapids, Mich., who make correct reproductions of Colonial and Period Furniture. Their brochure, entitled "Furniture of Character," is instructive, and can be obtained by sending 15 cents in postage to Dept. M to partly defray expenses.



Beautiful, Well-Made Doors

more than any other one thing, give a dignified, refined and substantial effect to your building.

Morgan Doors

are perfectly designed, substantially constructed and beautifully finished—they are perfect doors from every standpoint.

Morgan Doors will never warp, crack or shrink. They become a permanent part of the building, making it more desirable to live in and adding to its permanent value.

The name "Morgan" stamped on the top of each door is your guarantee of absolute satisfaction. Made in any style of architecture, Empire, Colonial, Mission, Chateau, etc.

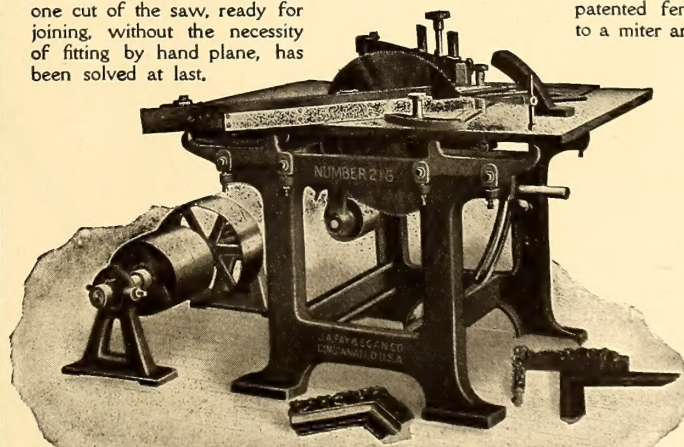
Write today for our handsome illustrated book "The Door Beautiful," which will give you helpful ideas and show the details of the real beauty of Morgan Doors.

Morgan Company, Dept. A, Oshkosh, Wisconsin.

Distributors: — Morgan Sash and Door Co., Chicago, Ill.; Morgan Co., Oshkosh, Wis.; Morgan Company, Baltimore, Md.

SOLVED AT LAST

The problem of cutting a complete and perfect miter with one cut of the saw, ready for joining, without the necessity of fitting by hand plane, has been solved at last.



It is accomplished by our **New No. 216 Mitering Saw**, equipped with a patented fence, by which the two parts to a miter are cut simultaneously, the process producing a counter pressure from both sides of the saw, thus preventing it from running off or vibrating, which makes this machine especially valuable to picture frame makers and to others where fine mitering is done.

Write us for descriptive circular.

J. A. FAY & EGAN CO.

209-229 N. Front Street
CINCINNATI, OHIO

Sanatile

The Modern Wall Tiling

It costs five times as much to use regular glazed tile as to use SANATILE—and you gain nothing. Every good quality of tiling is possessed by SANATILE, as well as many which tiling has not. It has an embossed, beautifully enameled surface in plain white or permanent tints and many artistic patterns. Absolutely waterproof and cannot tear, crack or chip from accident. SANATILE is a tough, elastic fabric, made in strips, on a heavy fibre backing. It can be applied by any good workman following instructions furnished with the material.



Representatives wanted in the wall paper and tiling trades to whom we can refer orders and inquiries received by us from their locality

LEATHEROLE The beautiful, richly embossed, washable wall covering made for use in the highest class of decorative work. Can be furnished in colors to harmonize with any scheme of interior treatment. Samples of the new line ready about March 1st.

SANITAS The washable wall covering used in place of wall paper. Many new patterns and colors. Dull and glazed surfaces.

Illustrated descriptive literature and prices, will be furnished on request

THE LEATHEROLE CO. 24 E. 22d St., Near Broadway
New York City



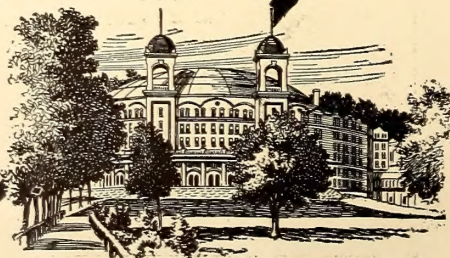
Two Weeks of Perfect Rest French Lick West Baden Springs

No famous foreign spa can equal the curative properties of these waters which are unsurpassed in the treatment of Kidney, Liver and Stomach troubles.

Hotel accommodations are ideal, and unique in offering the seeker of health perfect rest and quiet as well as ample opportunity for indulging in his favorite recreation. Many indoor and outdoor amusements—the most attractive health resort in America. Beautifully situated in Southern Indiana on the

MONON ROUTE

Write for descriptive booklet, rates, etc.
B. E. TAYLOR, Gen. Mgr. FRANK J. REED, G.P.A.
CHICAGO



A three-weeks' cruise upon one of the splendidly appointed steamers of The New York & Porto Rico Steamship Company

Around Porto Rico

is an ideal summer-like voyage. The steamer circles the entire island, stopping at interesting points, and affording enchanting glimpses of this tropical paradise. Such a tour is like a cruise in a private yacht. The ships are large, finely equipped, with only outside staterooms, every modern convenience and comfort. The steamer is the tourist's hotel during the entire trip.

The special tourist rate for this cruise is \$140, which includes every expense.

Write for illustrated booklet giving details of the voyage and containing attractive pictures of Porto Rico.

THE NEW YORK & PORTO RICO STEAMSHIP CO.
12 BROADWAY, NEW YORK.

Or RAYMOND & WHITCOMB CO., all Principal Cities.

Made their mark
Dixon's Pencils
Write for illustrated booklet W free.
JOSEPH DIXON CRUCIBLE CO.,
Jersey City, N. J.

ARCHITECTS', DRAFTSMEN'S AND ENGINEERS' SUPPLIES



DRAWING TABLES AND
FILING CABINETS OF
EVERY DESCRIPTION

Blue and Brown
Print Papers

Second-hand Instruments bought
and sold. Illustrated Catalogue
vol. 263, sent on application

F. WEBER & CO.
PHILADELPHIA, PA.

St. Louis, Mo.

Baltimore, Md.



Build with Concrete Blocks



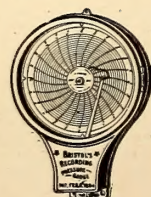
Make them yourself and save half the cost. Experience unnecessary. A

Pettyjohn Machine

and equipment for only
\$33.25

Every machine guaranteed. Sent on trial. Sand, water and cement only materials required. Buildings handsome and durable. Big money making blocks to sell. Beautiful booklet FREE.

THE PETTYJOHN CO., 617 N. Sixth St., Terre Haute, Ind.



BRISTOL'S Recording Thermometer

Located within house, records on a weekly chart outside temperature

Also, Bristol's Recording Pressure Gauges, Volt, Ampere and Watt Meters. Over 100 different varieties, and guaranteed. Send for Catalog B.

THE BRISTOL CO., Waterbury, Conn.
Chicago, 753 Monadnock Building
New York, 114 Liberty St.

personal qualities of these gardens in a faithful and artistic manner. The book is beautifully made in every respect.

OUR COUNTRY HOME. How we transformed a Wisconsin Woodland. By Frances Kinsley Hutchinson. Chicago: A. C. McClurg & Co. Pages 16+278.

Mrs. Hutchinson has prepared an entirely new kind of a book on the making of the country home. Most persons who write on this theme do so from the point of view of self-support, or at least of getting the largest possible return for the smallest possible amount of expenditure. Some one, sooner or later, was bound to write on this subject from quite the opposite point of view, namely; given a large amount of land and quite unlimited money to spend on it, what was the result? Mrs. Hutchinson has seized on this opportunity and has written an eminently readable and entertaining book about her country home in Wisconsin.

Apparently it is exactly the kind of a country home every one would like to have, and which only the very wealthy can possess. Fancy, if you can, dumping fifty thousand loads of dirt upon the site of the house, in order to raise its terrace fifteen feet above the level of a lake! As for the house itself we are spared statistical details, but from the various views presented of it there can be no doubt it was on the same splendid scale as the earth-dumping. It must have been fine to have proceeded with the making of a country home under such conditions, and every page of Mrs. Hutchinson's book breathes the joy and delight with which everything was done. And seemingly with never a thought of the cost!

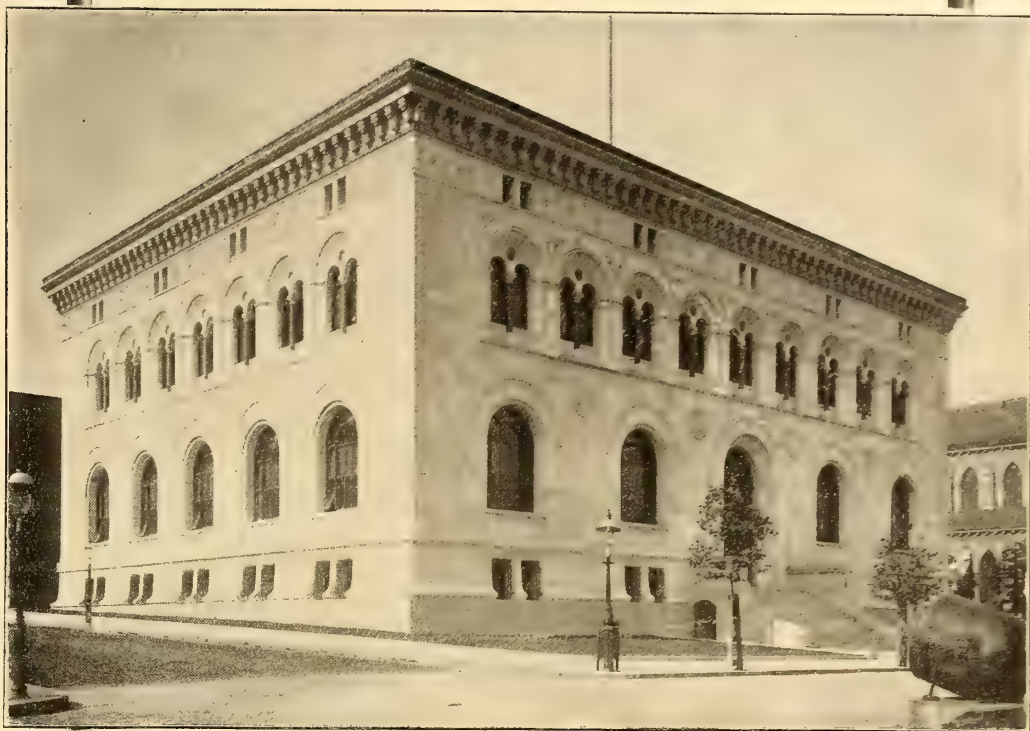
But money was not spent for the sheer purpose of spending money. Every part of the estate was carefully planned and developed. If the cost was great the value was well estimated in advance, and everything that was done was done with the end in view. Of course, this is precisely the plan on which all good country estates are developed everywhere; but the writers who are intent on telling how much money can be made from the land have so pre-empted the field of country book making that the point of view taken by Mrs. Hutchinson has been well-nigh overlooked. It is just as well that her point be made clear, and she will win the thanks of many readers by the sanity of her position, the soundness of her procedure, the charm of her narrative.

There is, however, a distinctly practical value to every home maker, large and small, in this book. It begins with the vacant land, describes it as it originally existed, describes the betterments put upon it, describes the transformation of the wilderness to the home of civilization in every detail. It is well to know, for once, just how this result is accomplished by intelligent people on a large scale. And the book abounds with hints and suggestions of great practical value, especially on ornamental planting of gardens and grounds. Mrs. Hutchinson is evidently a true plant lover who has acquired useful practical knowledge of her plants. Of this she gives an abundance, and from this aspect alone her book has great value. The photographs, mostly made by the author, are both numerous and interesting. Especially valuable are those showing the house and grounds at various periods, say of one or two years. It is thus possible to accurately estimate what may be done within a given period of time with intelligent planting, and sufficient means to plant intelligently. It is a book well worth reading and studying.

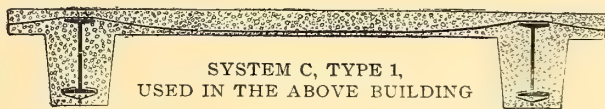
FLOORS



ROOFS



MARYLAND INSTITUTE, BALTIMORE, MD.
Pell & Corbett, Architects, New York
Henry Smith & Sons Co., Builders, Baltimore, Md.



Clinton Fireproofing System used throughout for floors, roof, landings and coverings of pipe conduits. The continuous bond of Clinton electrically welded wire is the ONE best reinforcing for concrete.

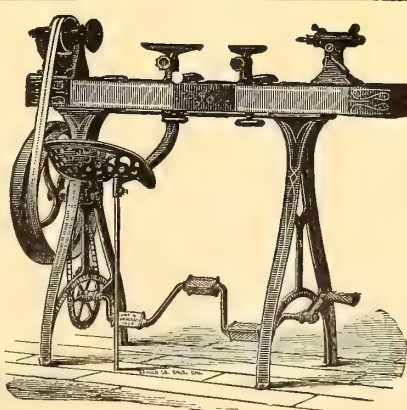
Clinton Wire Cloth Company
CLINTON, MASS.

Ceilings

FIREPROOFING DEPARTMENT
ALBERT OLIVER
1 MADISON AVE., NEW YORK

SEATTLE: L. A. NORRIS, 909 ALASKA BUILDING
ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
SYRACUSE, N. Y.: PARAGON PLASTER CO.
SAN FRANCISCO: L. A. NORRIS, 835 MONADNOCK BUILDING
WASHINGTON: ROSSLYN SUPPLY CO.

Partitions



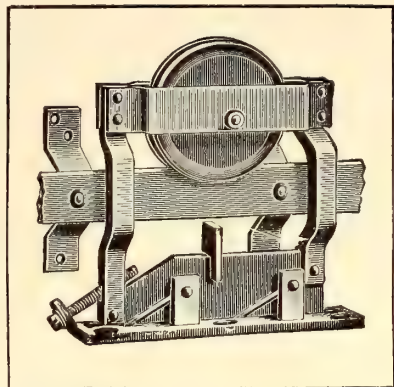
Complete Outfit
Hand and
Foot Power
Machinery

Our No. 3 Wood Turning Lathe can be speeded from 1,000 to 2,000 revolutions a minute with perfect ease. Stopped or reversed at will of operator.

WRITE FOR PARTICULARS

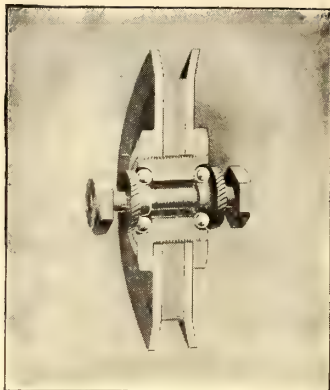
W. F. & John Barnes Co.
567 RUBY ST. ROCKFORD, ILL.

"LANE'S BALL-BEARING"



is the

**Best
House-
Door
Hanger
Made**



Other Styles for Less Money

Sold by Hardware Trade

Send for Catalog

Lane Brothers Company, 434-466 Prospect Street, Poughkeepsie, N.Y.

The Original Old Style Method

of making Terne Plates was known as the



32 POUNDS COATING
PROCESS

because MF Roofing Tin was the first practical metal roof covering ever made. The process is the same to-day as it was then, and the plates are just as even in gauge, thoroughly coated and easily worked. Therefore, when a property owner or roofer specifies MF Ternes, he can rest assured he is getting the best to be had.

When ordering, keep in mind the fact that the MF Process is the Oldest Old Style Process in existence, and that MF Roofing Tin cannot be excelled, regardless of how long you search. Write for our booklet "From Underfoot to Overhead," it is interesting, and costs you nothing.

AMERICAN
SHEET & TIN PLATE
COMPANY,

FRICK BUILDING,

PITTSBURGH, PA.

THE PRODUCTION OF COMMON BRICK

OF THE long list of mineral products of the United States concerning which statistics are collected by the National Geological Survey, only three—pig iron, copper, and bituminous coal—exceeded in value in 1906 the products of the clays; and of the clays themselves the product ranking highest in value was, as heretofore, the common brick, of which more than ten billion—to be exact, 10,027,039,000—were marketed during the last year. The value of this great product amounted to \$61,300,696, an increase of \$93,687 over the value for 1905, and constituted 47.30 per cent. of the value of all the brick and tile products and 38.07 per cent. of the value of the entire product of the clay industries.

The largest production of common brick in 1906 by any one State was reported by New York, whose output amounted to 1,535,579,000 brick, valued at \$9,205,981, or about \$6 per thousand. This quantity represents 15.31 per cent. of the entire output of the country, and the value is 15.02 per cent. of the total. The greater part of New York's common brick comes from the Hudson River region, which is one of the most interesting centers of the clay-working industries in the United States and has for many years been the almost exclusive source of supply for the common building brick used in New York City.

Next to New York, the largest producer of common brick in 1906 was Illinois, which reported an output of 1,195,210,000 brick, valued at \$5,719,906, or \$4.79 per thousand. The great common-brick producing region of Illinois is Cook County, and it was the decline in price in this district that brought the average price per thousand for the State to \$4.79, the lowest for several years.

The only other State reporting more than a billion common brick was Pennsylvania, whose marketed output amount to 1,027,541,000 brick, valued at \$6,586,374, or \$6.41 per thousand. While third in quantity the product of this State was second in value, and the average value per thousand was greater than that for either New York or Illinois.

Ohio's production of common brick in 1906 was fourth in quantity and value—550,422,000 brick, valued at \$3,243,157, or \$5.89 per thousand—and New Jersey's fifth, amounting to 413,258,000 brick, valued at \$2,610,686, or \$6.32 per thousand. The other States range from Kansas, with 314,371,000 brick, valued at \$1,376,552, or \$4.38 per thousand, to South Dakota, with 6,064,000 brick valued at \$54,175, or \$8.93 per thousand. California's 278,780,000 common brick were valued at \$1,962,866, or \$7.05 per thousand.

The average price per thousand for common brick in 1906 ranged from \$9.68 in Wyoming to \$4.38 in Kansas, the average for the whole country being \$6.11. The State whose average per thousand most nearly approached the general average was Tennessee, where the average price was \$6.13 per thousand.

Details of Building Construction

A collection of 33 plates of scale drawings with introductory text
By CLARENCE A. MARTIN
Assistant Professor, College of Architecture, Cornell University

This book is 10 by 12½ inches in size, and substantially bound in cloth. PRICE, \$2.00

FOR SALE BY

MUNN & CO., 361 Broadway, N. Y. City



AMERICAN HOMES AND GARDENS



Price, 25 Cents. \$3.00 a Year

CONTENTS FOR JANUARY, 1908

	PAGE
JERSEYS OF THE "WORLD'S END FARM" HERD.....	2
MONTHLY COMMENT	4
NOTABLE AMERICAN HOMES—"The Pines," the House of Philip S. Sears, Esq., Prides Crossing, Massachusetts	By Barr Ferree 5
SOMETHING ABOUT LAMPS AND CANDLE SHADES.....	By Mabel Tuke Priestman 10
A BUNGALOW IN PASADENA.....	By Helen Lukens Gaut 13
A NEW ENGLAND STOCK FARM.....	By Mary H. Northend 16
WINTER GARDENING UNDER GROUND	By Jacques Boyer 20
THE ASPIDISTRA	21
A DUTCH COLONIAL HOUSE, ENGLEWOOD, NEW JERSEY.....	By Martha Higgins Lane 22
THE WORLD'S LARGEST BUTTERFLY FARM.....	By Joseph Heighton 25
NEW FACTS ABOUT VENUS' FLY-TRAP.....	By W. C. Purdy 28
HOUSE BUILT FOR WILLIAM H. GRAY, ESQ., DEDHAM, MASSACHUSETTS.	
	By Paul Thurston 30
LIFE ON GREAT VINEYARDS	By Charles F. Holder 33
THE KITCHEN	By John A. Gade 36

The Production of Common Brick.
A Suburban Orchard.

The Action of Grass on Fruit Trees.
Window Garden Notes.

New Books.

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada \$3.50 a year

Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1907, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



Jerseys of the "World's End Farm" Herd

AMERICAN HOMES AND GARDENS



Volume V

January, 1908

Number 1



"The Pines"—Dense Woods Embower the House in Rich Green on all Sides, Save Where Space Has Been Cleared for the House and Garden

Monthly Comment



AMERICAN HOMES AND GARDENS welcomes the approach of a new year that gives every promise of being the most successful in its history. It has but a single end and aim, and that is to help the home builder and the home maker in every possible way. The Magazine has arranged a brilliant programme for the next twelve months, and will introduce many new features, while strengthening the best of those already established. New writers and authoritative writers will, in these pages, give the best of their time and thought. Many practical problems centering in the house and garden will be treated in a helpful and illuminating way, and countless valuable helpful and stimulating suggestions may be found in each month's issues. The illustrations will be more numerous and more beautiful than in any previous year. The Magazine bespeaks not only the continued support of its friends, but it asks their interest and co-operation. If you have something to tell that might help others, tell it in our pages. If you have a need on which you desire advice, let us help you. The Magazine invites correspondence of every kind on matters within its scope and plan.

MR. THOMAS A. EDISON, whose name and fame is known to all, has made the interesting announcement that he has solved the problem of building small houses at small cost. The operation is simplicity itself, for it consists of nothing less than pouring concrete into a mold, and keeping up the process uninterruptedly, until the house is finished. The method, says the *Scientific American*, consists in the use of molds, costing \$25,000 the set, made of $\frac{3}{4}$ -inch cast iron, planed, nickelplated, and polished. The different pieces vary in size, some of the interior parts being but two feet square. When in position, the units are held in place by trusses and dowel pins. Into the top of these molds concrete is pumped continuously by compressed air, using two cylinders. The concrete itself acts as a piston, and the two cylinders are alternately filled and emptied. The delivery of the mixture must be continuous, for wherever it is stopped a line appears. To secure this rapid and continuous flow, at the rate of 175 cubic yards per day, a very efficient mixer is required. It has not yet been decided whether a Ransome or a specially designed machine will be used. No rubbing up is necessary, although a few flaws may be present, owing to the difficulty of expelling all air. The escape of air is permitted by the special design of the house, or, when necessary, by a temporary pipe, which may be removed later.

FROM damage and loss by fire there appears little relief. The city of New York averages twenty-three a day, and the records of a single Tuesday—the universal ironing day—have amounted to as many as 989 in the boroughs of Manhattan and the Bronx alone. Ten million dollars of annual loss is an easy estimate for this city, while the total loss to the country at large is simply appalling. A good deal of useful agitation on this subject has been developed in the last few years, but the warnings and suggestions do not appear to reach the right people. Else why should it be possible for New York to calmly estimate a yearly fire loss of \$2,500,000 from carelessly dropped cigarettes and matches? The truth of the matter is that people, as a rule, are too careless of matches and flame, too careless in lighting gas and oil, too careless in disposing of their ashes and waste, too careless in a thousand ways in everything that relates to fire,

light, heat, and flame of any sort. Everyone knows the danger that comes from the careless use of matches and fire, but apparently many people think they can be indifferent to the requirements of safety, and then have to pay the bill for plain disregard of common sense. Only by persistent agitation can any relief from this wasteful indifference be obtained.

THE winter season is a favorite and convenient time in which to consider the house one hopes to build or occupy next summer. While very bad weather is an excellent time in which to test the inconvenience of country living, it is also an exceedingly inconvenient period in which to go house hunting. But if one may not go abroad into the green fields and country lanes a-seeking a house or lot, one may, certainly, look at house pictures. Forthwith every possible source of information and illustration is taken out, examined, studied, and criticised. It is a pleasant pastime, and an easy one, for there are a good many books and papers which undertake to tell you all about houses and the various delights of living in the country, miles from everywhere, and with nothing but open fields around you. They give lots of advice too, and tell you how to make a fortune by keeping all sorts of animals, domestic and otherwise—the more the merrier, and, no doubt, the larger the resulting fortune.

THERE are a good many words of caution that might be applied to the city folk who are about to remove into the country, but there is one that seems particularly applicable at the present time. And it is this. Don't believe all you see, and don't believe all you read. Not that the makers of books and the perpetrators of illustrations are dishonest folk; far from it. But it is well to remember that the true measure of success in living in the country is the living part and not the house and garden. These contribute mightily to the general joy, to say nothing of the drains they may make on the pocketbook; but the most delightful of all houses has to be lived in before it can be appreciated, and it is a well-established fact that what is perfectly suitable to one may not be equally agreeable to another. Hence, it unfortunately does not follow that because certain people have achieved a mighty success in raising guinea pigs you will do likewise; nor that because a certain family has experienced many, many rural delights all your own brood will be equally happy under similar conditions.

IN thinking about the house one would like to have, it will be well to remember that even with ample funds it may not be possible to combine the excellencies of half a dozen dwellings in one new creation. Each house that is designed for a special purpose is an individual house, intended for individual uses in one particular place. It is not always possible to translate house excellencies from one structure to another. A feature that appears particularly excellent in one design may seem quite commonplace, or at least not nearly so desirable, when transposed into another and divorced from the surroundings in which it originally appeared. It is well to know what other people have done; it is well to be familiar with houses of all sorts and descriptions, useful to understand plans, to note arrangements, to be familiar with furniture and details; but the very things that appear so desirable in another house may simply not seem so good when put into yours. It is well to be prepared for some disappointment here, for it is hardly possible to escape it.

Notable American Homes

By Barr Ferree

"The Pines," the House of Philip S. Sears, Esq., Prides Crossing, Massachusetts



LONG drive in the woods, through a forest, if not exactly impenetrable, at least dense enough seemingly to swallow one up; beautiful woods, such as the soil of Massachusetts seems to produce in a special abundance; woods soft and quiet, with scarce a house to indicate man's presence, and only the hard dry roads to show he has been here and at least visits here, if he does not permanently remain within these leafy shadows—all this is but a foretaste, and a most delightful one, to the pleasure that awaits one who visits Mr. Sears in his charming pine-land home.

Apparently there is no reason why his home should stand exactly where it does. There is no much traveled roadway leading to it; there is no other house close beside it; its site, surely, is not more beautiful—for here is so much beauty—than a hundred others near at hand. It is more to the point, beside these unnecessary academic speculations, that the house stands just where it ought to stand—in a clearing in the pine woods, an opening only sufficient to give it space and room for its attendant garden and terrace. As for its entrance, the forest comes almost to its front door, a dear untidy forest, with disheveled ground, gentle hillocks of moss and piles of pine needles, and all the wild delights of the wildland.

Surely if one knew nothing of the house, had not seen it pictured in pho-

tograph or roughly described in words, one would pause instinctively at first sight of it. It gives one—and it certainly gave me—the same delight as the discovery of some rare flower, blooming alone in the dense dark woods. Like a rare orchid it raises its soft yellowed walls in the center of a great tree wreath, standing all around it like sentinels to guard its simple beauty. It is a house to be seen to be appreciated to the full, seen with the odor of the pine needles in one's nostrils, and with the soft green of the trees decking it in the near-by distance.

Let me say at once that this is a lovely and exquisite house. It is a house of absolute simplicity and perfect directness. Take, if you will, the entrance front, the front by which it may be judged, although the house is so sequestered that each front belongs to the owner alone. There is not a single



The Porch on the Terrace Is Furnished as an Outdoor Living-room



The Terrace Front Has Three Stories, with Simple Dormers in the Sloping Roof

bit of ornament on this whole front. There is the doorway, it is true, but its detail is of the simplest possible description, so simple that its very severity but enhances the importance of its curved summit, with its glazed tympanum and its lantern that projects without and within. The curves above the doorway have, therefore, an intensely decorative character because they offer a beautiful contrast with the severity of the remainder of the front.

So also the great triple window above it has a special significance and a decorative value it would not have were its neighbors of the same shape and form. It is not



The Inner Porch Overlooks a Terrace Supported by Walls of Stone

actually a triple window, but a doorway to the balcony with a narrow window on each side. The balcony is of wrought iron, very simple in design, and identical with the other balconies in the end pavilions. The door has a gently curved top, its uppermost molding being continued as the crowning

sort, of imaginary ornamental detail, of unnecessary features, of the thousand and one details with which architecture is so often supposed to be concerned—of these, none. It is all so simple and quiet that the very leaders act as decorative features, as it is quite right they should.

molding on either side. Then comes the little semi-circular window above, and finally the curved gable.

Everything else is plain, simple and severe. Every thing else is solid walls, straight lines, plain rectangular windows. The lines are wholly structural, and are formed by the changes in the surface of the walls; by projecting the central bay somewhat forward, and bringing the end portions still further forward, swelling out their inner walls at the base, and building a seat within the recess thus formed. And over all is the roof, sloping down from the ridge over the center and end wings in a continuous slope, without other crown to the walls than its eaves, which are projected still further forward over the uppermost window toward each end.

Structurally this is all. Of horizontal lines there are none at all; of breaks of any



The Side Portal Stands atop a Semicircular Pyramid of Steps Leading to the Garden



The Entrance Doorway, with Its Glazed and Curved Tympanum, Is the Most Striking Feature of the Exterior



The Studied Simplicity of the Entrance Front Is Apparent in the Quiet Refinement of the Details



The Mantel of the Billiard Room Is Brick ; the Walls and Curtains Are Green

ordinary shutter would suffice. These have been carefully designed for the house, and are of two general types. The small shutters of both lower stories have solid panels, marked within by a narrow band swelled to a curve at the top. In the larger windows these panels have been confined to the lower parts of the shutters, the upper sections having blinds of the usual type. The point is of interest as evidence of the intense individuality of the design.

So striking is the exterior of this house that one enters the entrance doorway with many pleasurable anticipations of what it has to show within. And one is not disappointed. The door opens immediately into a vestibule-hall, covered with a groined vault. The walls are covered with light buff plaster, and have a low wainscot of wood, painted

white. The door frames are simply molded and are also painted white. This entrance passageway—for it is scarce more than that—adjoins a longer passage to the right, where

There is nothing else save the color. And this is so supremely important that more than a passing word must be given to it. The house is built of stucco, colored an exquisite buff. The wood trim is painted white; the shutters are green, the door French gray, the iron work black, the roof shingles left to weather finish. The dominant color is, of course, that of the walls. One need not wonder if any other color would have answered as well; it is sufficient that it is exactly the right color to have used.

Hence there is no somberness to this house. It is alive with light and brightness, with gentle soft color that, after all, is the crowning beauty of the house. A word as to the shutters. In a design which bears so much testimony to the exceeding care its architect—Mr. H. F. Bigelow, of Boston—has given it, no



The Dining-room Is Papered in Soft Grays ; the Rug Is Deep Blue ; the Window Curtains Are Pale Blue Silk

the stairs rise against the entrance wall. The stairs have white risers and oak treads, covered with a green carpet, and have a wrought iron hand rail. The window on the stairs has green curtains with white sash curtains.

A doorway at the end of the passage admits to the library. It is paneled throughout to the ceiling in black cypress, with built-in book cases. These are stopped somewhat below the ceiling, with the upper panels brought out flush with the shelf supports, thus giving a frieze-like finish, which is completed with a narrow molding below the white ceiling. There are curtains of gold and yellow at the doors and windows, and a green rug on the hardwood floor. The furniture is green tapestry and black leather.

The center of the house is occupied by two rooms which face the entrance door. That nearest the library is the billiard-room. The walls are covered with a dark green cloth, and have a small molding at the summit below the

white ceiling. The fireplace on one side is of brick, with a double curved opening that approximates the form of the leading curves of the house front. The bricks are arranged in pattern form and support a small wooden shelf. There

is a very shallow base mold, and the doors and trim are black cypress. One window has a built-in seat, and all of them have green curtains lined with white silk. An Oriental rug is laid before the fireplace.

The dining-room adjoins. The wood-work is white. The base mold is extremely narrow, and a second band of wood is carried around the room just above the chair tops. The white and gray paper which cover the walls has a boldly conventional design. The side of the room containing the mantel has a high paneled wainscot, which forms part of the mantel design. The fireplace is sandstone with double curved opening, which, however, is strictly indi-

(Continued on page 12)



The Library Fireplace Is Built of Caen Stone



The Library Is Walled with Shelves and Plain Rectangular Panels of Wood

Something About Lamps and Candle Shades

By Mabel Tuke Priestman



ONE of the most perplexing problems when coming to the end of furnishing the house is that of deciding what kind of lamps to buy. Within the last few years there has been such an improvement in lamps and candelabra that the choice is much more difficult than heretofore, when artistic ones could only be found after a diligent search. Ten years ago it was the exception to come across a really pretty lamp; but to-day the choice of good ones is bewildering, because so many attractive novelties are displayed.

The illustrations show some lamps picked up at random, at stores, exclusive and otherwise. Thus one shows a glass lamp which is extremely simple and yet fills all the functions for which it is intended. The iridescent glass shade that comes with it is divided by bands of brass, resulting in an artistic lamp at small cost.

We are all familiar with the beautiful Tiffany lamps, but few realize what charming little lamps they make for reading or desk lamps. The first one in the group of three is made of dull green metal with heavy rough cut-glass panels in green. This, of course, can only be used for electric lighting. The second one

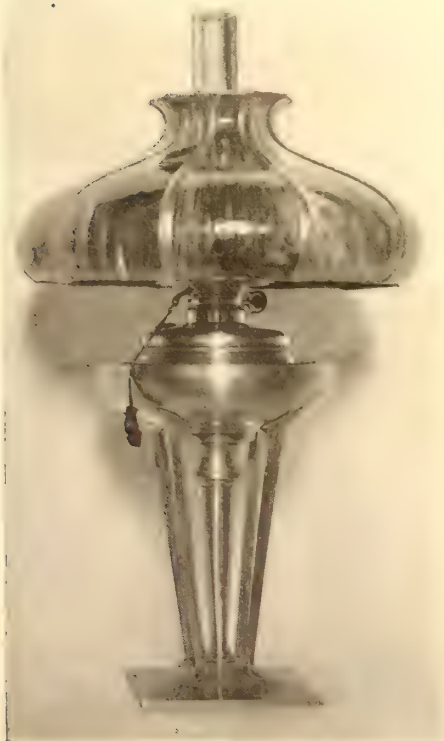
has a heavily weighted ball, which allows the lamp to be adjusted at any angle. The green iridescent shade is one of the most beautiful of the Tiffany products, but few of them are found to day, as leaded glass shades are more generally used. The third one shows a bronze lamp for oil. For so small a lamp it gives a wonderfully good light, and is so well proportioned it could not be easily overturned. The bronze is treated with an acid which makes it a beautiful tone of green. A reproduction of an Etruscan vase is used for the base of the lamp shown in the third illustration. This has a font of brass fitted to it. The vase is made of rough cream clay, and while very decorative

is quite inexpensive. The shade selected to go with it is one of the new cut brass affairs so popular at the Arts and Crafts Exhibitions. The sheets of brass have the design carved out with a jeweler's saw, making an effective and easily made shade, if the home maker is interested in doing metal work. These shades are usually lined with silk. A yellow silk diffuses the light, while a green converts it more into a reading lamp.

The fourth illustration shows another rough clay vase, which has had a font made for it. The shade is somewhat of a novelty, and consists of pieces of leaded glass in three shades of



2—A Group of Reading Lamps



1—Glass Lamp with Glass Shade of Good Shape



3—An Etruscan Vase Converted Into a Lamp



4—Mosaic Shade and Earthenware Lamp

green. This is also an inexpensive lamp, thoroughly effective. Electric lamps are very different to those used for oil. The fifth illustration shows a lamp designed for a room furnished in Mission style. Brown oak and green glass are the materials employed for this simple little lamp. The cutting of brass for lamp shades is made use of in a great variety of ways. The sixth illustration shows brass metal shade cut with a saw and riveted together. The lamp and shade are both made of brass in a dull Roman finish.



5—Electric Lamp in the Mission Style

An innovation in shades is the use of Japanese baskets, and the brown wicker ware harmonizes particularly well with the dark brown oak of the Mission lamp, while the silk lining can be selected to go with the color of the walls and furniture covering.

There is something very charming about candle light, especially for the dining table, and a great many kinds can be seen every season among the new shades. These always seem expensive for such perishable articles, and should present an opportunity for deft fingers to make them at home. The large lamp shade is quite expensive, and yet if made at home would practically cost one-third of the price. It is really surprising how easy it is to make a lamp shade if only a good model has been seen first. The illustration of a French lamp shade (No. 7) is made over a good quality of cream silk. The three medallions with which it is embellished are printed on the silk, and can be bought at the stores where lamp shades are a specialty. This is outlined with a fine gold lace, and the circle is finished off with a silk flower and fringe trimmings, which can be bought by the yard. This is made in pink and green, the same colors being carried out in the silk fringe at the top and bottom of the lamp shade. The



7—A French Lamp Shade of Paper Over Silk

alternate panels have a tassel decoration which is somewhat of a novelty. The gold lace is also introduced between the silk tassel fringe and the bead fringe. Such a shade could not be bought for less than fifteen dollars, and yet it could be made at home for five dollars.

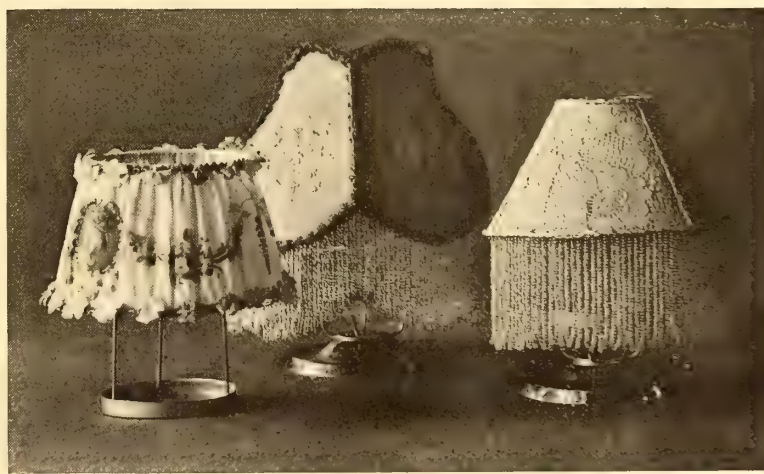
The group of candle shades (No. 8), showing two with the bead fringe now so universally used, could, any of them,



6—Lamp with Shade of Cut Brass

be made at home. The French silk one is very similar to the large lamp shade just described, except that it is decorated with a water-color floral painting. Ribbon embroidery is one of the new materials introduced into the making of candle shades. The panel shade is of cream silk with a simple decoration in ribbon embroidery. A neat little silk gimp outlines each panel, while the shade is completed with a pretty beaded fringe.

There is something very charming about a heavy lace



8—Three New Candle Shades

shade. One is made with cream lace stretched over heavy corded yellow silk, which is edged top and bottom with a cream silk gimp of bead fringe matching the silk lining. The same idea can be carried out by using an open Japanese brocaded silk and makes a lamp shade very Eastern in appearance. Several of the new lace shades have the flowers stained pink or yellow, while the leaves are tinted green.

These are very beautiful when the light filters through them, and at first it is difficult to realize of what they consist. A good linen lace is usually made use of, as a poor quality

and most of the new French shades make use of it in some form or other, while ruching for ladies' dresses is also used on some instead of silk trimming. The fluted shade on



9—Some New French Candle Shades



10—A Novelty in Shades

looks tawdry. Such a shade could be easily made by an amateur; the frames for the shades are supplied by lamp stores, and when the wires are covered with cheesecloth it is very easy to sew the materials on them.

Some novelties just arrived from France are shown in silk and paper shades in the group of five (No. 9). Four of these show the introduction of ribbon embroidery. The kind of ribbon used on these resembles the coronation braid,

the table is of heavy corded silk, and a design in water color is painted on it before the silk is fluted.

There is a wide field for amateurs making lamp and candle shades and a good income awaiting the brainy girl who can evolve something really original like the above-mentioned candle shade. The illustration gives no idea of the beautiful color effect, which in the case of every good shade gives the final note of beauty and interest.

“The Pines,” the House of Philip S. Sears, Esq., Prides Crossing, Massachusetts

(Continued from page 9)

vidual in form. The wainscot adjoining is continued on one side to a closet with glazed doors. The color of the room is given by the rug and the window curtains. The former is deep blue; the latter of light blue watered silk, lined with white, with white sash curtains. From these rooms one may reach the porch situated on the terrace or inner front of the house. It is rectangular in form, supported by stucco columns, yellow like the walls, with narrow rim-like white capitals. It is furnished as an outdoor living-room, the edges being projected by awnings. It stands in the midst of a grassed terrace, and contained within a low stone retaining wall, below which is a cleared space, and then the forest, growing beyond lofty rocks.

The terrace front of the house is designed with even greater simplicity than the entrance front. The center projects quite far forward, while the ends are apparently as much recessed. The porch is the chief feature here, and a very necessary one for a house built in the woods. A third story is added, by means of three dormers, in the central building.

Below the library door is a flower garden, a garden too irregular to be termed formal, yet arranged in a formal manner. That is to say, the flower beds are given definite shape and form, bordered with brick. Its limits are defined by a huge rock and by a rustic fence beyond which stand great pine trees of the primeval forest.

But one does not need a flower garden to give beauty to the house, albeit so charming an addition detracts nothing from it. It is a house well able to stand alone, although designed for this precise spot, and of a form and coloring nowhere else yielding such delightful results. This, in truth, is its exceeding merit: that every aspect of it is interesting. Every part of it counts in the final result, because such a result was anticipated from the beginning. Yet, after all, its loveliness is the greater because hidden in the midst of these Massachusetts woods, watched perpetually by the pine trees that have given their name to it.

The quiet gentleness of the woods has been well matched by the simple repose of the dwelling. It fits into its surroundings and belongs with them.

A Bungalow in Pasadena

By Helen Lukens Gaut



HIS bungalow is located on a city lot, in a nest of greenery, of hedges, trees and flowers, that makes it seem a thing of rest and quiet apart from the usual prim, conventional city home. Once behind the low cobblestone wall and five-foot laurestina hedge that separates the place from the street, one feels he has escaped from the dust and smoke and whirl of life. In this case, house and garden belong to one another, as do the diamond and the golden setting. Too often bungalows are inflicted with tailor-made gardens, and when one really has the proper bungalow setting, it is worthy of attention. From the pergola gateway leading from the city street into this little Eden, to the quiet little patio with its trailing vines and ferns, all is in perfect harmony.

The house is a most attractive type of the inexpensive bungalow, and one of considerable originality, especially in the smaller details. It faces the east. The gable that roofs the porch is filled in with perpendicular slats three inches wide and three inches apart. The porch is floored with dark red cement, marked off in twelve-inch squares. Around the outer edge of the porch platform is a ten-inch border of brick. The steps are also of brick.

The front door is of exceptionally fine grain oak boards, twelve inches wide, the joints being covered with batons. The knocker consists of three narrow iron slats, on which is mounted a tiny bronze lizard. On either side of the door are small but elegant art windows, and beneath these are wooden benches of simple and appropriate design. The entire exterior is stained a dark brown, which blends admirably with the greens of the garden. The entrance-hall, as is fitting, is nothing more than a corner of the large living-room, partially separated on one side by an artistic arrangement of timber-work and hangings of Old English tapestry of dragon design, in colors of gold, cream and dull red, and on another side by a wainscoted six-foot wall that forms the dividing line between reception-hall and inglenook. The other two sides, excepting space required for entrance and bedroom doors, are also wainscoted.

In the living-room sunshine and air have free access. On the south side are four wide swinging lattice windows, while in the southeast corner is a deep window seat with backing and sides entirely of glass. The window hangings are of tan-colored Iris cloth, lined with cream silk and trimmed in scroll design with tan braid. The ceiling is of six-inch tongue-and-groove pine flooring left in the natural color of pale yellow. Nailed to this, one foot apart, are four-by-four beams stained a dark olive green. The appearance of

these contrasting colors is unusual and striking. The floor is of polished oak.

Though the furnishings all unite in the bungalow harmony, the table in the living-room climaxes all, and helps not a little in completing the bungalow motif—a closeness to nature and simplicity. This table is made of burl redwood, and the top is one solid piece four feet in diameter.

In this room the walls are plastered, and the rough surfaces tinted a golden brown by the use of oil colors. The picture molding, one by four, is in perfectly plain strips; in fact all the woodwork has straight, square edges.

In the inglenook the open grate is surrounded by six-inch square Grueby tiles in dull red. The tiling is framed with strips of beautifully grained Oregon pine. The floor of the inglenook is also of dark red Grueby tiles. On either side of the grate are book shelves, and in the double wainscot that divides the inglenook from the reception-hall is a roomy cupboard with paneled doors opening into the hall. In this cozy corner are two wide-cushioned seats, above which hang electric lanterns of quaint design.

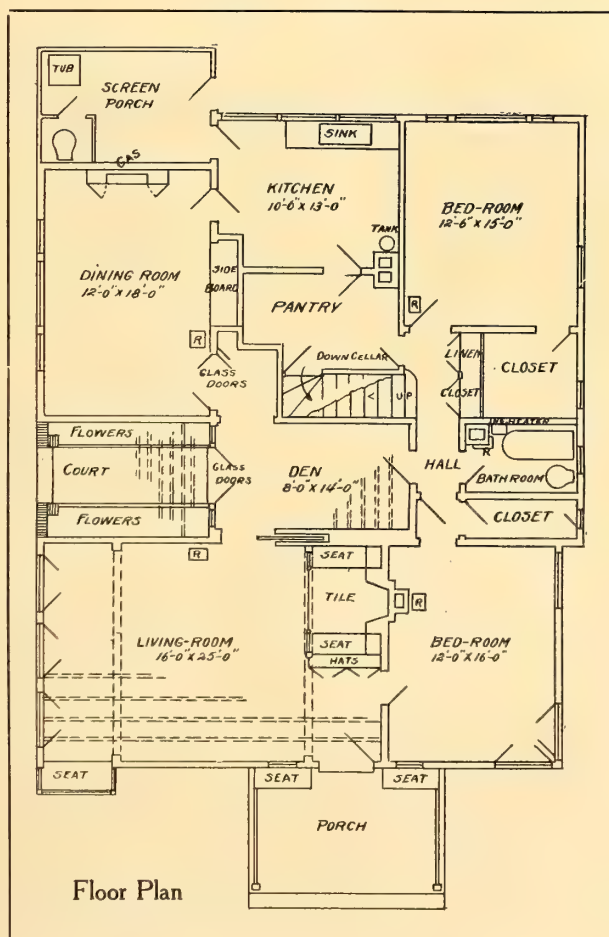
In the den door casings and book shelves are of fine grain Oregon pine, stained to represent mahogany. The ceiling is like that in the living-room, and the rough plaster is tinted a dull tan. A wide French window with long narrow glass panels incloses one end of this resting place, and gives unobstructed outlook on a tiny cemented court with pergola roof, and borders of ferns, bamboo and flowers.

The dining-room walls are tinted a creamy flesh color, while the woodwork, also of rich grained Oregon pine, is stained a deep warm brown. The gas grate is of brass, surrounded by green Grueby tiles. The framework is of wood, with short double panels on either side, of heavy mottled glass, in colors of green and blue.

The built-in sideboard corresponds with the mantel scheme, the panels of glass and the brass pulls and bolts giving a fetching bit of color. On either side, and just below the ceiling, are electric lanterns—boxes of dark wood with panels of mottled glass. There are no beams in the dining-room. The south side of the room is of lattice windows, and it would be hard to find a more cheery place for an early breakfast. Window hangings in this room are of art madras, showing a bold, effective design in blue and brown.

The woodwork in bedrooms, bath, rear hall, and kitchen is finished in cream enamel. Yellow and white flowered curtains give the effect of continued sunshine in the bedrooms.

This house is well suited for its purpose, beautifully adapted to its environment, and could be built for \$2000. It was designed by Carl Enos Nash.

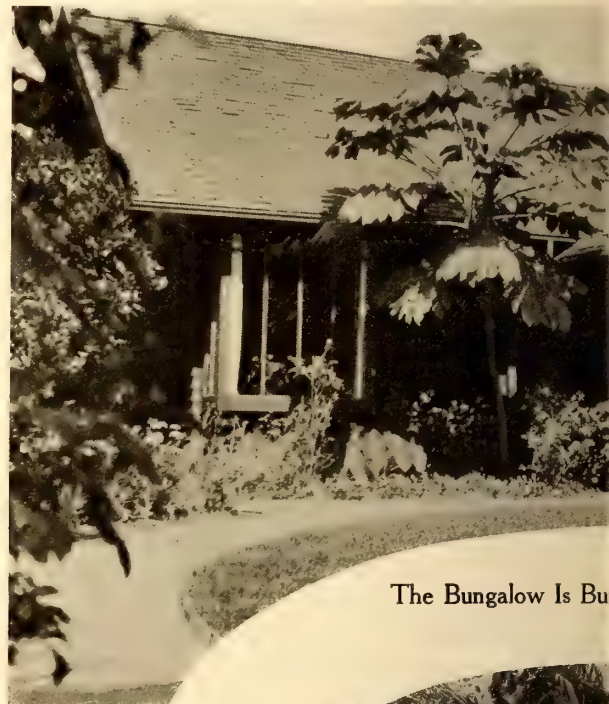




Inside the Den



The Entrance



The Bungalow Is Bu



The Built-in Sideboard



The Laurestina He



h and Doorway



a Nest of Greenery



e and Pergola Gate



The Inglenook of the Living-room



The Living-room and a Glimpse of the Hall



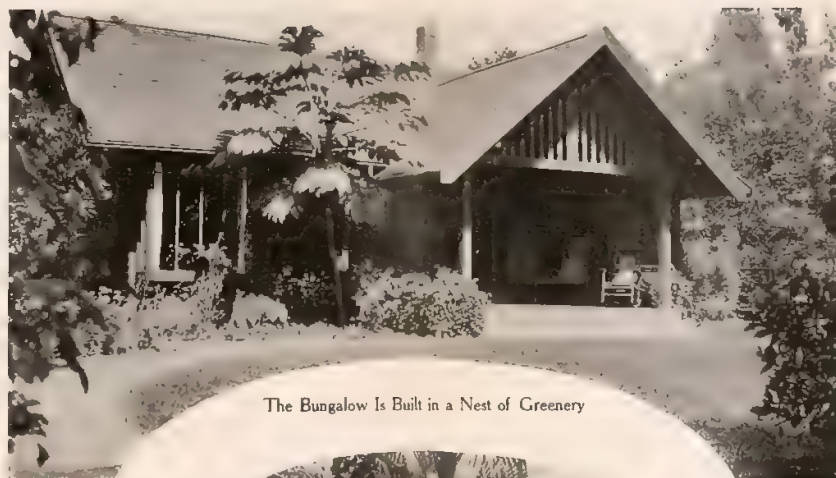
Inside the Den



The Entrance Porch and Doorway



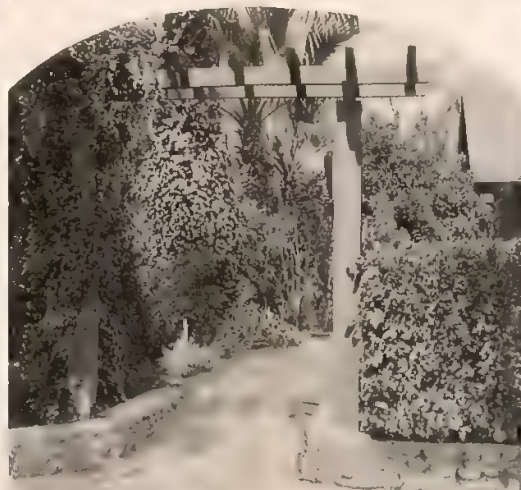
The Inglenook of the Living-room



The Bungalow Is Built in a Nest of Greenery



The Built-in Sideboard



The Laurestina Hedge and Pergola Gate



The Living-room and a Glimpse of the Hall

A BUNGALOW IN PASADENA



A Herd of Young Stock

A New England Stock Farm

By Mary H. Northend

With Photographs by the Author



“**W**ORLD'S END FARM,” the summer home of Mrs. General W. W. Blackmar, has the distinction of being one of the best stock farms in New England. It lies on the shore of Hingham Bay, about a mile from the little town of Hingham, and directly opposite the home of the Hon. John D. Long.

When it was only a huckleberry pasture, more than fifty years ago, this estate was purchased by Mrs. Blackmar's father, who was Mr. John R. Brewer, of Boston. He started the present herd of registered Jersey cattle in the early eighties with several registered cows and the bull Decatur, 2421, from stock imported by Thomas Motley, of Boston. This herd is the more noticeable from the fact that for half a century it has not run down in the least, but maintains to-day a higher standing among the stock farms of New England than ever before.

The grounds extend over an area of two hundred and seventy acres, and include four hills with the level land between. They are Planter's Hill, Pine Hill, and the two World's End Hills,

from whose heights are obtained magnificent views of sea and land. Beyond the summer home are seen the farm buildings, spacious and up to date in every respect. The barn for cattle and hay is what is called a “bank” barn of three stories, which affords quarters for cattle on the second floor, and storage for hay above. An inclined driveway at each end gives approach to the third story directly from the ground. Rotary ventilation, daily spraying with disinfect-

ants, frequent white-washing, and strict attention to sanitary principles, make this an ideal home for the cattle. On each side of the barn are winter yards in which to exercise the cattle, for it is a feature of this estate that every animal must have vigorous daily exercise all the year round. This policy has contributed much toward the success of this herd, which is claimed to comprise the largest and strongest Jerseys in all New England. A covered exercising yard at the rear is used exclusively for the bulls. It is circular in form, and has an inner wall built about six feet from the outer wall, so that the attendant can, without danger of harm to himself, put his leading stick through the ring in the bull's nose.



Avenue of Apple Trees

Much of the drudgery is done by power, there being in the engine-room a gasoline engine of nine-horsepower, which furnishes power to the bone mill, the feed mill, and the thrasher, besides working the slings which transfer two-ton loads from wagon to loft in four and one-half minutes. The pitching of hay by engine was done on this farm for the first time in the United States.

While the "World's End Farm" herd is a small one, seldom numbering more than twenty-five, it is distinctive from others of its kind for the size and strength of the cows. This is brought about by regular exercise in all kinds of weather, by carefulness in not breeding before the heifer is fully two years old, and by never using a sufficient quantity of grain to force the flow of milk. All these facts have been proved to be of great value at "World's End" in breeding for size.

In their native home on the island of Jersey these cows are small in size, weighing from seven hundred to one thousand pounds. The specimens at "World's End" average eleven hundred pounds in weight.

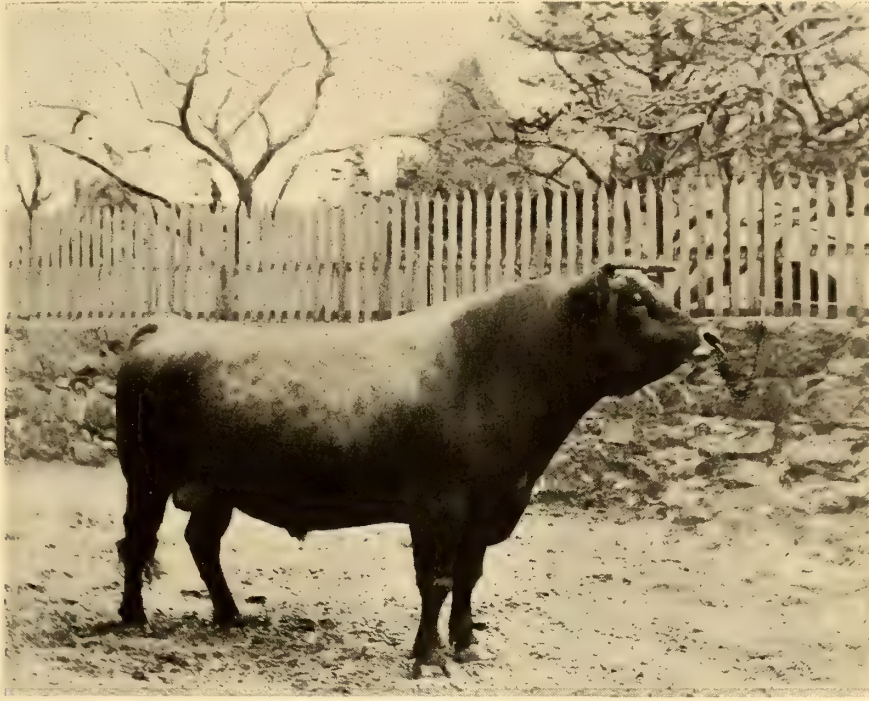
The coloring of native pure bred Jerseys is not uniform. It varies from brown to black, or from tan to yellow-fawn. Occasional cows are light red, brindled, squirrel-gray, mouse-color, or even creamy white. Only about one animal in ten,

on the island of Jersey, is solidly colored, without any white hairs, but this coloring is the favorite with breeders in this country, and the "World's End" herd has this solid coloring, with black tongue and black switch.

Of course the coloring of the bull is darker than that of the cow. The leader of the herd at present is Rupert of Hingham, 65,182. He is grandson of The Owl, 54,738, imported by William Rockefeller, and also of Mon Plaisir, who took a prize on the island of Jersey, and was sold at the Cooper sale for three thousand dollars.

Viking of Hingham, 75,931, was bred at "World's End Farm." He is son of Taurus of Hingham, who traces to Tormenter, King Koffee, Stoke Pogis, Honeymoon of St. Lambert and Golden Lad.

At "World's End" the herd averages seven thousand five



The Dignified Pose of the Blooded Bull



The "Bank," Is Three Stories in Height, Affording Accommodation for Cattle and Storage for Hay



The Sea-edge of the Estate

hundred quarts for each cow, while individual specimens have recorded as high as eight thousand five hundred quarts, with a percentage of five and twenty-five hundreds butter fat.

All this is done upon ordinary feed. During the winter months the cows are fed from twenty-five to thirty pounds of ensilage, with seven pounds of corn meal and five pounds of shorts. As soon as there is green fodder the grain ration is lessened, and they receive green grass, clover and oats.

Only about forty acres of the farm are cultivated from year to year. A part of this is laid down to mixed clover and timothy, while in other fields each of these crops is grown separately. Each

spring and fall fresh stable manure is hauled upon this land at the rate of twelve cords to the acre. This is plowed under in the early spring, and the grounds planted to corn and potatoes. In the fall it is re-plowed, and next spring it is sowed to barley or other grain. After harvesting the barley the ground receives the third plowing, and is seeded to timothy in the month of September. One thousand pounds of bone to the acre is used as a fertilizer.

The twenty acres sown with mixed clover and timothy yield at the rate of four tons to the acre; as do the six acres of solid clover and the twelve acres of timothy for the horses.

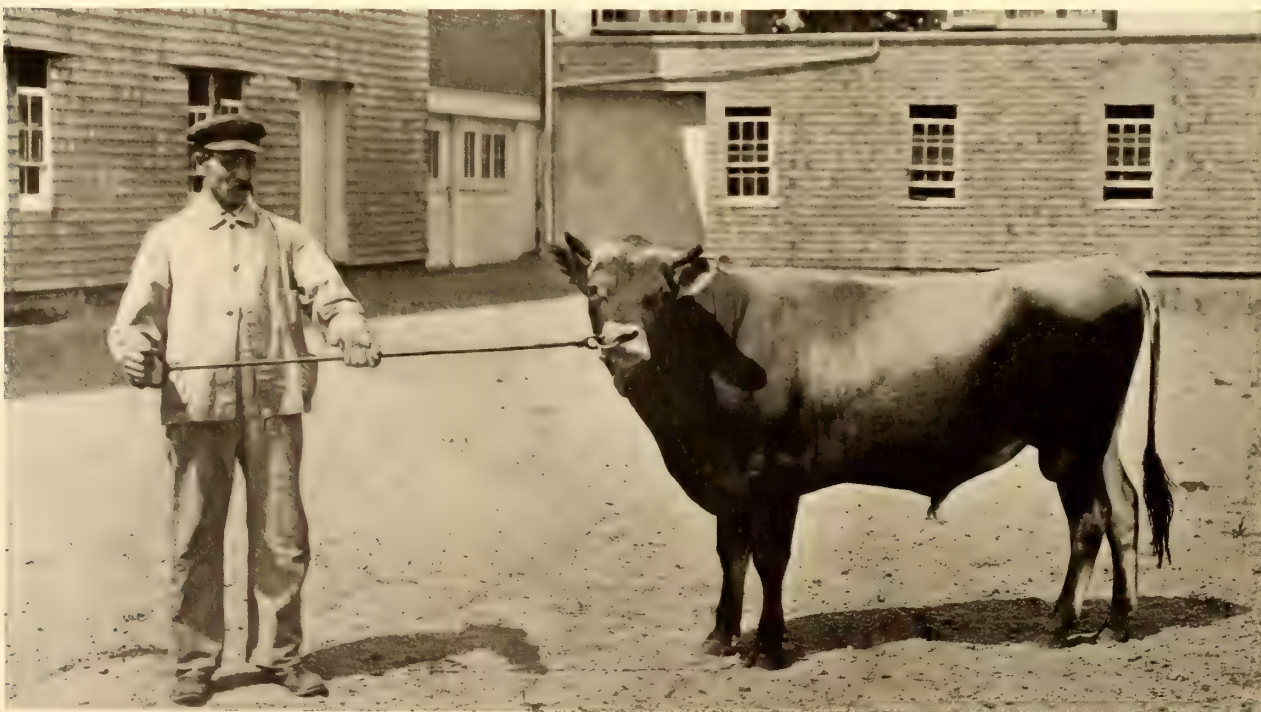
"World's End" might well be called a little village in itself, with its acres of woodland and grassland, fronting the sea, on a point of land jutting into the bay.



Farm Horses Ready for Work

Two islands in the bay also belong to this estate. It has its own workshop, where carpentering and blacksmithing are done by competent workmen who are employed here all the year round.

Following the road from Nantasket Junction over the crest of Old Colony Hill, one finds a smooth driveway of more than a mile in length, overarched by the spreading branches of maples half a century old. Midway one comes suddenly upon the house itself, which stands back from the road, with a frontage of lawn shaded by stately trees. The entrance has one fea-



Viking of Hingham, 75,931, Bred at "World's End Farm"



Spraying for Flies

ture introduced during the life of the late General Blackmar. It is the stone pillars capped by cannonballs which stand at each side of the broad driveway leading to the house.

An old-fashioned box-bordered garden lies near the house, and in full view are several large beds of rhododendrons, iris and peonies. Beyond, a lawn extends to the water, bordered by a road under the interlacing of a double row of old apple trees.

Extensive stables at the right are filled with many thoroughbreds which are used for driving purposes. In the rear of the cow barn are the hen houses in a long line, the home of the Wyandottes used on the estate.

Across the street is the superintendent's house, and the farm houses for the hands, of whom about seven are regularly employed on the estate. Beyond is the driveway, which leads to the four hills and to the system of private roads, which are open to the public. The roadways wind in and out along the line of the sea, or follow the crest of the hill.

By air line it would be one mile and a half, but by driveways it is between five and six. Delightful views are seen everywhere, both inland and seaward, and the horizon in the west is bounded by the Blue Hills of Milton.

Trees are everywhere, it being a special feature of the estate, and every tree of natural growth has been most carefully protected.

"World's End Farm" is a place of very many interests. It abounds, in other words, with many matters of attractiveness of many kinds. It is, therefore, a delightful and charming place to visit, as what place is not, where there is much to see and much to enjoy? Yet, after all, it is the cattle that attract one—these kingly bulls, these splendid cows, this almost royal state in which they are housed, cared for, fed, groomed, looked after as only valuable beasts such as they are ever receive in this world. It is a pleasure to look at



Katonal of St. Lambert

these gentle creatures and to watch them as they lead their placid lives, and the landscape helps to complete the picture.



Winter Gardening Under Ground

By Jacques Boyer



WILD chicory grows spontaneously throughout a rather wide region, but few people would appreciate it as a salad if cultivation had not lessened the bitterness of its dark green, indented leaves with narrow ribs and shaggy texture. The French and Belgian market-gardeners have managed, by blanching certain varieties during the winter, to produce vegetables greatly prized by "gourmets" and known in France under the names of "Barbe-de-Capucin" and "Endives."

In the outskirts of Paris this forcing is done in an original manner in underground darkness from which light is carefully excluded.

To obtain the young "Barbe-de-Capucin" necessary for blanching, the gardeners sow the seed in open fields during April or June. The fields are more or less well manured during the preceding year. They use from forty-four to fifty-five pounds of grain to the "are" (one hundred and seven and one-half square feet), planting in rows distant from each other about eleven inches. They gather the spindle-shaped roots afterward when they are about thirty-nine one-hundredths of an inch at the shoulder. Toward the end of the autumn or beginning of the winter the young chicory plants are dug up with a fork, taking care not to injure the roots. As soon as they are taken out the leaves are cut off about half an inch above the shoulder, the roots then being heaped up under a shed, where they are covered with the cut-off leaves to keep them from drying in the air.

According to an expert, M. Enfer, the return for each "are" is, under good conditions, twenty-five bundles of roots



Gathering "Barbe-de-Capucin"

about half an inch in diameter. As soon as the digging up is finished, the roots are measured, only the upper extremity remaining free. On the evenings when freezing weather is feared, dry leaves or litter are thrown over the heaps. The forcer draws on this reserve according to his needs.

The next stage is the blanching proper. In his dark cellar, with ventilators hermetically sealed, the market-gardener builds a bed of manure capable of giving off a heat of from eighteen to twenty degrees Centigrade, which he covers with from two to two and one-half feet of pure loam. Then, while the bed is giving off this heat, he takes from the measure the roots necessary for the first series of forcings, and a woman removes the dirt that adheres to them before proceeding any farther. This woman carefully picks off the spoiled or dried leaves, leaving only the central sprout, if it is intact, rejecting it if it shows the least trace of decomposition. By means of the primitive instrument which is shown beside her in the illustration—an instrument made of two uprights nailed to a chair—between which she puts the cleaned-off roots, she forms great bundles in which all the shoulders are on exactly the same level. She then ties each bundle solidly and strongly near the top with a withe, and toward the edges she puts a second binding somewhat looser than the first. She cuts off the ends of the roots that are too long, and nothing then remains but to take them down into the underground chamber.

There they are simply placed on the bed, pushed one closely against the other. Under the influence of the luke-warm heat of the cellar, the plants grow rapidly, and at the end of two or three weeks are in fit condition for eating. During this period they require no other attention than a few waterings. To



Preparation of "Barbe-de-Capucin" and "Endive" Roots

gather them the cultivator seizes a bundle in his arms and carries it above to the daylight. There women take them,



Planting the Roots on the Subterranean Manure-bed

and after having picked them over, divide them into small bundles, in which form they are sold. Each small bundle contains at its center a sod of earth that nourishes the roots.

They then pack the vegetables in baskets, with a great deal of care, and the next morning the market-gardener takes them to the market.

Some people, who make use of only one corner of the cellar, plant the roots of wild chicory upright in a trough full of heaped-up earth or sand, and gather the leaves when they reach a sufficient height. Use is also made of a barrel pierced laterally with holes capable of receiving three or four roots; in these holes the roots are inserted pointing toward the center. The crop lasts thus all through the winter without the roots being changed. As to the bleaching under the frame of a hotbed or in the open air beneath upsidedown flower pots, the product is an excellent chicory, but one which is not held in very high esteem.

Certain market-gardeners of the outskirts force, in an identical manner, another variety of wild chicory called "Endive." This large rooted plant has merits residing principally in the size of the leaf and in the strong development of the ribs. When bleached by subterranean forcing, it forms a sort of head similar to that of romaine lettuce, very compact and of the whiteness of ivory. The endives are cultivated exactly like the Barbe-de-Capucins, but the bundles that are placed in the cellar to be wedged together on the bed of manure are composed of a smaller number of roots, owing to their large size. Moreover, once picked, the head is cut from the roots. Again, endives are not sold in small bundles. However, the endives form, together with the Barbe-de-Capucin, a savory winter salad, as well as a picturesque form of cultivation.

The Aspidistra



FALMS are popular. Nearly everybody who cares for plants attempts their culture. But not one specimen in ten affords satisfaction to its owner, because of ill health, which causes the foliage to take on a pale look or turn brown at the tip of the leaflets. The ficus gives better satisfaction, in the majority of cases, because it is able to withstand the debilitating conditions which prevail in the average living-room better than any variety of palm except *Phoenix reclinata*, which would be the favorite of the amateur palm-grower if it were more graceful in habit. As it is, it sprawls about and takes up too much room. The ficus is ornamental only, while it retains its foliage well down to the pot. As soon as it loses its lower leaves it ceases to be attractive, unless the specimen is well-branched, and not many specimens can boast the possession of even one branch.

The aspidistra is one of the best of all plants adapted to house-culture and hall-decoration. This is because it is so strong in constitution that it is able to stand the trying ordeal to which all plants grown in the dwelling must be subjected without any harmful effect whatever, if one may judge from its appearance. A dry atmosphere evidently causes it no discomfort. Dust can be washed off its thick leathery leaves as easily as from a china plate. It does not seem to be attacked by any insect. Give it all the water it needs and it will keep on growing indefinitely. It rarely loses any of its old leaves. The pot will become crowded with roots, but the production of new foliage goes on as if there was no restriction of root-room.

This plant has no branches. Its foliage is all produced from the thick, fleshy root-stalks which come to the surface,

but never rise about it, except as they are crowded upward by surrounding roots. The leaves average about fifteen inches in length. The leaf-stalks run all the way from four to six inches in length. Its chief characteristic is massiveness and luxuriance, because of its great profusion of rich, glossy foliage. Well-grown specimens will often have from fifty to a hundred leaves.

There are but two varieties of aspidistra in general cultivation. *A. lurida* has foliage of a very dark green. *A. lurida variegata* has foliage of the same rich green as a ground color, striped irregularly with creamy white and yellow. Some leaves will show no variegation whatever. Others will have but a single narrow stripe of light color, while some will be so heavily marked that the light color predominates. This variety is preferable to the plain-leaved sort, because of the charming contrast afforded by the combination of light and dark colors.

Only the close observer would discover the blossoms of the aspidistra. They are produced close to, or partly in, the soil, at the junction of root and leaf. They are a dull chocolate in color, thick in texture, and with no claim whatever to beauty. They are very interesting, however, to the person who likes to study the peculiarities of plants.

Those who have grown tired of sickly palms and naked-stemmed ficuses, should try an aspidistra. Give it a soil of ordinary garden loam. Feed it well. Water moderately. Shift it into larger pots as its roots fill the old ones, until you have it in a ten or twelve inch one, and after that let it alone. You will be delighted with your acquisition, because it will always look well, and you will never have to worry about it. One of the strong points of this plant is that it does not require a great deal of light.



The Hall Has Mustard Color Walls and White Trim

either end of the property and winding its way to the front door. The front of the house is marked by an entrance porch, while the living-porch is at the side. The detail of the front porch is excellent, and carries out the feeling which is found among many of the old Colonial houses. The foundation walls are built of red brick laid in red mortar. The superstructure is of wood and is covered with matched sheathing, good building paper and shingles; the latter are stained a silver-gray color, and the trimmings and blinds are painted white. The roof is also covered with shingles.

A Dutch Co

Englewood,

By Martha



HE interesting country house built for Frederick S. Duncan, Esq., at Englewood, is a recent addition to that group of suburban houses within the confines of that delightful city, and as a whole exhibits an interesting expression of the modern domestic architecture of this particular class.

Mr. Duncan's house presents the successful treatment of a site which, in itself, offers many advantages upon which the architect naturally seizes. The style chosen was of the Dutch Colonial. The house stands some distance from the road, and is approached by a driveway coming in from

either end of the property and winding its way to the front door. The front of the house is marked by an entrance porch, while the living-porch is at the side. The detail of the front porch is excellent, and carries out the feeling which is found among many of the old Colonial houses. The foundation walls are built of red brick laid in red mortar. The superstructure is of wood and is covered with matched sheathing, good building paper and shingles; the latter are stained a silver-gray color, and the trimmings and blinds are painted white. The roof is also covered with shingles.



The House Stands Within Spacious Grounds



The Entrance Porch Carries Out

Colonial House

New Jersey

gins Lane

Entering the house from the south one enters oneself in a large central hall and a living-room. Both the hall and living-room have a pine trim with white-enamel treatment. The space is well broken by the staircase with its massive fluted columns resting on paneled pedestals. The columns and pedestals as well as the stair rail is treated with white enamel, except the hand rail, which is of mahogany. A paneled seat is placed at one side of the stair-landing. The walls of the hall and living-room have a mustard-colored wall covering which harmonizes well with the white trim. A coat room and lavatory are conveniently arranged in the rear end of the hall. The fireplace in the living-room

is furnished with green vitrified tile and a paneled mantel. An archway from the living-room forms an entrance to the library, which is finished with oak, finished in a Femish brown. The furniture is of the Arts and Crafts style, and the wall covering is in harmony and a symphony of autumnal tints. The open fireplace with brick facings and hearth, and a mantel of quaint design, and the bookcases which are built in completes the room. To the right of the entrance is the dining-room, which is a handsome room. The walls have a tapestry wall covering, and the trim is painted white. The furniture is of mahogany, and the old sideboard with a mirror overhead,



Mahogany Furniture and Tapestry Walls Make a Stately Dining-room



Features of the Colonial House



Dutch Colonial Motifs Are Effectively Used



The Hall Has Mustard Color Walls and White Trim

THE interesting country house built for Frederick S. Duncan, Esq., at Englewood, is a recent addition to that group of suburban houses within the confines of that delightful city, and as a whole exhibits an interesting expression of the modern domestic architecture of this particular class.

Mr. Duncan's house presents the successful treatment of a site which, in itself, offers many advantages upon which the architect naturally seizes. The style chosen was of the Dutch Colonial. The house stands some distance from the road, and is approached by a driveway coming in from

either end of the property and winding its way to the front door. The front of the house is marked by an entrance porch, while the living-porch is at the side. The detail of the front porch is excellent, and carries out the feeling which is found among many of the old Colonial houses. The foundation walls are built of red brick laid in red mortar. The superstructure is of wood and is covered with matched sheathing, good building paper and shingles; the latter are stained a silver-gray color, and the trimmings and blinds are painted white. The roof is also covered with shingles.

Englewood, New Jersey

By Martha Higgins Lane

A Dutch Colonial House

Entering the house from the south one finds oneself in a large central hall and a living-room. Both the hall and living-room have a pine trim with white-enamel treatment. The space is well broken by the staircase with its massive fluted columns resting on paneled pedestals. The columns and pedestals as well as the stair rail is treated with white enamel, except the hand rail, which is of mahogany. A paneled seat is placed at one side of the stair-landing. The walls of the hall and living-room have a mustard-colored wall covering which harmonizes well with the white trim. A coat room and lavatory are conveniently arranged in the rear end of the hall. The fireplace in the living-room

is furnished with green vitrified tile and a paneled mantel. An archway from the living-room forms an entrance to the library, which is trimmed with oak, finished in a Femish brown. The furniture is of the Arts and Crafts style, and the wall covering is in harmony and is a symphony of autumnal tints. The open fireplace with brick facings and hearth, and a mantel of quaint design, and the bookcases which are built in completes the room. To the right of the entrance is the dining-room, which is a handsome room. The walls have a tapestry wall covering, and the trim is painted white. The furniture is of mahogany, and the old sideboard with a mirror overhead,



Mahogany Furniture and Tapestry Walls Make a Stately Dining-room



The House Stands Within Spacious Grounds

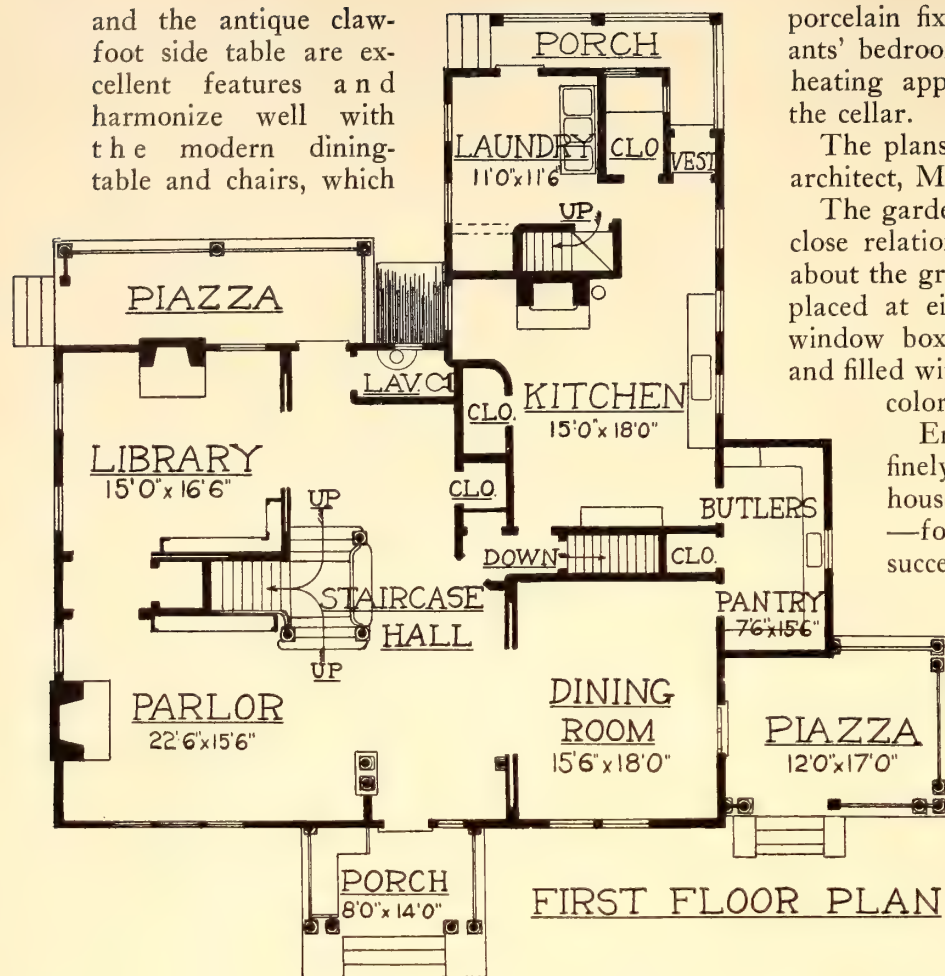


The Entrance Porch Carries Out the Features of the Colonial House



Dutch Colonial Motifs Are Effectively Used

and the antique claw-foot side table are excellent features and harmonize well with the modern dining-table and chairs, which



FIRST FLOOR PLAN

are copies of the antiques. French windows open onto the living-porch, which is well furnished with wicker furniture and a red and green rug.

Another door opens into the butler's pantry, which is fitted with drawers, shelves and sink. The store pantry, which communicates with the butler's pantry, is also fitted up complete. Doors from both of the pantries open into the kitchen. Special attention has been given to the kitchen and its dependencies. The walls of the kitchen are wainscoted with white glazed tile. The kitchen is provided with a sink, range built in a fireplace, laundry furnished with porcelain laundry tubs, and a store closet.

The second floor is divided into bedrooms furnished with all the necessary appurtenances. The owner's suite, consisting of two bedrooms, dressing-room and a bathroom, is conveniently arranged. Besides the owner's suite, there are also four guest rooms and bathroom on this floor. The entire floor is painted white, and the walls have a two-tone decoration. The bathrooms on this floor have tiled floors and wainscotings and

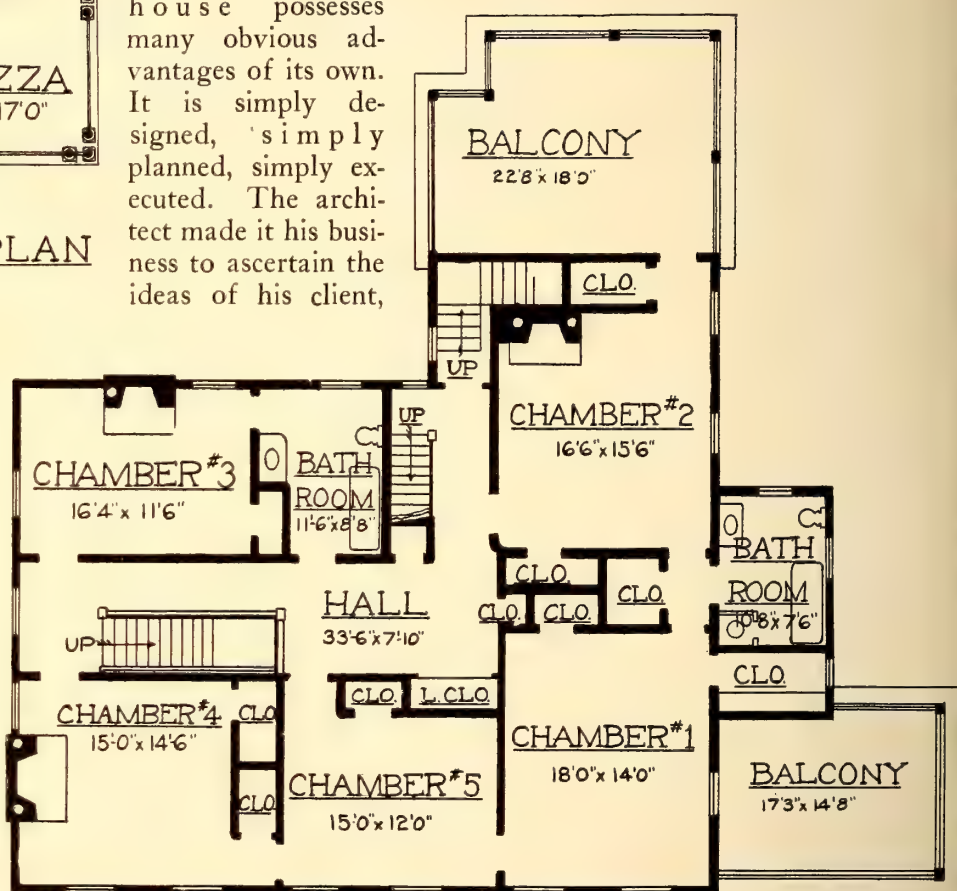
porcelain fixtures with exposed nickelplated plumbing. The servants' bedrooms and bath are placed on the third floor, while the heating apparatus, fuel rooms, and cold storage are placed in the cellar.

The plans and the elevations have been well worked out by the architect, Mr. E. S. Child, of New York.

The garden is a notable feature of this property, and is laid out in close relation to the house. There has been much planting done about the grounds which surround the house, with clusters of shrubs placed at either side of the porch and in front of the entrance, window boxes placed in front of the windows of the first story and filled with red geraniums, and "sunshine" vines add a touch of color to the general scheme of the place.

Englewood is a town of such superabundant charms, so finely located, so beautifully laid out with many charming houses and gardens, some of which, quite within city limits—for the place is legally a city—are true estates, that it is success of no mean order to achieve architectural distinction

amid such surroundings. The present house possesses many obvious advantages of its own. It is simply designed, simply planned, simply executed. The architect made it his business to ascertain the ideas of his client,



SECOND FLOOR PLAN

and then proceeded to develop them in a comprehensive and effective way. The result is ample justification.



The World's Largest Butterfly Farm

By Joseph Heighton

Photos. by Charles Lavell



NOT infrequently it has been asserted that Englishmen lack enterprise. No such accusation, however, can be leveled against Mr. L. W. Newman, of Bexley, Kent—one of the most charming of England's oldest towns. Mr. Newman is but a young man just past his thirtieth birthday; and yet in the last six years he has built up a farm, the live stock on which numbers anything between 80,000 and 100,000 head of some 200 different breeds. This enormous stock feeds and thrives upon a single acre of land; and yet the latter is not overcrowded; for the breeds are simply moths and butterflies. Six years ago Mr. Newman was occupying the position of bookkeeping clerk to a London firm. An early passion for the study of insects asserted itself, however, and having made a little money by collecting and breeding moths and butterflies in his spare time, he resolved to stake everything upon a special, up-to-date butterfly farm.

The venture has proved a splendid success, although Mr. Newman confessed to the writer during the course of an interview that he entered upon the experiment with some feelings of trepidation. At the present time he is supplying hundreds of private collectors in various parts of the globe, who make entomology their special hobby, not to mention museums, with live and dead specimens; for Mr. Newman's dead stock is quite as important to him as that which costs him money and labor for food.

In one of his rooms Mr. Newman has cases and cup-

boards which generally contain about 60,000 moths and butterflies, all carefully set and mounted ready for collectors. Before his marriage some time ago, Mr. Newman was obliged to spend six hours a day mounting butterflies in order to cope with the orders. Now, however, he not only has a most charming wife, but a really valuable helpmeet in more senses than one; for Mrs. Newman has, under her husband's guidance, become an expert mounter, and consequently is able to relieve her husband of much important, though tedious, work. The mounting of the insects, by the by, must be done within a certain time of their death.

Otherwise, the legs and wings become too stiff to set properly and produce the best effect. Then again, in order to retain the full beauty of the wings it is essential in many cases to kill the butterflies as soon as they are fully matured in order that they may not damage themselves in any way by fluttering about the cages or fighting with one another. It is interesting to note the two methods—both of an expeditious and painless character—

by which Mr. Newman kills the butterflies he requires for mounting. One method is very simple. Provided with a large glass jar containing a solution of cyanide of potassium, Mr. Newman simply takes up each butterfly with a pair of curiously shaped pinchers and drops it into the jar. Immediately the butterfly is placed over the mouth of the jar it expires, death being brought about by the fumes. The second method requires more skill in order to be painless and effective, and is not to be attempted by the amateur. It is accomplished by means of a mapping pen and a weak solu-



The Largest British Moth—The "Death's Head" Moth



Killing the Insect with
Oxalic Acid



Feeding Butterflies with Water
and Honey



Removing Caterpillars from a Denuded
Lime Tree

tion of oxalic acid. Taking the insect between his thumb and forefinger, as shown in one of the photographs, Mr. Newman sticks the point of the pen, which has been previously dipped in the solution, between the two front legs of the insect, as near the head as possible, killing it instantly.

carrots, while for the butterflies themselves large bunches of flowers, well sprinkled with honey, have to be provided. Should this not be the case, they would not obtain sufficient nourishment. Then again, willow herb and evening primrose is the food of the larvæ of the elephant



A Part of the Farm Showing Shrubs Covered with Gauze to Prevent the Escape of the Insects



Setting and Mounting Specimens

It is probable that the average person who tried to do this would pierce the insect several times before killing it.

It is the live stock, however, which makes Mr. Newman one of the busiest farmers in Great Britain, and often causes him to have to work eighteen hours a day. Each different breed of butterfly requires the special food which it would naturally search for if out of captivity, and it is the providing of this food which causes Mr. Newman so much labor. Neither does the fact that the average butterfly eats twenty-five times its own weight in twenty-four hours make the task any easier.

The larvæ of the swallow tail butterfly, for instance, the biggest British butterfly, thrive only on wild and garden

hawk, a beautiful pink-colored moth, which Mr. Newman also is obliged to feed sometimes in the manner shown in one of the accompanying illustrations. There he is depicted with a small camel's hair brush, which has been dipped in the saucer—on the edge of which the butterflies are resting—containing honey and water, just about to touch the tongue of one of the insects.

The death's head moth, so called because it is decorated on its upper side with curious markings, somewhat resembling a skull and crossbones, feeds on the potato. This is the largest of British moths—the specimen shown in the photograph measures four and one-half inches across the wings—and has the peculiar power of emitting a strange squeaking



The Caterpillar and the Moth in Their Native Land



Larvæ Inside a Cage



A Rare "Black-veined" Moth

sound, a faculty unique among moths and butterflies.

Mr. Newman confessed that he did not object to feeding the aforementioned breeds so much as obtaining food for the painted lady or cardai species, which is rather particular about having nothing but thistles. As Mr. Newman possesses many thousands of this species, one of his assistants has to devote several hours each day to providing fresh food for the little family.

Another troublesome breed to feed is the comma butterfly—so called because there is a small white comma on the reverse side of each wing—which has a great partiality for nettles. In order to supply his other breeds with food, Mr. Newman has planted his garden and land with a great variety of trees, shrubs and bushes on which the butterflies, when in the caterpillar stage, are placed in order that they may



The "Comma," Showing the Caterpillar, the Chrysalis, and the Perfect Butterfly

ting, through which birds find it impossible to break.

In addition to the thousands of caterpillars to be seen on the trees and bushes, there are thousands of others in the greenhouse and cages which dot the grounds. It is in these cages that the early stages of breeding take place. Briefly, and without going into too many technical details, it may be stated that the eggs are first hatched and the young larvæ reared in small glass-topped boxes, after which the different species are placed in their respective cages, where they remain until sold, or until it becomes necessary to transfer them to a suitable

tree for their further development.

All Mr. Newman's butterflies are British, the most costly among them being the purple emperor, or king of the forest, so named because it is usually to be found flying over the tops of oak trees, and consequently is most difficult to catch.



Inspecting the Stock in One of the Butterfly Houses



Mounted Moths and Butterflies Ready for Delivery

feed as they please. The voracity of the insects is well illustrated by the picture of the lime tree here reproduced, which was stripped in twenty-four hours by lime hawks. Mr. Newman's assistant is also shown picking off the insects one by one in order that they may be transferred to another tree—a tedious task, which must be done if the insects are not to starve.

When the caterpillars have been placed on a bush or tree, the whole is enveloped in a large gauze bag, not only to prevent escape, but also to guard against the depredations of birds, their mortal foes. Even the gauze, however, is not sufficient to prevent attacks, and consequently the whole of the breeding ground has been covered in with wire net-

A male specimen of this insect is worth about \$1.00, and a female \$1.25, in England.

The prices of the ova, larvæ and pupæ, which Mr. Newman sells, vary, of course, according to the species. For instance, a dozen of the ova of the drinker, a very common butterfly, can be purchased for about 6 cents, while the same quantity of the comma would cost six times that amount. Then again, a dozen of the larvæ of the small tortoise shell cost but 8 cents, while a dozen black grass could not be purchased for much less than \$2.00. The pupæ are sold at so much each, the prices ranging from 3 cents for a painted lady, satin moth or scalloped hook tip, to 40 cents for scarce burnished brass.

New Facts About Venus' Fly-Trap

By W. C. Purdy



VIGOROUS plants of *Dionaea*, or Venus' Flytrap, secured in early spring and kept under glass, will put forth flowers in June. The leaf or "trap" is the chief object of interest; its behavior in catching insects, and the pressure it exerts to retain these when captured, are surprising. A brief description of the plant, together with results of experiments performed by the writer, may be acceptable to the reader.

At the top of a naked 10-inch stalk which arises from the rosette of leaves or traps, the delicate blossoms appear, in a compact 5 to 8 flowered cyme. The inflorescence is determinate. The flowers, half as large as apple blossoms, have five white spreading petals, delicately veined. These petals do not drop off when the flower withers; they curl inward tightly from the tip, gradually becoming discolored and brown. When the flower opens, the pollen is ripe, but the stigma is

sure is effected by some one's touching a sensitive hair with an object, as a pencil, the trap will open again in a few hours; but if the trap be closed by placing in it a bit of animal tissue, such as meat, or if it catch an insect, several days, usually four to nine, elapse before the trap opens again.

It is not generally known that the trap in closing has two distinct positions or stages, which, in the absence of better terms, we may designate as first position and second position respectively. When a trap closes, from any cause whatever, the curvature of the sides is reversed, and the margins nearly or quite touch each other, the marginal bristles intercrossing. The closed trap is therefore double-convex in shape, forming

a cavity within large enough to accommodate the insect, if one be captured. Each half of the trap describes a simple curve from midrib to margin. This is the first position.

If a trap closes upon an insect, or upon a bit of animal tissue, it first closes to the first position, as described above. But it does not



Traps in Natural Position. Four of the Six Sensitive Hairs may be Seen in A



Upper Illustration

Flower Cluster of *Dionaea*. Flowers lettered in order of age. In A, (the youngest) stigma is undeveloped. In B, stigma is developed, and stamens are divergent. In C, petals are curling. In D and E, petals are curled tightly and discolored

Lower Illustration

Plants of *Dionaea* on Common Dinner Plate. Traps A, B, C, and D have caught flies, and are in the second position. Flowers are not fully opened



The Trap A about Twenty Minutes after Catching a Fly. The Trap is in the First Position

undeveloped. In a day or two the 17 to 20 stamens (which are at first closely arranged about the pistil) become very divergent, thus removing the ripened pollen from the vicinity of the small feathery stigma, which develops meantime. In this manner the flower prevents self-pollination.

Looking down upon the upper surface of the trap, one observes that the two halves, standing open at an angle of 90 degrees or more, are each *convex*; also that the marginal bristles on one side incline toward those on the opposite side, so that, when the trap is closed, these bristles intercross, as the fingers do when the hands are loosely clasped. The inner portion of each half of the trap is finely mottled with red. From this mottled surface arise six slender hairs, three on each half. These hairs are very sensitive, a touch on any one of them causing the trap to close almost instantly. They therefore constitute the "trigger" of the trap. When clo-

remain in this position while digesting and absorbing its prey. In the first position, the extreme margins of the trap are in contact with each other, the marginal bristles intercrossing. Now if the closure be effected by the presence of animal tissue in the trap, this first position is slowly re-

placed by a very different one. The simple curve described by each side in the first position is changed very slowly to a compound curve. The two-thirds of the trap nearest the midrib retains the double-convex form of the first position, but the one-third nearest the margins—and including them—separates and the edges curve outward, away from each other, the line of contact of the two sides receding toward the midrib.

This curving outward of the margins results in two things: First, the bristles, which in the first position were intercrossed, now separate and swing outward with each recurving

margin until every bristle coincides approximately with a line drawn from its base to the midrib, each bristle thus being nearly or quite parallel with its fellow on the opposite margin of the trap. Moreover, the amount of the outcurving is usually the same throughout the length of each margin, thus making these two rows of outward-pointing bristles parallel.

The second result of the outcurving of the margins is evidently of more import to the plant. As the line of contact of the two halves recedes toward the midrib, the double-convex portion of the trap becomes much reduced in size, and the imprisoned insect is closely invested, wings, legs, or other members being crowded, together with the body, into small space. The trap is now held shut with considerable force, so all chance of escape of the prisoner is gone. As the digestive juice is now poured about and upon the insect in this cavity, the diminished size of the latter—requiring less digestive juice to saturate and cover the prey—is probably of importance to the plant from an economical point of view.

This position of the trap—margins uniformly recurved, causing each half to describe a compound curve from margin to midrib, line of contact having receded about one-third of distance toward midrib, and bristles in two outward-pointing parallel rows—is maintained during the several days necessary to digest the prey. We will term this the *second position*.

The pressure exerted by the closed traps is surprising, when we consider their small size. The two traps used in the following experiments were each about 22 mm.—less than an inch—in length. By means of gummed paper a loop of thread was fastened to each outer surface of a spring trap, which was made to lie in a horizontal position, midrib and margins being in a horizontal plane. Securely anchoring the thread from the lower half of the trap to a firm support directly below, I now attached the thread from the upper part of trap to one pan of a pair of delicate balances suspended above. A small weight (7 1-2 decigrams) was now placed in the opposite pan of the scales to take up the bit of slack in the thread, and to correct the final result for weight of the thread and of the upper half of trap, together with the bit of gummed paper.

Any additional weight now placed in the scales would tend to pull the trap open; moreover, the weight required to thus open the trap would be the measure of the force exerted by the trap in preventing the escape of captured prey.

The first trap to be tested had been closed by a touch, so it contained no prey. It had been closed about forty-five minutes, and was in the first position. (The second



¶ This Trap Caught and Digested a Daddy-Long Legs



¶ The Trap (A) a few hours after Catching a Fly. The Trap in the Second Position The Trap shown at B has been Closed by a Touch to an Imperfect First Position

fore. But the weight required to open the same trap this second time was only 25 grams, 1 1-2 decigrams. Evidently the trap was not exerting as much force as it did at finish. This result agrees with the well-known fact that the trap opens in a few hours if, in closing, no prey be captured; the trap was relaxing its pressure, preparatory to opening.

The following day, this same trap was closed by contact with animal tissue, and had assumed an imperfect second position, when I again placed weights in the scales to ascertain the amount of pressure exerted. Results showed a surprising increase in the pressure, a weight of 58 grams 6 1-2 decigrams being required to open edges of trap 11 mm., less than 1-2 inch.

From this result it is evident that the trap exerts more pressure when closed to the second position than it does when in the first. The second position is assumed only when the trap has closed on animal tissue, or some nitrogen-bearing material. Thus it exerts most pressure when closed on animal tissue, and while digesting its prey.

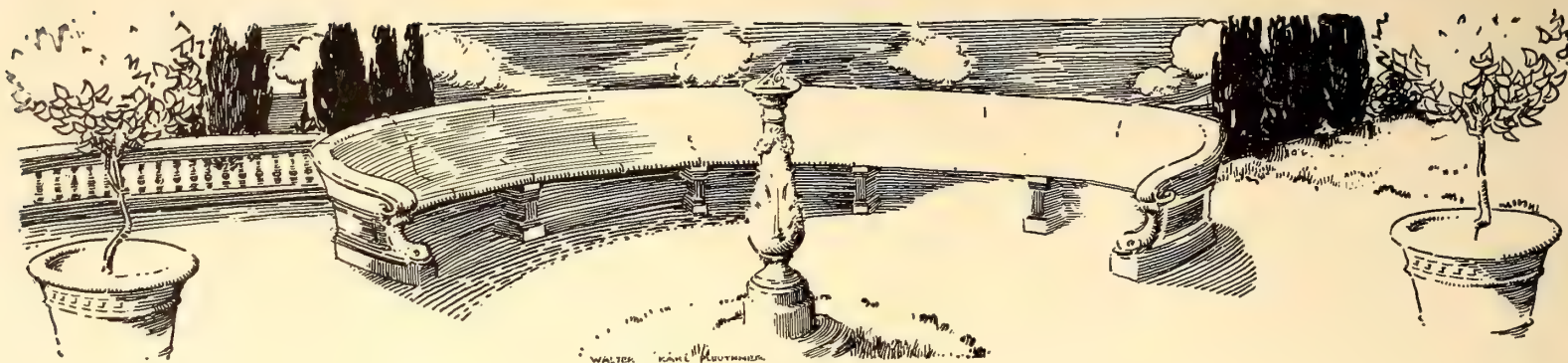
While this trap was being held open by the weight of 58 grams, 6 1-2 decigrams, I touched one of the sensitive hairs three or four times in quick succession. In response the sides of the trap drew together slightly, (1 1-2 mm.) leaving the margins separated by 9 1-2 mm.

Another trap of about the same size was tested in a similar manner. This trap, however, was closed on a fly, which I held by the leg, allowing him to clamber over surface of the trap. He touched a sensitive hair, and was promptly captured. In about forty-five minutes, the trap had closed to the second position, and I then measured its pressure. The weight required to open the trap only 3 mm. (one-eighth of an inch) at middle of the margins was 79 grams, 8 decigrams. This is a trifle more than the combined weight of three silver dollars.

By a slight increase in the weight used, this trap was pulled open, several hours later, a distance of 6 1-2 mm. (one-fourth of an inch). When this same trap was in the natural position before closure, the margins were separated by a distance of 14 mm.



¶ Manner of ascertaining pressure exerted by Trap at A, while digesting a fly. Weight required to pull trap open as shown was about 80 grams (the weight of three silver dollars). Trap at B is open after several days' work in digesting a fly.



House Built for William H. Gray, Esq.

Dedham, Massachusetts

By Paul Thurston



THE picturesque and interesting house built for William H. Gray, Esq., at Dedham, Mass., is another addition to the many beautiful, as well as modern, houses to be found in that delightful old village. The site chosen for the house was one which has been well endowed by nature, simply waiting for future development.

The architect seized the opportunity to use the low type of the old Colonial house found in New England as his prototype. The house stands on a foundation of stone, with an underpinning of dressed stone, while the first and second stories are covered with white pine clapboards of unusual width. These clapboards are painted white and are relieved by the trellis extending across the entire front of the house,

which is placed between the first and second stories. The trellis is painted a fern green, as are the blinds, which are painted a similar color.

The house is kept close to the ground, and the roof, which is shingled and stained a soft brown color, is also kept low and flat, in order to preserve the elongated effect sought; the whole blending with the great pines, which form a setting for it. A porch with Doric columns supporting crossed beams, with a pergola effect, occupies the central portion of the facade, while a terrace extends along one side of the house, which, in summer, is covered with an awning, forming a living-piazza. The advantage of this arrangement is found in being able to remove the awning in winter and bring all the light and sunshine into the living-room, which would ordinarily be eliminated if the terrace was permanently covered by a roof.



The Pergola-like Porch of the Entrance Door



The Low Flat Roof Helps in Producing an Elongated Effect

The interior throughout is carried out in the same style as the exterior, and it has white painted trim and mahogany doors with glass knobs. It has a central hall extending through the depth of the house. The walls have a paneled wainscoting to the height of three feet, above which they are covered with a large figured wall paper with American beauty roses and green vines on a white ground, the whole being finished with a wooden cornice painted white. The staircase, of Colonial style, has white painted balusters and risers, oak treads and a mahogany rail. This staircase and the upper and lower hall are lighted by a cluster of windows placed on the landing of the staircase. Under this landing a toilet is conveniently placed.

To the left of the entrance is the living-room, which with its in-



The Colonial Stairway to the Second Floor



The Fireplace of the Living-room

broad facing of stucco, the hearth of tile and the hammered brass hood quite complete the treatment of the fireplace. Pilasters placed at either end of the chimney breast, and which are reproduced on the opposite side of the room, support a beam which breaks the elongated effect of the room. A neat wooden mantelshelf, resting on corbel brackets, completes the fireplace. Bookcases are built in along the wall on either side of the fireplace. The walls have a Colonial wainscoting of the old-fashioned type, above which they are covered with a striped

teresting features go to make a room all that will be contentment in itself, as well as a component part in the whole scheme of a beautiful dwelling. A living-room is only complete when it fulfils the purpose for which it is intended, and its chief charm springs from its fitness to meet the needs of its occupants, as simply as is possible without regard for custom or convention. Two steps lead down into this room, giving it a greater height than the other rooms of this floor, which is quite necessary in order to bring it to a better harmony with the length and breadth of the room.

Nearly opposite the doorway is the great open fireplace, built of brick. The



A White Painted Trim and Mahogany Doors Carry Out the Desired Colonial Effect

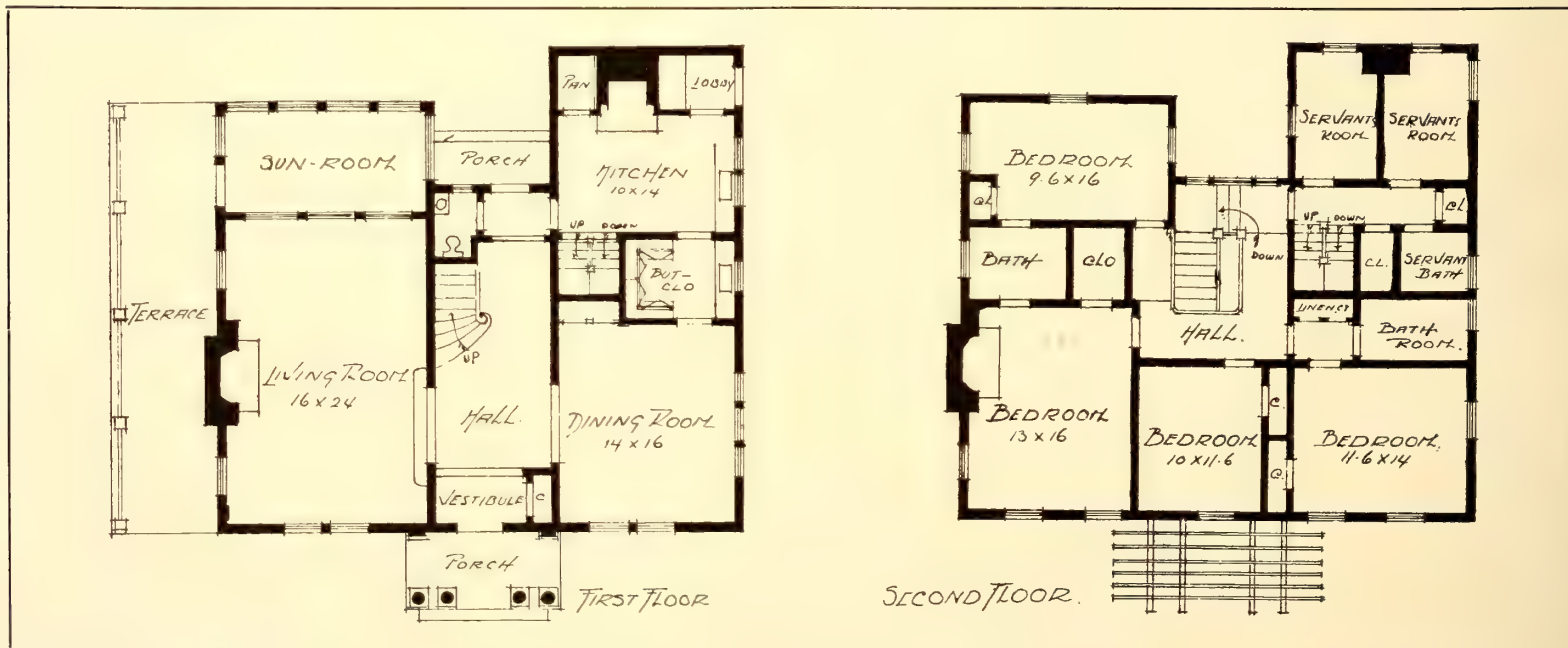
wall covering in a two-tone green. The ceiling and frieze is tinted a cream white, in harmony with the white painted trim. Beyond and connecting with the living-room, by glass doors, is the sunroom, treated with a low wainscoting painted white and white painted walls. Green wicker furniture with turkey-red upholstery, and red, white and green colored cretonne draperies over the window, completes the room.

The dining-room, to the left of the hall, is a handsome room, with its white painted trim and mahogany doors. It has a wainscoting of panels to the height of five feet, above which the walls are covered with mustard-colored paper and finished with a dentailed cornice, intersecting with the beams which cross the ceiling. A china closet, with leaded glass doors, is built in one corner of the room. The cluster of three latticed windows, draped with soft muslin curtains, is a good feature for a sideboard window. The butler's pantry, with double acting doors,

good closets and bathroom. There is the owner's suite, consisting of two bedrooms and a bathroom, besides two guests' rooms and bath and two servants' bedrooms and bath placed over the kitchen extension and reached by a private stairway from the kitchen. All the bedrooms have white enameled



The Trellises of the Exterior Are a Distinctive Feature



separates the dining-room from the kitchen. This pantry is well fitted with dressers, inclosed with glass doors, closets and a butcher's sink. The kitchen is fitted complete and with the most sanitary fixtures, and includes also a store pantry and a lobby large enough to admit an ice-box.

The second floor is divided into bedrooms furnished with all the necessary appurtenances; plenty of good-sized rooms,

trim and a wall covering in one particular color scheme. The bathrooms have tiled wainscotings, porcelain fixtures and exposed nickelplated plumbing.

The cemented cellar, under the entire house, contains the heating apparatus, fuel rooms and laundry. Mr. James Burton, of Boston, Mass., was the architect of this very interesting type of the old Colonial house.



Life on Great Vineyards

By
Charles F. Holder

IF YOU are seeking a land presenting almost every possible climatic condition under the sun, from Alpine glaciers to palm forests, go to California. Some time ago the City Fathers of Pasadena determined to give a demonstration of the peculiarities and possibilities of the climate of Southern California. They selected a day in February, in the heart of the Eastern winter, and in the course of a nine hours' trip they had passed through winter, summer, the semi-tropics and the temperate zone. During the winter of this region, from November to May, when almost fifteen inches of rain falls, the country is a virtual flower garden, luxuriant in green and blossom, but for the vineyards. These lie bare and brown, showing long lines of black, unattractive roots. In May, when the other foliage begins to fade, the vines fill up with verdure of their peculiar vivid green, and soon put forth great clusters of grapes. Though not trellised or otherwise supported,



Bunches of Mission Grapes at Pasadena, California

the vines have received the most assiduous care during the unproductive months and the vineyards are as clear of weeds as it is possible to make them. There are now in California about 100,000 acres planted to grape, requiring the employment annually of over 10,000 men. The yearly crop is about 250,000 tons of grapes, and from these are produced not far from 40,000,000 gallons of wine. The first grapes planted on the coast were from clippings brought to America by Spanish priests, who established the "Mission" grape. To perfect the vines of the coast Colonel Haraszthy, a well-known Californian, went to France and Italy some years ago and brought back a large variety of clippings, which were given to growers in all parts of the State, with splendid results in arousing interest in and stimulating the growth of the industry.

One of the most picturesque vineyards I have seen is on the island of Santa

Cruz, about twenty miles out to sea from Santa Barbara. No more beautiful driveway can be found in California than the one from the landing at the island into the interior. The road gradually rises, now skirting masses of brakes and ferns, now entering the stream bed; wild flowers cling to banks of moss, and above the deep blue sky is seen like a mosaic of turquoise through the live oaks. Suddenly the road opens out into a little potrero or valley, and we are in the vineyard of Santa Cruz, one of the most romantic and isolated, doubtless, in the world. The mountains of the island from a distance give no suggestion of the interior depression, a miniature valley with steep sides, which can be climbed, but which, nevertheless, descend straight into the sea. The hacienda, a typical French villa, is in the center of a little town. Opposite is the chapel, the winery with its foreign sun-dial, and near by the quarters for the men. To the south are great clumps of plume-like



A Mountain of Grape Skins and Stems. The Swiss Italian Colony, Asti, California

eucalyptus trees, and then the vineyard, loaded with white, red and purple grapes. There is a charm about this island home, with its peculiar environments, difficult to explain; completely isolated, hardly suspected by passing ships, and only visited by passing yachts, it is a haven of rest and beauty.

There is a peculiar fascination in the life on the great Southern California vineyards, and they are a Mecca for thousands of visitors during the season. As the summer wanes the vineyard takes on an appearance of renewed activity, with the arrival of the bands of pickers, generally Mexicans, who camp out on some corner of the land. In the morning the Chinese boss brings out a great number of boxes holding so many pounds, and each picker begins filling his as rapidly as possible. Every once in a while a team comes around to collect them, and the counter, on a big white horse, accompanies it to take the count. The sight is an interesting one, with the men in picturesque sombreros, the women in fancy colored shawls, and the babies lying by the roadside, laughing at the tall eucalyptus plumes that wave and nod in the

seeds almost form small mountains, of quite some bulk. The rolling country reaching back to the Sierras, about the vineyards at Pomona, is beautiful in the extreme. In Southern California the vineyards lie mostly in the San Gabriel and other large valleys, and from there we have the finest views of one of the strangest contrasts in America. The valleys are robed in all the vestments of summer's rich



The Vintage at Pasadena, California

1—Mexican Grape Pickers at the Brigden Vineyard

2—Grapes Going to the Crusher on Endless Chain

verdure, the mesa above the vineyard is gorgeous, ablaze with the poppy or cup of gold that has traced a path of fiery color from Santa Barbara to the desert beyond San Jacinto, and back of this, apparently so near that you can almost touch it, rises the wall of the Sierra Madre, 6,000 feet in the blue, with sentinel peaks of San Antonio, San Jacinto, and San Bernardino, five or six thousand feet higher. Their summits are white with winter, and standing in the

strong west winds, like things alive, as they truly are. The picking sometimes goes on steadily for several weeks, while the great loads of grapes are being hauled to the winery and led by an endless chain device into the press-room, where the juice is extracted. One can always tell the big winery by the rich odor or perfume of the crushed grapes, and near some of them the piles of rejected stems, skins and

vineyard I can see the snow blowing up the slope of San Antonio, then whirled aloft into the air like some gigantic wraith, to drift away and be lost in the warm air rising from the summer land below. Winter and eternal spring are face to face in the Southern vineyard.

Many vineyards produce only raisin grapes, and in certain localities hundreds of acres of these are to be seen.

Others, so heavy is the crop, sell their product only by the ton. Grapes raised in this way pay the farmer five per cent. on a valuation of three hundred dollars per acre, the growers receiving from eighteen dollars to twenty dollars a ton. The grapes are Mission, Zinfandel, Riesling, Burger-Carignon, Black-Malvaise, Blue Alva, Marie Blanche and Montereaux, so the rancher tells me. At the little town of Lamanda the very air is permeated with grape, and we see hundreds of pounds of the luscious fruit going into the crusher. The crusher fits into a pomace box two feet in depth and ten feet square, and as it drops the pomace falls into a vat-like case, while the stems are whirled away like chaff by the stemmer. When the vat is filled the pomace runs off through pipes or troughs in various directions to the fermenting cellar below. This is an interesting sight, as every hour the juice of twenty-five tons of grapes flows into the two hundred fermenting vats, which, in the Shorb winery as an example, hold two thousand five hundred gallons each. From four to eight days are required for the fermenting process, the time varying according to the temperature.

The winemaker, whose profession is one of the most exact of sciences, is the wizard who, by blending and manipulating, produces the many brands for which California is famous. If white wines are desired the juice is taken from the pulp as soon as the fermenting tub is reached, and is fermented by itself for twelve or fifteen days in special puncheons. The juice is now drawn from tank to tank every sixty days for six months, until there is absolutely no sediment. If port is desired the juice is allowed to ferment from three to six days with the pulp, a vigorous stirring being maintained to ensure a rich color. The juice is now separated from the pulp until it shows twelve per cent. of sugar. It then goes to the fortifying tank, and is passed by the United States gager if it shows twenty per cent. of alcohol. In making Angelica the juice is fermented up to fifteen or sixteen per cent. of sugar. With the Zinfandel, the famous claret of this section, the juice and pulp are allowed to ferment from twelve to fifteen days; the juice is then drawn off and allowed to stand for a month, after which it goes first to tanks, then to puncheons, being drawn every spring and fall into casks to age. Claret requires nearly five years to produce in its

best condition. Sherry necessitates great attention and careful blending as well.

The immense size of the wineries astonishes the visitor, and as the value of wine generally lies in its age a vast amount of room is required as well to store and keep it from five to twenty or thirty years, or more, according to kind and quality. Some idea of the productive capacity of the Southern California wineries may be gathered from the fact that from August 24 to November 24 the Secondo Guasti establishment makes over three hundred thousand gallons of the different kinds of wine. The wineries of the San Gabriel Valley make Port, Sherry, Angelica, Muscatel, Tokay, Madeira,

Burgundy, Hock, Riesling and Haut Sauterne. Here also are made the famous Folle Blanche brandies, the oldest dating to 1882. This is made from the Folle Blanche grape brought from the Cognac region of France. Here is also produced the Trousseau Port, which is always held five years, and the Mission Port. A choice wine from the San Gabriel Valley is the Lenoir Port, made from a grape found in this region exclusively. It is a small grape, jet

black and rich in sugar, running as high as thirty-five per cent.

One feature that impresses the visitor to these wineries is the absolute cleanliness of the entire establishments. Among others, the Brigden, Campbell-Johnston and Baldwin wineries stand in virtual parks surrounded by flowers and protected by groves of eucalyptus, pepper and other trees.

There is novelty and newness in the life on a California vineyard, especially to the visitor from the East. It is quite true that vineyards are not unknown in eastern districts and

in regions of much severer climate than that in which the California vineyards flourish. But the vineyard has not, in America, the commonplaceness of the wheatfield or even of the stock farm, and hence the visitor who first sees one of the great California wineries is both astonished at the size of an industry of which he may know very little, as well as at the sights and sounds, the work and play which make up the life of these very considerable communities.

For without any exception all is strange here. The wonderful new land, which we are just beginning to know, and which some of us love so well, is itself a source of unending, unvarying delight.



Picking Grapes at the Brigden Vineyard, Pasadena, California
Sierra Madres in Background



Miles of Grapes, Asti, Northern California

The Kitchen

By John A. Gade



THE modern kitchen, though still used to a certain extent as a dining-room for servants, and in the more modest dwellings also as their living-room, is more and more solely employed for the preparation of food. It has become a cooking-room pure and simple, and its location and planning is studied with this in view.

The kitchen in the country house is naturally an entirely different proposition from the city kitchen. It offers practically none of the difficulties, which sometimes are almost impossibilities, that limit and hinder us in every manner in the dark, narrow, ill-ventilated tunnel of a city lot.

The kitchen, more than any other room in the house, can not be regarded as a unit in itself, but merely as one of a group of several rooms, mutually dependent upon each other's position and relationship. In a limited number of city residences, as well as in a few larger establishments, such as clubs, etc., the architects have endeavored to procure more favorable conditions for the kitchen by the radical step of entirely removing it from its dependencies and placing it in the top story or upon the roof of the structure. The conse-

quent difficulties of service and servants have, however, left the experiment still a very dubiously successful one. For servants are going to complain at endless "running," the housekeeping is to become complicated and onerous, the food is to be served lukewarm, unless the dependent rooms and their separate arrangements are "handy." Kitchen and pantry must be adjacent as well as close to the dining-room. Kitchen closets, scullery, servants' hall, servants' dining-room, pastry room and cold room must form an organic group, or housekeeping will be found difficult.

Another consideration in determining the position of the kitchen is that of easy access to it from outside, and easy access for the cook or scullery maid to such stores as can not be kept in the immediate vicinity. The grocer and butcher and iceman must, if possible, be able to serve the house with their supplies without crossing other apartments or long corridors. Neither should the servant, in her turn, have too far to go to answer their call.

With this general dependence well in mind, what general conditions are of vital importance in determining the position of the kitchen? First of all, ventilation. The preparation of the food carries with it, by necessity, odors and heat which must be taken care of and not permitted to penetrate



A Kitchen Floored, Walled and Ceiled with Tiles



Compactness Is a Notable Element in Planning a Successful Kitchen

other portions of the building. The nearest rooms are, of course, those which will suffer first. If these rooms are directly above, they are bound to be hot, especially in summer, and must thus be planned for use either as pantries, serving-rooms, or possibly servants' bedrooms. If, as is the case in most country houses, the kitchen is situated on the same floor as the dining-room, its odors easily penetrate into the dining-room, unless forethought takes care of them. Heat and smell will best be disposed of by plenty of windows on at least two sides of the room, and preferably three, so as to furnish cross currents of air, ventilating and cooling. There should always be a generous, steel-bound, japanned iron hood on the chimney, gathering the heat and odors rising from the range directly below it and pouring them into a register to a ventilating flue in the chimney.

In city residences, where the ventilation of the kitchen is extremely faulty and there is no natural

draught obtainable in the vent flue, a small electric fan placed in it will provide very satisfactory results.

The odors of the kitchen must not reach the dining-room. The rooms should never be placed side by side. If they are on different floors be certain that the dumb-waiter will not directly transmit the odor and heat from one to the other. If they are on the same floor (the usual case in country houses), take care with the intercommunicating doors. The pantry or serving-room is generally the intermediary chamber. It is then through the kitchen-pantry and pantry-dining-room doors that the odors and heat will come. The door leading from the kitchen to the pantry should never be opened during the serving time. It should remain tightly closed and the dishes should be passed through a slide in the door, and which is always closed except when the food is being served. This slide should merely be wide enough to take the largest platter. A small folding leaf

on each side of the door, acting as a table to rest the plate upon, will be found of considerable help to the servants. Still better than a slide is a revolving drum placed at a



Glass Topped Tables in the Center of the Room

convenient height in the panel of the door, in which the dishes are placed. This fits within a similarly shaped outer shell, revolving the dishes into the room and practically allowing no odor to enter with them.

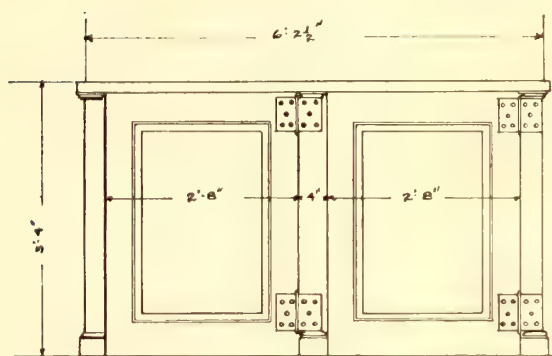
The kitchen must be placed where it can receive a cool summer breeze—the best of cooks will give warning if she is compelled to work all day long in a piping hot room. Height of ceiling in it is of the greatest value, for the hot air collects under the ceiling.

Locate the range in as cool a position as possible. The boiler, which is likewise a great source of heat, may be hung against the ceiling, or, still better, taken out of the room entirely and placed say, in a well-ventilated closet directly back of the range, to which piping connections are convenient. Then, most important of all, the kitchen must be made of the proper dimensions. Its furnishings encroach more than in any other room of the house upon its floor space. A small kitchen, planned say twelve by fifteen feet, has dwindled down to a hopeless working room when the dressers and

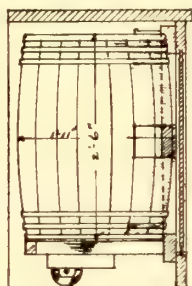
by pipe coils, others by cast-iron water-backs. It is thus a very difficult matter to definitely advise any special type of range when a housekeeper asks which one is the best and “whether to use the American type of cast-iron or the French wrought-iron range.” Unless the cook understands a French range, she will generally complain of its working. The range the cook is used to is generally the one she swears by and from which she procures the most satisfactory results. The French ranges are, owing to their perfected arrangements and expensive fittings, the more costly. The extra-heavy firebrick tiles, the duplex grates, the steel trimmings, the wrought-iron protection rails, all increase their cost.

To take two frequent types, a double oven, American range, four feet six inches long, with water-back, costs \$85.00, while a French range of the same length costs \$140.00 or very nearly double. For the average sized family a four foot six inch range should amply suffice. If large dinners and meals at all hours of the day are required, larger sizes will naturally have to be selected. A couple of plate

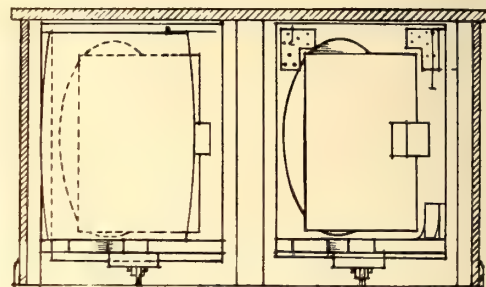
Illustrations Showing the Kitchen Cupboard and Barrel



FRONT ELEVATION



CROSS SECTION

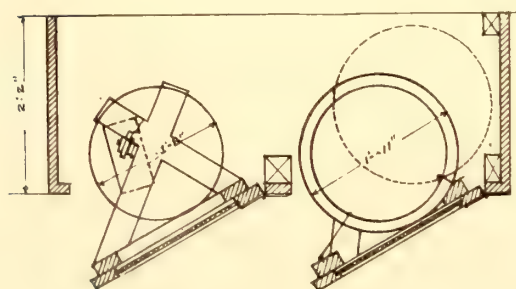


REAR ELEVATION

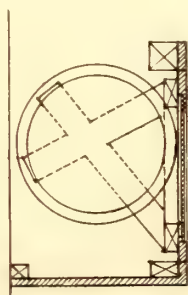
range and requisite plumbing fixtures have been set in place. Eighteen by twenty feet is none too liberal for the average house—the range, if not brick set, projects two feet six inches and its hearth should project the same distance. This alone takes one-quarter the size of our room.

The selection of the range is naturally a most important problem, affecting not only the kitchen but the entire domestic arrangements of the family. Its selection should not only be influenced by the amount of cooking required, but

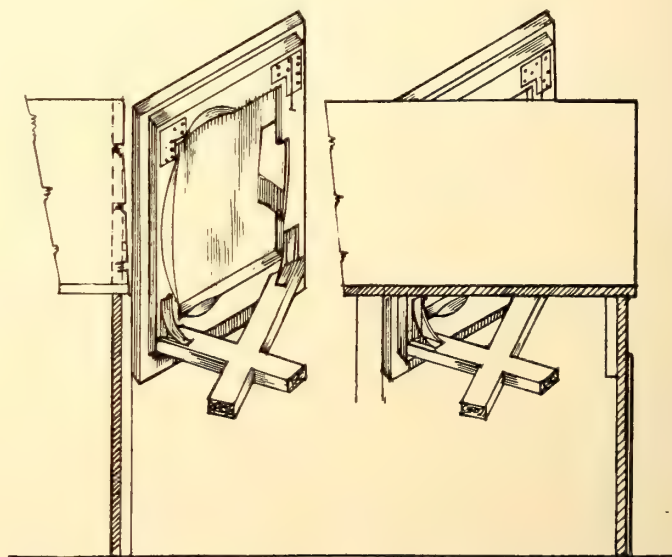
racks as well as the canopy are essential, whatever type is chosen. By the side of the range, or united with it, may be all manner of arrangements for special cooking, such as combined roaster and broiler, special pastry ovens and confectionery stoves. Whatever they may be, they should all come



PLAN—DOORS OPEN



PLAN
DOOR CLOSED



ISOMETRIC PROJECTION
REAR VIEW.

also, often, by the amount of hot water used throughout the house. It must have a fire large enough to heat the water-back to create a sufficient supply of hot water, and at the same time the fire must be so proportioned that it also heats the ovens to do the necessary cooking, and burns with a reasonable amount of attention. In purchasing a stove, one must first assure oneself that there is good circulation of the products of combustion around the oven, so that the oven will be evenly heated all over, and, secondly, that the oven is well ventilated—that ventilation is possible without chilling the food which is cooking. The various range manufacturers have their own different devices for this, as well as for the heating of the water—some accomplishing the latter

under the same canopy. The hearth, if the floor is laid of any kind of non-fireproof material, should be run the total width of the range and made to project two feet or two feet and a half, so as to catch all coals that may be thrown out.

Cleanliness, durability and practicability determine the materials to be used in the various surfaces. Any wooden floor, even the best of hard Georgia pine, will be found hard to keep clean, or, if kept clean, hard to give a satisfactory surface. Whatever finish or surfacing the wooden kitchen



Convenience to Use Is the Chief Rule of all Kitchen Furnishing

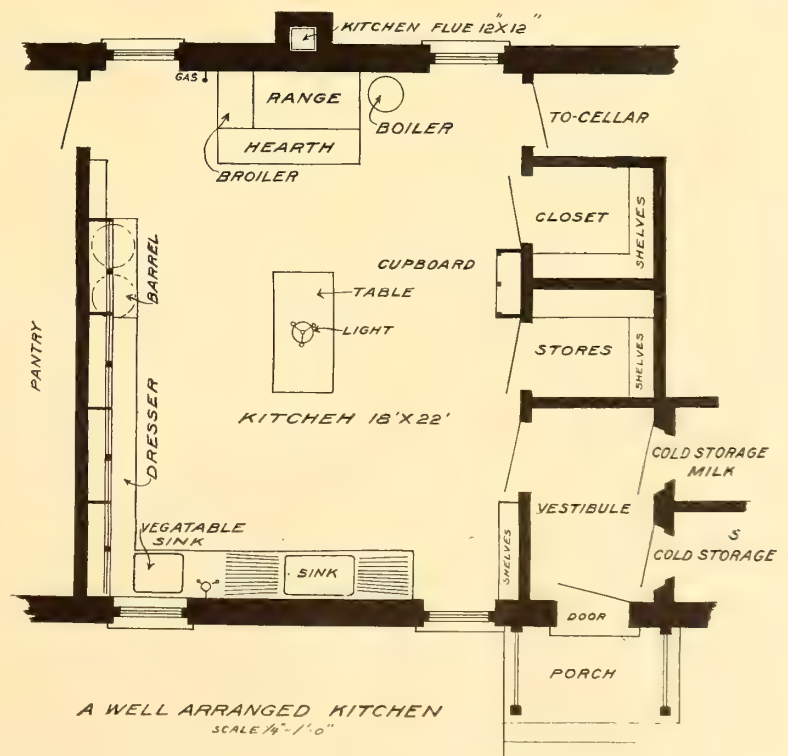
floor is given, it is bound to come off after having received a daily scrubbing with soap and hot water. It is thus advisable to cover a wooden floor with a material similar to linoleum. A tile or brick or briquette floor is far better—here the surface will stand any amount of wear and can easily and perfectly be washed. Best of all, however, is a floor of one of the several new fireproof and sanitary flooring preparations made up of varying quantities of sawdust, plaster, cement, asbestos, etc., such as Taylorite, Asbestolith, or Lignolith. The hose may be turned on them as easily as on the tile floor, and they have the advantage of being neither as cold nor as hard on the feet as a hard burnt clay. The base, with a rounded angle, should be made of the same material.

On the walls nothing is nicer than a white glazed tile, using likewise a tile base and trim. Expense will probably prohibit its use throughout, but the attempt should be made to employ it, or a white enamel brick, up a portion of the walls, or for the surfacing of the chimney front and the backing of the plumbing fixtures. Where it is out of the question, the best substitute is three or four good coats of light paint on walls as well as ceiling, completed with a gloss finish. If the floor is tiled, an unglazed tile should invariably be used, the glazed being slippery and dangerous.

These surfaces have a secondary value in resisting the steam constantly emitted from cooking and boiling pots and kettles. The woodwork must similarly have a practical finish. Painting it white with an enamel finish undoubtedly looks the best and cleanest, but the good looks will not last long—it has to be repainted or refinished. If the natural wood is left, either without any stain or with a very slight one, and finished with a spar varnish or "supremis" finish, a surface will be procured which will both last well and wash perfectly. The trim, the base, the chair rail (very necessary for protection if the wall surfaces are of plaster), the stools, the doors—all the woodwork in fact—should be as plain in detail as possible. For trim a seven-eighths inch by four inch board, rounded at the corners with a plain quarter-round mold to cover the joint between the wood and plaster, could not be improved on. Dirt as well as heat should be

the enemy of every cook. The various plumbing and heating connections will necessarily run along the ceiling. They can, just as well as the walls, be neatly finished. The hot and cold water pipes should be bronzed or painted and the valves neatly labeled—the hangers likewise. The heating pipes should have asbestos jackets, to protect from radiation as well as for looks. Brass bands should cover the joints or painted canvas sewed outside. A copper boiler, though costing just about the double of a galvanized iron one, is worth the difference in price because of its looks alone, if not from the fact that one may be certain of its water not containing rust. This may be doubtful in the case of the galvanized iron one.

The question of general appearance holds true in every detail of the kitchen. There is no reason why it should not look spik and span and orderly. There should be a place for everything, either a shelf or a drawer or a table or a cupboard. It should be so neat that a meal prepared in it with the guests all present, or a chafing-dish party held over its table, should be as appetizing as if served in the dining-room. The tables and dresser tops, either of clean scoured, well oiled ash or of glass, may often be cleaner than the polished mahogany. The different condiments and spices in the small cupboards may be made to look as attractive through the diamond or square-paned glass doors as books in library cases. The shining pots and pans in neat order on their racks and shelves, the tin boxes, each in its own place, may make a most attractively furnished room of what is generally considered the least so in the house.



In the kitchen everything must be "handy" as well as have its specially appointed place. The cook can not leave her dishes to go far, and is constantly in need of different utensils and spices and articles of food. The cupboards and dressers should be arranged to contain, in the most utilitarian and economical manner, everything which can not go in adjacent closets. These should merely be for such articles as are too large for the kitchen or only occasionally required.

The cupboards are most serviceably made two feet four inches deep, to a height of three feet four inches, and then above about twelve inches in the clear. The lower and deeper compartments should have solid wooden doors and be arranged to take all such pots and pans and kettles as are unsightly. Some of them should also be made so as to take the large supply barrels for sugar and flour. The door and a bottom shelf are made in one, the shelf resting and running on wheels, when the door is opened. The barrel standing on the bottom of the cupboard is thus swung out into the room for use. The lower compartments being deeper than the upper ones creates a shelf at a convenient height and a little over a foot deep. This may naturally constantly be utilized as a minor table.

The upper portion of the lower compartments should have narrow drawers for the knives and forks and spoons of the kitchen table, as well as the many small utensils used in baking or in molding or forming various courses of food.

The upper dressers may either stand directly on top of the lower wooden cases or come about a foot above, resting on brackets, and thus in the latter case leaving a deep table top about two and one-half feet. All the upper doors should be glass, and preferably made to slide past each other on brass tracks. If they are hinged they prove often in the way, by their projection into the room when open. The shelving should be seven-eighths of an inch thick and on movable pegs, so that it may be adjusted to the varying height of what it is to carry. The bottoms of the shelves should have hooks for cups, the tops should have grooves about an inch from the wall in order to hold plates upright without danger of their sliding and breaking. If there is no servants' hall, all the kitchen china and crockery will be kept here, apart from that in use at the master's table. Glass shelves are, of course, ideal, but a most expensive luxury.

The sink is naturally one of the most important fittings



Chairs of the "Mission" Type Are the Most Serviceable for the Kitchen

of the kitchen. A good-sized one is about two feet broad by three feet long by seven inches deep, with grooved drain-boards on each end made of ash and each thirty inches long. Often a separate vegetable sink is added. This need naturally not be over eighteen inches or two feet long. A sink made of the yellow or Colonial ware will be found less expensive than the white porcelain and equally good. The wall directly back of the sink must, of course, if of plaster, be protected from the constant splashing by either tiles or marble or slate, running up the wall a foot and a half. The sink must be where there is good light and generally some distance from the range. Near the sink should be the towel rack.

The kitchen table is best placed in the middle of the floor, and should have a top that can constantly be scoured spotlessly clean. The space underneath is valuable either for drawers or cupboards.

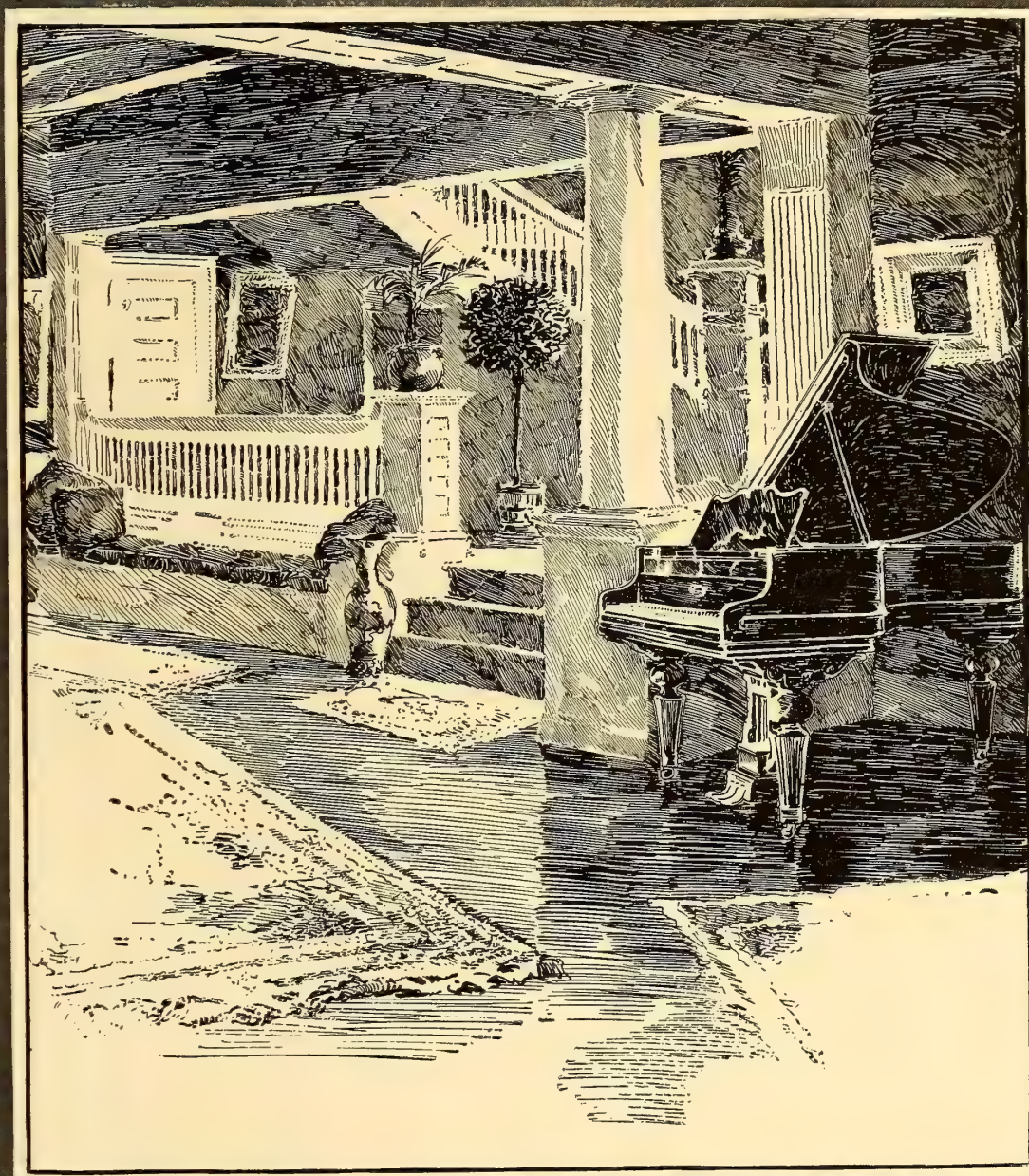
What chairs or other furniture there is should be of straight, simple lines—of the cheaper "Mission" types, with caned or rush seats. They are well worth the slight difference in price between them and the ugly turned stock patterns of kitchen chairs with legs kept from straddling by copper wire.

The artificial lighting of the kitchen can best be done by a reflector of the simplest character, placed in the center of the ceiling over the table, and with a quantity of bulbs meeting the demands of the size of the room. Three bulbs will in most cases be found sufficient. In addition, there should be a single side bracket, with practically no arm, above and to one side of the sink.



Chickering

Pianos



A DEPARTURE IN TONE PRODUCTION. ¶ Recent experiments in the direction of tone production made by us have resulted in the perfection of a notable Grand Piano, the Style X (next in size larger than the famous Quarter Grand). ¶ It is an instrument of rare and exquisite tone, in which quality and not quantity has been the first consideration. ¶ It is a new departure in modern piano building, and in inviting attention to it we do so with much pride in the success of our efforts.

CHICKERING & SONS, 826 Tremont St., BOSTON

Established 1823

Catalogue upon request



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING
COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.

Denver

CHICAGO

Trenton

Paint That Wears is Paint Based on Oxide of Zinc

THE NEW JERSEY ZINC CO.

71 Broadway, New York

We do not grind zinc in oil.

A list of manufacturers of zinc paints sent on application.

WINDOW-GARDEN WORK

By Eben E. Rexford

THE beginning of winter is apt to show increasing activity in the window-garden. Plants potted from the outdoor garden in fall should have fully adjusted themselves to the "new order of things" by this time, and begin to make vigorous growth. If they have not already done so, the probabilities are that something is radically wrong with them, and that, whatever the trouble is, it is something not likely to be overcome in time to make the lagging plants valuable for winter use. If a plant is not in shape to begin its winter's work now, do not waste further time and labor on it, but put it aside and concentrate attention on such as show a disposition to do what is expected of them.

Do not attempt to make healthy plants out of sickly ones by feeding rich food to them. This makes a bad matter worse, for they are not in a condition to digest or assimilate rich food. Fertilizers are for the benefit of plants which are doing active work. Plants at a stand-still need none.

"A good fertilizer is any kind of plant-food that contains the essential elements of plant-development. Liquid manures, obtained by soaking the nutriment from barnyard matter, bone meal, and the various combinations in which phosphoric acid, potash, and other elements of plant-growth are united according to the formulas of scientific men, are all good. Bone meal appears to be the basis of most flower-foods on the market. Most plants flourish under its application. Liquid manure, from barnyard soil, is an ideal fertilizer for nearly all plants, but it is not generally available. In order to test the value of any preparation advertised as a fertilizer for plants in the window-garden, experiment carefully with it, before applying it generally. Try it on a few plants, and watch its effect. Keep note of the quantity used, and the frequency of application, and thus secure data to guide you in its future use.

The red spider does more damage in the window-garden in the winter than all other insects combined. This, to a large extent, because it is so apparently insignificant that we fail to see how it can accomplish much. But those who think it incapable of doing great harm, because of its size, underrate its ability to do deadly work. Let alone, it will ruin our strongest plants in a short time. Very often its presence is not suspected. But if our plants show yellowing leaves, and take on a sickly appearance generally, it is well to make a thorough examination of them, with a view to determining the cause of the trouble. Take some of the yellow leaves to a strong light, and examine the underside of them with the aid of a magnifying glass. The chances are that you will discover hundreds of tiny creatures, wrapped about with webs hardly visible to the naked eye, and these creatures, looking in their magnified proportions like nothing else so much as grains of cayenne pepper, are the insects you have good reason to stand in fear of, if nothing is done to interfere with them. We frequently see tobacco-water and other applications of a similar character advised in fighting this pest, but all the value there is in these preparations, as a remedy for the red-spider, is in the water they contain. Moisture, applied directly to the plant, therefore to the spider, or in the atmosphere, is the only way by which he can be got rid of, or kept in check. Clear water is quite as efficacious as any infusion of drugs. If your plants are badly infested, use this treatment: Heat a tubful of water to 120 degrees Fahrenheit, testing it by a reliable thermometer. Immerse the plants in this

Gregory's Seed Book

Worth Dollars To You

Let us help you make your planting a success by sending you our new catalogue. It contains our seed experiences of over fifty years, gives expert advice on the raising of various vegetables and describes the best of the old and new varieties.

This book has been the means of turning many a failure into success. Write to-day for a free copy.

We sell all kinds of flower and vegetable seed from five cents' worth up to the outfit for a farm.

J. J. H. GREGORY & SON,
MARBLEHEAD,
MASS.

GREGORY'S SEED BOOK

Take off your Hat to the MYERS

For whether you need Hand or Power Pumps, Hay Ties, Store Ladders, Gate Hangers or Pump Fixtures

MYERS' are Always Best

Quality and Service is the Myers slogan—you've always got your money's worth and a bargain besides when you buy from MYERS.

500-Page Catalog with close prices FREE.

P. E. MYERS & BRO. Ashland, Ohio

Colonial Houses FOR MODERN HOMES

A collection of designs of Houses with Colonial (Georgian) details but arranged with modern comforts and with the completeness of the twentieth century.

Written and Illustrated by
E. S. CHILD, Architect

They show large, correctly drawn perspectives, full floor plans, and complete descriptions, with estimates of cost. The designs are new, original, unique, consistent, but not stiff nor constrained. Made, not by an artist, but by an architect. They combine beauty of exterior with complete and convenient interiors, with Kitchens, Laundries, Pantries and Closets carefully and skilfully considered.

If you are at all interested in the subject, you will enjoy this publication.

PRICE, *Postpaid*, TWO DOLLARS

MUNN & COMPANY

361 Broadway : : New York City

**American
Homes and Gardens
and
Scientific American**

To one address **\$5** per year Regularly \$6

Ideal Heating

Cheerful Winter evenings of cozy family comfort—hours so dear to the heart of wife and mother and restful to the bread-winner—are assured by our ways of Low Pressure Steam and Water heating with



AMERICAN & IDEAL RADIATORS & BOILERS

High winds cannot arrest nor chilling frost offset their ample, gentle, and certain flow of warmth. Do you know that the more any room or rooms are exposed to the cold, the more Steam or Hot Water will automatically move in that direction? Every nook and corner is thus made livable—enjoyable. No ash-dirt,

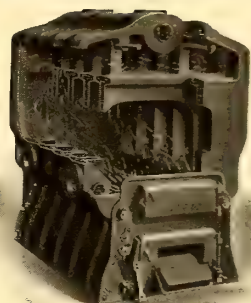
soot, and coal gases to vex the tidy housewife, as with stoves or hot-air furnaces—the needless tasks which make slavery for women.

Savings in labor, fuel, repairs, and the cleanliness in the use of IDEAL Boilers and AMERICAN Radiators (made in many sizes for cottages up to largest structures) make them paying investments—far beyond 3% on bank money.

If your coal bills are large and burly and you have scant comfort, why wait longer with five months' Winter ahead? OLD buildings can be newly fitted while the old heater stays in place and without disturbing occupants.

ADVANTAGE 10: Correctly proportioned circulation spaces inside of IDEAL Boilers and AMERICAN Radiators are a scientifically planned feature. Heat is taken from fire instantly by the Steam or Water; and the free, unobstructed circulation insures rapid deliveries of warmth to the rooms—which means full value of fuel money.

Write for valuable heating books (free) telling of all the ADVANTAGES. Sales Offices and Warehouses in all large cities.



Note the thin water sheets surrounding the fire surfaces of IDEAL Boilers, which bring quick, sensitive, full heating value from every ounce of fuel burned.

DEPT. 6

AMERICAN RADIATOR COMPANY

CHICAGO



THE "GLOBE"
is built on honor
and sold on merit

The "Globe" Ventilator

In Galvanized Iron, Brass and Copper
Also with Glass Tops for Skylight

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. *Smoky Chimneys Cured.*

"GLOBE VENTILATED RIDGING"

Manufactured by
Globe Ventilator Company :: Troy, N. Y.

Patented and Trade-Mark
Reg. U.S. Pat. Off.

Cattle Manure
in Bags *Shredded or Pulverized*

WIZARD BRAND MANURES

Best for all indoor and outdoor work. No bad odor. Easily applied. Delivered east of Missouri River. \$2.00 per bag (100 lbs.) Write for circulars.

The Pulverized Manure Co.
21 Union Stock Yards, Chicago.

DINGEE Roses

are the best. Always on their own roots. Plants mailed to any point in the United States. Safe arrival guaranteed. Over 60 years' experience. Flower and Vegetable Seeds a specialty. Write for **New Guide to Rose Culture** for 1908—the leading rose catalogue of America. 134 pages. Mailed free. Describes over 1000 varieties. Tells how to grow them and all other desirable flowers. Established 1850. 70 greenhouses.

THE DINGEE & CONARD CO., West Grove, Pa.

EASY TO PUT ON

CORTRIGHT METAL SHINGLES

SAVES COST OF INSURANCE

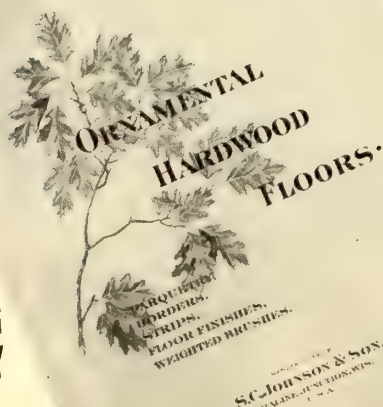
TWO important features that every architect should appreciate. Saving in labor—first cost. Making the building fire-proof—after cost, are two features the owner of the building is pretty apt to want to discuss. Our 56-page booklet, "Rightly Roofed Buildings," is full of pointers of interest to architects—it's free.

CORTRIGHT METAL ROOFING CO., Philadelphia and Chicago

Write For This Catalog

If Interested In Hardwood Flooring

It's

FREESee Coupon
Below

We have just published our new illustrated Catalog of Ornamental and Plain Hardwood Floors. It is the most elaborate and complete catalog of its kind ever issued and should be in the hands of every Carpenter and Builder. We will gladly send it FREE to any interested person who will write for it—(see coupon below).

This catalog contains interesting information about the different kinds of floors—

Ornamental, Plain and Parquetry and about the various kinds of woods.

We have been making fine hardwood floors for over twenty years and are in position to give you the best value, and prompt service for your money.

We are located where we can obtain all the different hard woods to good advantages. We employ skilled workmen only—nearly all our men have been with us for years.

We ship our floors anywhere. Any good carpenter can easily lay our floors over old floors. When you want good hardwood floors get

Johnson's Ornamental Hardwood Floors

"The World's Standard of Excellence"

Here are two beautiful designs with prices. We have hundreds of others.

S. C. Johnson & Son, Racine, Wis.

Please send me FREE your illustrated catalog of Ornamental and Plain Hardwood Floors. I understand there is no obligation incurred on my part.

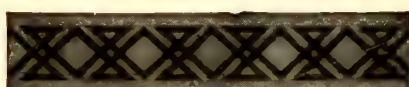
Name.....

Town.....

State.....



Border No. 707—8 inch. Oak, Maple, Cherry and Dark Oak, 28c. linear foot. Corners 35c. each.



Border No. 836—10 inch. Oak and Dark Oak. 40c. linear foot. Corners 60c. each.

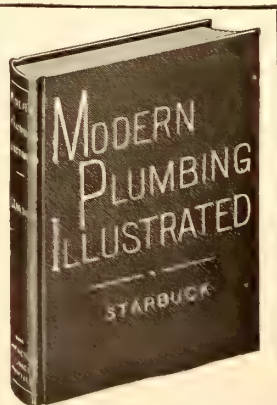
In this age of keen competition quality is often sacrificed for price. This is particularly disastrous in our line, for if a floor is not made of wood carefully selected and cured and extreme caution used in every detail of manufacture, the floor, instead of being one of the most beautiful and satisfactory features of the home, will be a source of constant care, annoyance and expense. The fact that we have been in business for so long, and have built it up until our trade extends all over the world, is evidence that our goods are satisfactory and our methods right.

Don't forget—send coupon to-day for this catalog. It will interest you and it's absolutely FREE.

S. C. JOHNSON & SON, Racine, Wis.

"The Wood-Finishing Authorities"

Modern Plumbing Illustrated



By R. M. STARBUCK

400 (10¼ x 7½) PAGES

55 FULL PAGES OF ENGRAVINGS

PRICE, \$4.00

A comprehensive and up-to-date work illustrating and describing the Drainage and Ventilation of Dwellings, Apartments and Public Buildings, etc. The very latest and most approved methods in all branches of Sanitary Installation are given.

Many of the subjects treated in the text and illustrated follow in the next column.

MUNN & COMPANY, Publishers
SCIENTIFIC AMERICAN OFFICE, 363 BROADWAY, NEW YORK

SOME OF THE SUBJECTS TREATED

Connections, sizes and all working data for all Plumbing Fixtures and Groups of Fixtures
Traps—Venting
Connecting and Supporting of Soil Pipe
House Trap and Fresh-Air Inlet
Floor and Yard Drains, etc.
Rain Leaders
Sub-soil Drainage
Floor Connections
Roof Connections
Local Venting
Bath Room Connections [etc.
Automatic Flushing for Factories, School Houses, Use of Flushing Valves
Modern Fixtures for Public Toilet Rooms
Durham System
Plumbing Construction without use of Lead
Automatic Sewage Lift—Sump Tank
Disposal of Sewage of Underground Floors of High Buildings
Country Plumbing
Cesspools
The Electrolysis of Underground Pipes
Septic Tanks and Sewage Siphons
Pneumatic Water Supply, Rams, etc.
Examples of Poor Practice
Roughing—Testing
Continuous Venting for all classes of Work
Circuit and Loop Venting
Use of Special Waste and Vent Fittings
Cellar Work
House Drain—House Sewer—Sewer Connections
Plumbing for Cottage House
Plumbing for Residence
Plumbing for Two-Flat House
Plumbing for Apartment Houses
Plumbing for Office Building
Plumbing for Public Toilet Rooms
Plumbing for Bath Establishment
Plumbing for Engine Houses
Plumbing for Stables
Plumbing for Factories
Plumbing for School Houses, etc. [by Electricity
Thawing of Underground Mains and Service Pipes

bath, allowing them to remain submerged about half a minute. It would seem to the amateur that such a bath must kill almost any plant, but even such tender plants as the begonia are not injured by it. Such a bath kills off most of the insects, and puts the plant in a condition which will enable you to keep it in health, if, after this "heroic treatment," you do not neglect to make liberal use of water, daily, in the form of a spray, and by evaporation. Always have some evaporating from stove or register. Shower your plants thoroughly, and regularly, and "between times," if it is convenient to do so. Do not be satisfied with a whisk-broom sprinkling. That is good, as far as it goes, but the trouble with it is—it doesn't go far enough. The aim should be, to get moisture enough to the hiding-places and haunts of the spider to make it so uncomfortable for him that he cannot do much harm. A dip-bath, three or four times a week, is advisable, because this makes it sure that no part of the plant fails to get wet, and wetness is what the spider objects to.

The aphid is found in most window-gardens, and if not checked promptly, it will do much damage. It breeds with astonishing rapidity, and when one is discovered to-day you may safely reckon on finding hundreds, if not thousands, next week. It appears to swarm, so rapidly and so prolifically does it propagate itself. Most amateurs are greatly frightened when its presence is discovered, but there is really little cause for alarm, if one is willing to take the trouble necessary to rout it. The most effective remedy I have ever tried is an infusion of tobacco, sold by all florists under the name of Nikoteen. This is a very highly concentrated extract of the nicotine quality of the tobacco-plant. All one has to do to prepare it for use is to add a little of the extract to water. It should be applied as a spray, or, if one prefers to do so, infested plants can be dipped in it. This is, perhaps, the best method of getting rid of the insects at once. After-applications will keep them away altogether, if given regularly, or so keep them under control that they do very little harm. The thing to do, is to get rid of them wholly, for, so long as any remain, they will make continuous effort to take possession of your plants, and if you slacken up a little in your preventive treatment, they will, before you are aware of it, have increased to such an extent that you will have to fight the war of extermination over again. The best thing to do, after once getting rid of them, is to make use of the nicotine bath so frequently that they have no chance to re-establish themselves. This insecticide has none of the nauseating features peculiar to fumigation. The latter often sickens a person of delicate stomach, and the intensely disagreeable odor of the burning tobacco will penetrate to all parts of the house, and cling to everything with which it comes in contact with a persistency which makes many airings necessary before it can be completely eliminated. The idea seems to prevail, to a considerable extent, that fumigation is the only really effective method by which the aphid can be controlled, but such is not the case, as the amateur will soon admit if he follows the instructions I have given above. It is absolutely necessary that one's plants be kept free from insects in order to secure best results from them. Keep that in mind.

Careful watering is important. This means giving the amount of water each plant needs, no more and no less. It has been said so often that it seems hardly necessary to repeat it here, that the only rule to follow is—to apply water when the surface of the soil has a dry look, and then give enough to thoroughly saturate all the soil in the pot. This is a general rule, which must be modified

to fit the requirements of the case. Some plants require much more water than others. It would never do to let them get really dry. Were this to happen, they would receive a check from which they would be a long time in recovering. A geranium may get so dry at its roots, that its leaves wilt, but give it a fresh supply of water and it straightens up almost immediately, and no bad results follow. But let this happen to a heliotrope, and note the difference. The plant may not *die*, but it will frequently drop its leaves and you may have to cut it back and renew it almost entirely—a process requiring months of time and no little attention. Such results can be prevented if one is enough in love with her plants to study them as she does her children, and vary the treatment given them according to their peculiar habits and requirements.

THE ACTION OF GRASS ON FRUIT TREES

THE reports of the Woburn Experiment Fruit Farm near Bedford, England, describing the work of the Duke of Bedford and Spencer U. Pickering, for the years of 1897 to 1905, include accounts of most significant and interesting observations upon the effect of one plant upon another through the apparent intervention of toxic materials. These accounts are worthy of a rather full presentation here.

The two authors observed, in their report for 1897, that when the soil surrounding their young apple trees was allowed to be occupied by weeds or was sown to grass, the trees very soon showed a much poorer growth than that exhibited by other trees around which the soil had been kept cultivated. The effect was much more pronounced in the case of grass than in that of weeds. In considering the possible causes of this deleterious effect of the herbage it was pointed out that the grass and weeds probably absorb the nutrient materials of the manure, prevent the normal aeration of the soil, and promote evaporation from the soil both directly through transpiration and indirectly through preventing cultivation and the formation of the usual dust mulch. In this report the authors attributed the bad effects observed mainly to the last-named cause and pointed out that the greater injurious action of the grass was probably due to the fact that it is perennial and active throughout the year, while the weeds dealt with were largely annuals.

Three years later, in the report of 1900, the statement was made that about the worst treatment to which a young apple tree could be subjected was that of sowing the surrounding soil to grass. Trees which were purposely improperly planted and afterward entirely neglected exhibited a better growth than did trees surrounded by grass. Normally cultivated trees increased in weight in four years from ten to thirty fold, while those surrounded by grass barely doubled their weight. "Neither weeds alone nor weeds coupled with careless planting and total neglect produced such bad effects as the grass." In the yield of fruit the trees surrounded by grass showed a deficiency of 89 per cent., the neglected trees of 82 per cent., and the trees of the weeded plots of 55 per cent. below the normal. The normally green fruit of the trees surrounded by grass, instead of being green when ripe, was either red or practically colorless and of a waxy aspect and was always undersized. The leaves of these trees were deficient in chlorophyll and were shed about two weeks earlier than those of the normally grown trees.



Effectiveness of Hardware

The architectural effectiveness of a house may be emphasized by the character of the hardware trimmings. The importance of right selection cannot be too strongly impressed upon the prospective builder, so if you are planning to build a new home, or remodel the old, choose the hardware *yourself*. In this way you can keep the cost at its lowest figure, and at the same time know that in quality and appearance the hardware is in keeping with your ideas of what is appropriate.

SARGENT'S Artistic Hardware

is made in a wide range of designs that accord with any architectural style or period.

Sargent's Book of Designs Sent FREE

is an invaluable aid in the selection of right hardware. Illustrates and describes nearly seventy different designs to harmonize with your new home.

Don't order hardware before seeing this book. It's a costly book to send free, but it's yours for the asking. If interested in the Colonial—ask for our Colonial Book in addition to the Book of Designs.

A postal request will bring you complimentary copies by return mail.

SARGENT & CO.,
156 Leonard St., New York

TOBEY HANDMADE FURNITURE

(Not "Arts and Crafts")

is submitted as the most elegant furniture procurable in America today.

Made of beautifully grained, solid woods, in a wide variety of patterns and to order in special designs.

If you have need of furniture of the higher order we will be pleased to receive the details of your requirements. A booklet upon request.

THE TOBEY FURNITURE COMPANY

CHICAGO

WABASH AVENUE AND
WASHINGTON STREET.

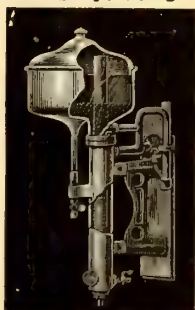
NEW YORK

ELEVEN WEST THIRTY-
SECOND STREET....



T.H. BROOKS & CO. CLEVELAND, O.
FLOOR & SIDEWALK LIGHTS.
OF EVERY DESCRIPTION.
SEND FOR CATALOGUE.

Gas Operating



THE JEWELL STILLS

(Patented in the U. S. and Foreign Countries.)

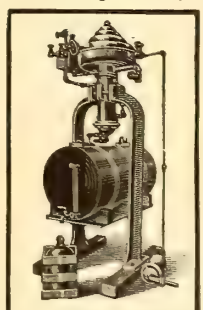
PURE WATER H₂O
For Drinking and Technical Use

A Jewell Water Still installed in your home will furnish distilled water of the highest quality, cool, aerated and palatable, for a mere fraction of what you are paying for bottled water.

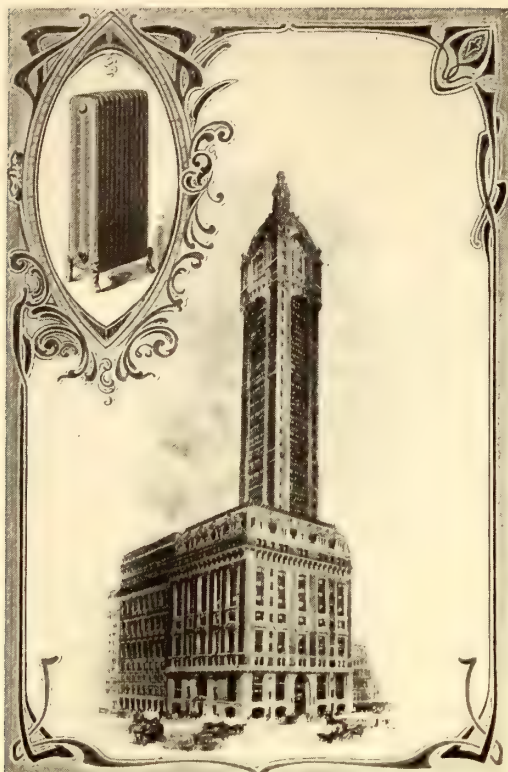
This Apparatus is finished in baked white porcelain enamel, inside and out—is automatic and will last as long as your stove. Costs no more than a common filter. Your architect has full details—see Sweet's Index, Nov. 1907.

We also manufacture large Distilling Apparatus for hotels, clubs, factories, etc., and water filtering and softening plants for all purposes.

Steam Operating.



JEWELL WATER IMPROVEMENT CO., 122 W. Jackson Boulevard, CHICAGO



Kinnear Pressed Radiators

Selected for
THE SINGER BUILDING, NEW YORK
Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

**On the Wall—Off the Floor
Out of the Way**

If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.

Write for Catalog "D" for any desired information.

THE PRESSED RADIATOR CO.
PITTSBURGH, PA.

A Leading Architect

Designed this Non-Smoking Fireplace

We have scores of other fireplace designs—some simple, some elaborate—that will suit if this does not appeal to your artistic sense—all designed by America's leading architects, in conjunction with a practical fireplace builder who has devoted his life to the work of perfecting a fireplace that will not smoke.

Our fireplaces leave nothing to be desired in point of true artistic beauty, practicability and honesty of construction. We can refer you to many men of wealth and position throughout the country who find solace and comfort in the warmth and cheer of our fireplaces. Being built of finest specially made brick, they should not be confused with the cheap wooden affairs so often seen in modern dwellings.

We suggest tints and colors to harmonize with the room decorations. Can be placed in new or old homes.

Our free Book of Designs, sent for the asking, shows a pleasing and suitable variety to meet individual requirements.

Our prices are from \$18.00 upwards.

COLONIAL FIREPLACE CO.

2537 West Twelfth Street, Chicago



In this report the authors were inclined to explain the deleterious action of the grass on the ground that it robbed the trees of their supply of nutrient salts and that it diminished the aeration of the roots. The true explanation of the observed phenomena was then sought for by a carefully planned series of experiments, the results of which were presented in the later reports.

In the report of the Farm for 1903, a number of valuable additional points were brought out. The action of grass was found to be quite as deleterious on old trees as on young trees, and the injury produced was independent of variety or root stock. The roots of trees injured by the grass were examined and found to be obviously unhealthy, long and straggling, dark in color, and more slender than normal roots. They showed no tendency to grow downward away from the grass.

Young trees planted in a pasture, with all the sod replaced around them, died during the first season, whereas, when even a small area of sod was permanently removed they lived. In another case where holes three feet in diameter were opened in the sod, the trees planted, and the sod replaced, at the end of two seasons the trees which were still alive exhibited a growth 32 per cent. below the normal, and the mortality of the whole series was 72 per cent.

Trees eight years old from graft, growing and fruiting normally, were grassed down. Even in the first season the foliage and bark assumed a peculiar light color, characteristic of the trees in other grassed plots, and growth was practically nothing. A small area of sod left around a young tree was shown to retard growth immediately after planting, but as the roots penetrated beyond the grass area an increase in growth accompanied by a more healthy appearance became manifest. Conversely, when the sod was permanently removed for an area of several feet around the trees when first planted, the trees grew well until their roots had penetrated outward to the surrounding grassed soil, after which they began to show the usual and unmistakable effects of grass, the leaves yellowing earlier in autumn than in normal cases and the fruit of green varieties turning red on ripening. When trees were subjected to the action of grass on one side only the branches on that side showed the grass effects, while the others appeared normally healthy.

The facts just stated argue very strongly against the supposition that the ill effects of the grass are to be considered as due to removal of nutrient salts, to excessive evaporation, or to inadequate aeration. These three possibilities were thoroughly tested by experiments both in the open and in especially constructed iron pots. Using pure sand and natural soil, which had been analyzed to determine its content in nutrient salts, it was definitely shown that the action of the grass upon the trees could not be ascribed to its removing nutrient material from the soil. Artificial applications of water showed just as clearly that this effect could not be considered as due to drought conditions induced by the presence of the herbage. Cultures in which air was excluded from the soil, and other similar ones in which the soil was artificially aerated, brought out the fact that exclusion of air could not be the cause of the grass effect. Indeed during the two first seasons of air exclusion in the field—by means of broad bands of sheet iron and the cementing over of the soil surface—the growth of the trees and yield of fruit were actually in excess of those exhibited by the control trees. Artificial aeration of the soil around trees in grass had no appreciable effect. It seemed possible that the grass might produce its effect through increasing the amount of carbon

dioxide in the soil. But determinations of the amount of this gas present in the soil of the various plots showed less carbon dioxide in the grassed-over ground than in that without grass. Furthermore, the artificial introduction of carbon dioxide into the soil of pot cultures had no appreciable injurious effect upon the trees.

The effects of differences in the temperature between the grassed and open soil were also studied, and it was again found that this factor could not possibly explain the injury produced by grass.

Strong root pruning every year stunted the growth of the trees much more than did the presence of grass, but had a different effect. These trees were prevented from dying only by artificial application of water, yet they showed none of the effects produced by grass, their leaves being green and as normal as in well-fed trees.

In view of this mass of evidence the authors concluded in this report, "that this action of grass is not merely a question of starvation in any form, nor of any simple modifications of the ordinary conditions under which a

Van Dorn Iron Works Co.



PRISON, HOUSE & STABLE WORK

**JOIST HANGERS
LAWN FURNITURE
FENCING, ETC.**

CLEVELAND, OHIO



Standing Seam ROOF IRONS

CLINCH right through the standing seam of metal roofs. No rails are needed unless desired. We make a similar one for slate roofs.

SEND FOR CIRCULAR

BERGER BROS. CO.
PHILADELPHIA

Study Architecture

EASY LESSONS, or Stepping Stone to ARCHITECTURE.

By THOS. MITCHELL.

A simple text book telling in a series of plain and simple answers to questions all about the various orders as well as the general principles of construction. The book contains 92 pages, printed on heavy cream plate paper and illustrated by 150 engravings, amongst which are illustrations of various historic buildings. The book is 12mo. in size, and is attractively bound in cloth.

Price, 50c. post Paid.

MUNN & CO., 361 Broadway, New York City

The A. J. Crawford Company

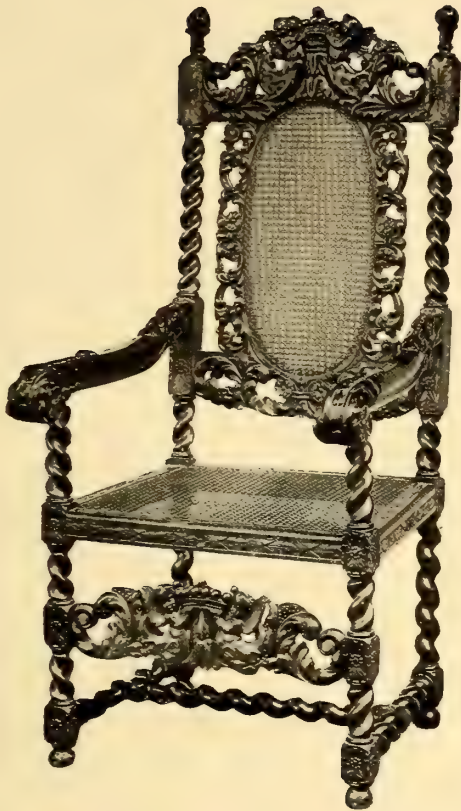
LONDON

NEW YORK

251-255 FIFTH AVENUE

AND

1 EAST 31st STREET



Faithful Reproduction of Charles II
Walnut Armchair

Interior Decorating Executed in
all the English periods.

The Largest Collection of
English Furniture in America.

Reproductions of Exclusive Old
English Models at Moderate Prices.

"The Little Shop"



A CONCRETE RESIDENCE AT PORTCHESTER, N. Y.



Do you want a home that will not burn, be a good investment, need no repairs, paint or fire insurance,
that is warm in winter and cool in summer? If you do our book

CONCRETE COUNTRY RESIDENCES

(Second Edition)

WILL HELP YOU

It contains photographs and floor plans of over **150 Concrete Houses**, ranging in price from \$2,000 to \$200,000. The houses not only show a large variety of design but are of several different systems of concrete construction. These are not imaginary sketches, but houses already built and designed by the best architects in the country.

This book, 168 pages (size 10x12), will be sent express prepaid upon receipt of \$1.00

THE ATLAS PORTLAND CEMENT CO., DEPT. 10, 30 BROAD ST.
NEW YORK



**Do you live in the country?
Or in the suburbs?
Or anywhere away from a city water supply?
How is your house supplied with water?**

Every one must have water. Water is necessary for animal and man; and nature demands it too for irrigation. The success of your home as a comfortable and sanitary abiding place, depends largely on your water supply. Artificial heat is required only in winter—artificial light only at night.

Water is required during all seasons—day and night. Impossible as it may seem, the subject of water supply had been almost entirely neglected until recent years, while great improvements had been made continually in lighting and heating methods. The water supply problem is now completely solved by

The Kewanee System of Water Supply

The Kewanee System insures every convenience, comfort and protection offered by the most up-to-date city water works system.

This means an abundant supply of water with ample pressure behind it, available at any hour of the day or night.

The Kewanee System will enable you to have that water delivered to the bathroom, kitchen, laundry, barn, garden, lawn—anywhere, under strong pressure.

The Kewanee System does away with the drudgery of carrying this water in buckets, a task which men shirk and women detest.

The Kewanee System obviates the old style elevated tank, which is expensive, unsightly and unsafe—which may leak, freeze or collapse.

And no leaky and inefficient attic tank need be used.

Use the water from your own well, cistern or other natural source of supply.

The plant may be placed in the cellar, located in a special pump house—or under ground if necessary—out of sight and thoroughly protected.

Kewanee Systems are easy to install, easy to operate and cost nothing for repairs.

The Kewanee System is not an experiment by any means.

Over 8000 Kewanee Systems in successful operation. Complete plants furnished to supply any requirements, from those of a cottage to a small town.

Kewanee Systems are now supplying country and city homes, clubs, hotels, schools, apartment buildings, public institutions and towns.

Our engineers can solve your water supply problem; and no charge will be made for preliminary prices and plans.

Every Kewanee System is fully guaranteed—we take all the risk and responsibility.

Let us show you what we can do for you.

Write for our complete 64-page illustrated catalog which explains everything.

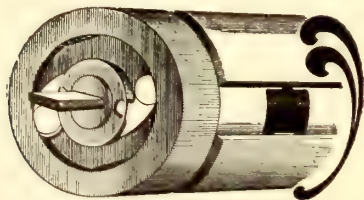
Ask for catalog No. 35.

Kewanee Water Supply Company, Kewanee, Illinois.

No. 32 Broadway, New York City.

820 Marquette Building, Chicago.

404 Equitable Building, Baltimore, Md.



Hartshorn Shade Rollers

Wood Rollers

Bear the script name of Stewart Hartshorn on label. Get "Improved," no tacks required.

Tin Rollers

Stewart Hartshorn

Philosophy of Protective Paint

A practical treatise on the subject of protective paint by a practical paint man of long experience. Write for free copy No. 106 B.

Joseph Dixon Crucible Co., Jersey City, N. J.

Details of Building Construction

By CLARENCE A. MARTIN

Assistant Professor, College of Architecture, Cornell University

Price, \$2.00

For Sale by

MUNN & COMPANY, 361 Broadway, New York

A collection of 33 plates of scale drawings with introductory text.

This book is 10 by 12½ in. in size, and substantially bound in cloth.

tree can thrive, but that grass has some actively malignant effect on the tree, some action on it akin to that of direct poisoning." Further, "it is no exaggeration to say that if the surface soil were entirely hidden from view, every tree which is grassed over could be identified with the greatest ease; the early bursting of the buds in spring, the green of the leaves in summer, their yellowish hue in autumn, the color of the bark and the color of the fruit are all equally distinctive. Whenever the grass even approaches a row of trees, then we get some telltale tints, as if the trees were feeling the contagion of their diseased neighbors." In summing up the whole matter, they say, "We can not yet even hazard a suggestion as to whether the poisonous action of the grass is a direct one or only an indirect one, operating through the agency of bacteria; for it is possible that the grass may remove certain bacteria necessary for the growth of the trees, or foster the growth of others prejudicial to tree growth."

In the report for 1905 this question was considered still further. It was pointed out that the presence of grass around the trees did not appear to affect the leaf-size, but that the leaf color was a direct indication of the presence of grass. The fruit of the grassed trees, normally green when ripe, or "occasionally tinged with red, were brilliant red in color, with the shaded parts showing a light green, transparent hue; indeed, nothing could be more remarkable than the appearance of these two rows of trees laden with their bright red crops in the midst of fifty or sixty rows of similar trees with their loads of the ordinary green fruits." The authors suggest that the deleterious effect of the grass causes a degeneration of the chlorophyll of the fruit, resulting in the waxy light green or deep red color. They observed that the grassed trees bore quite uniformly a larger crop of fruit than the normal ones and offered the explanation that this is an example of the well-known fact that any check of the growth of a tree, if not too severe, causes an increase in the crop. "In fact, the whole results observed are but an illustration of how a form of treatment, which when carried to excess is highly injurious, may, if adopted in moderation, lead to beneficial results. It is a case of a poison proving to be valuable in minute doses; but the beneficial dose is a very small one in this case."

An investigation was made into the question of what fraction of the entire root system of a tree had to be subjected to the grass treatment in order that the effect should be observed. The grassed area began five and a half feet from the stem of the trees studied. A trench was subsequently dug along the line separating the grassed from the ungrassed area, and all roots which extended outward beyond this trench were carefully removed. It was found that the air-dry weight of the roots which had penetrated into the grassed soil varied from 0.9 ounce to 2.4 ounces, while the thickest root cut was three-sixteenths inch in diameter in one variety and seven-sixteenths in another. "It will thus be seen that the roots entering the grassed area are almost infinitesimal in amount and can not represent more than one one-thousandth or one two-thousandth part of the whole root system of the trees. Yet they must have conveyed something to the trees which has been sufficient to modify the whole character of the crop. This points strongly to the view that the action of the grass is due to some active poison, and it is equally conclusive against the view (if, indeed, further evidence on that point were necessary) that the action can be explained by the grass depriving the trees of the necessary moisture or nourishment."

A number of different varieties of grass tried seemed to have about the same effect. Clover,

while stunting the tree growth, failed to produce the pale color of the leaves, probably, as the authors point out, on account of the increased amount of nitrates accompanying the clover treatment, which might well overcome the chlorotic action otherwise observed.

The soils on which the work just reviewed was carried out are shallow and underlain by chalk or similar impervious formations, so that the tree roots can not penetrate very deeply below the surface. It may be that the ill effects of grass here observed would not have been manifest had the soil been deeper, and this may explain why it is that, in certain parts of the United States and elsewhere, the growing of grass in apple orchards is not found to be harmful. The main interest lies in the fact that these careful observers and experimenters have been forced to the conclusion that on these soils grass is markedly injurious to fruit trees (observations were made which show the effect of grass on pears, plums, and cherries to be very similar to that so thoroughly studied in the case of apples), and that this injury is undoubtedly due to an active poison resulting, directly or indirectly, from the growth of the grass.

THE SUBURBAN ORCHARD

By E. P. Powell

WITH apples selling at three dollars to four dollars a barrel in the orchard, and at from five to seven dollars in the city markets, it is time we had an apple revival. There are very few new orchards being set in the New England States or in New York—excepting one or two counties near Rochester. Nine out of ten of those who do plant, deal with their trees as if they suppose the apple tree to be capable of entirely taking care of itself. The truth is that there is not another of our common fruit trees that is more subject to damage, or less able to get on without intelligent care than the apple. It needs specific knowledge and specific attention; and this attention must begin at the very selection of varieties. It must cover the planting, the mulching, the feeding, the trimming, and then the picking of the fruit.

We do not encroach on absolute verity when we say that not one orchard out of twenty is decently treated. Suckers are allowed to grow, until they have devitalized the fruit bearing limbs and rendered them too brittle to bear the weight of fruit. These should be regularly and constantly removed. The feeding of an orchard is equally important. I have one tree that has netted me one hundred dollars in four years. It has had perfect food in full supply. I know of no large orchard in better condition than those used for sheep pastures. The sheep pick up all the wormy fruit, and in that way very greatly reduce the damage from insects. They at the same time fertilize the soil and feed the trees. A thoroughly decomposed compost made of all sorts of litter, barnyard manure and coal ashes makes an admirable orchard dressing.

There is a common mistake made that spraying once or twice in the year is all the care that the fruit needs. This happens sometimes to be a fatal mistake. During 1907 our chief enemy has been an enormous development of lice. This was true of half a dozen or more States. They so weakened the power of the foliage that its functions could not be fulfilled in elaborating sap. Trees everywhere reverted to the wild state, and instead of giving us large, fine fruit gave us clumps of knotted, crab-like apples. It

Kimball Pipe Organs For Residences

as well as churches. With the self-playing attachment they become instruments for the amateur as well as the professional organist.

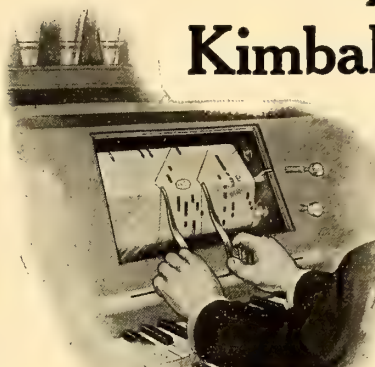
The Kimball Soloist

is a new feature for residence pipe organs and is the world's most remarkable achievement in self-playing devices. This "Soloist" or solo-device may be built in any organ. For further particulars write Pipe Organ Dept.

W. W. Kimball Co.

New York Office:
150 Fifth Ave.

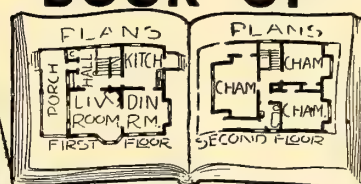
Chicago Office:
253 Wabash Ave.



FREE BOOK OF PLANS



This House in January Number.



FOR
Home Builders
With One Year's Subscription to



Our Plan No. 3 in January Number

Keith's Magazine

Plans for your new home with all the information you need to make home building easy and satisfactory. Keith's Magazine is devoted to home building, decorating and furnishing. Each 64-page issue contains plans for seven practical, artistic house designs, drawn by the best architects in the country. Keith's Magazine is filled from cover to cover with helpful ideas and suggestions for home builders and home makers. It helps to make every dollar you put into your home count for beauty, utility and lasting satisfaction. Subscribe *now* and we will send you our handsome book, showing

42 COTTAGE AND BUNGALOW PLANS FREE

This book gives you your choice of 42 inexpensive, up-to-date, model designs, with accurate descriptions, illustrations and cost estimates at current prices. The book also tells how you can obtain Free Blue Print Plans. With Keith's Magazine and its free information service, together with our books of designs, your building simply cannot go wrong, because deals in *facts*. It can be relied upon absolutely as the recognized authority for home builders, and is the only publication of its kind in existence.

One year's subscription to Keith's, \$1.50 with illustrated book of 42 Cottages and Bungalows FREE. Book of designs for 74 Homes costing \$3000 to \$5000, and Keith's for 1 year, \$2.00. Book of Designs for 72 Homes costing \$5000 and up, and Keith's for 1 year, \$2.00. Book of 120 Beautiful Interiors and Keith's for 1 year, \$1.75. Single copies of Keith's at all news-stands, 15 cents.

MAX L. KEITH, Lumber Exchange 534, MINNEAPOLIS, MINN.

Artistic, Appropriate, Embossed Steel Ceilings for all Kinds of Rooms



From the massive and elaborate effects frequently required in public and business buildings, to the simpler and less obtrusive designs suited for residence purposes, ample selection is afforded in the wide range of styles and patterns available in

BERGER'S "CLASSIK"

The Most Complete Line of Artistic
Steel Ceilings in Existence

You Should Have our Catalog on File

Write for it to-day Ask for Catalog D64

Send sketch and dimensions of room or rooms to be covered and we will send free suggestions and exhibition drawings of appropriate designs. Write us to-day.

THE BERGER MFG. CO., Canton, O.

New York, Boston, Philadelphia, Chicago, St. Louis, Minneapolis, Atlanta,
San Francisco

SPECIALTIES: STEEL CEILINGS, ROOFING, FIREPROOFING, STEEL FURNITURE, ETC.

New Papers on Concrete Reinforced Concrete Concrete Building Blocks

Scientific American Supplement 1543 contains an article on Concrete, by Brysson Cunningham. The article clearly describes the proper composition and mixture of concrete and gives the results of elaborate tests.

Scientific American Supplement 1538 gives the proportion of gravel and sand to be used in concrete.

Scientific American Supplements 1567, 1568, 1569, 1570 and 1571 contain an elaborate discussion by Lieut. Henry J. Jones of the various systems of reinforcing concrete, concrete construction, and their applications. These articles constitute a splendid text book on the subject of reinforced concrete. Nothing better has been published.

Scientific American Supplement 997 contains an article by Spencer Newberry, in which practical notes on the proper preparation of concrete are given.

Scientific American Supplements 1568 and 1569 present a helpful account of the making of concrete blocks by Spencer Newberry.

Scientific American Supplement 1534 gives a critical review of the engineering value of reinforced concrete.

Scientific American Supplements 1547 and 1548 give a resumé in which the various systems of reinforced concrete construction are discussed and illustrated.

Scientific American Supplements 1564 and 1565 contain an article by Lewis A. Hicks, in which the merits and defects of reinforced concrete are analysed.

Scientific American Supplement 1551 contains the principles of reinforced concrete with some practical illustrations by Walter Loring Webb.

Scientific American Supplement 1573 contains an article by Louis H. Gibson on the principles of success in concrete block manufacture, illustrated.

Scientific American Supplement 1574 discusses steel for reinforced concrete.

Scientific American Supplements 1575, 1576 and 1577 contain a paper by Philip L. Wormley, Jr., on cement mortar and concrete, their preparation and use for farm purposes. The paper exhaustively discusses the making of mortar and concrete, depositing of concrete, facing concrete, wood forms, concrete sidewalks, details of construction of reinforced concrete posts, etc.

Scientific American Supplement 1583 gives valuable suggestions on the selection of Portland cement for concrete blocks.

Scientific American Supplement 1581 splendidly discusses concrete aggregates. A helpful paper.

Scientific American Supplements 1595 and 1596 present a thorough discussion of sand for mortar and concrete, by Sanford E. Thompson.

Scientific American Supplement 1586 contains a paper by William L. Larkin, on concrete mixing machinery in which the leading types of mixers are discussed.

Scientific American Supplement 1626 publishes a practical paper by Henry H. Quimby on concrete surfaces.

Scientific American Supplement 1624 tells how to select the proportions for concrete and gives helpful suggestions on the treatment of concrete surfaces.

Scientific American Supplement 1634 discusses forms for concrete construction.

Scientific American Supplement 1639 contains a paper by Richard K. Meade, on the prevention of freezing in concrete by calcium chloride.

In **Scientific American Supplement 1605** Mr. Sanford E. Thompson thoroughly discusses the proportioning of concrete.

Scientific American Supplement 1578 tells why some fail in the concrete block business.

Scientific American Supplement 1608 contains a discriminating paper by Ross F. Tucker on the progress and logical design of reinforced concrete.

EACH NUMBER of the SUPPLEMENT COSTS 10 CENTS. A SET of PAPERS CONTAINING ALL THE ARTICLES ABOVE MENTIONED WILL BE MAILED for \$3.40

Order from your Newsdealer or from

MUNN & CO., Publishers, 361 BROADWAY, New York City

CEMENT

Its Chemistry, Manufacture & Use

Scientific American Supplement 1372 contains an article by A. D. Elbers on tests and constitution of Portland cement.

Scientific American Supplement 1396 discusses the testing of cement.

Scientific American Supplement 1325 contains an article by Prof. William K. Hatt giving an historical sketch of slag cement.

Scientific American Supplements 955 and 1042 give good accounts of cement testing and composition, by the well-known authority, Spencer B. Newberry.

Scientific American Supplements 1510 and 1511 present a discussion by Clifford Richardson on the constitution of Portland cement from a physico-chemical standpoint.

Scientific American Supplement 1491 gives some fallacies of tests ordinarily applied to Portland cement.

Scientific American Supplements 1465 and 1466 publish an exhaustive illustrated account of the Edison Portland cement works, describing the machinery used.

Scientific American Supplement 1519 contains an essay by R. C. Carpenter on experiments with materials which retard the activity of Portland cement.

Scientific American Supplement 1561 presents an excellent review by Brysson Cunningham of mortars and cements.

Scientific American Supplement 1533 contains a resumé of the cement industry and gives some valuable formulae.

Scientific American Supplement 1575 discusses the manufacture of hydraulic cement. L. L. Stone is the author.

Scientific American Supplements 1587 and 1588 contain an able paper by Edwin C. Eckel on cement material and industry of the U. S.

Any one of these Supplements will be sent for 10 cents. The entire set costs \$1.60, and constitutes an invaluable text book on the subject. Order from your Newsdealer or from

MUNN & COMPANY, 361 Broadway, New York

was plain, very early in the season, that apples must be sharply thinned by the grower. I thinned my own orchard twice, and even yet it needed a third thinning—which it did not get. The result is an orchard full of fine fruit, while I do not know of one other orchard in central New York that has been properly cared for. Four or five years ago the pears psylla was the pest we had to contend with. It worked mostly, however, on the pear trees, instead of apple trees. So it is that rarely can we care for our orchards in the same manner two years in succession. Brains are needed here if anywhere.

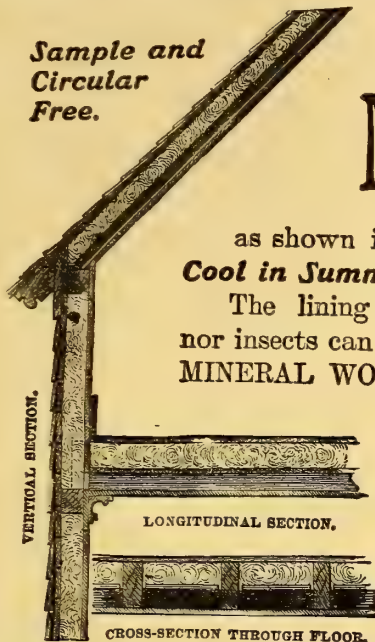
The present difficulty may account for high prices, yet it is a fact that the price of apples, with one or two exceptions, has been climbing up for the past ten years. Poor stuff and culls remain in the market at the same old nominal rate, but prime fruit has climbed up from one dollar a barrel to three and four dollars. It is now bringing more than this, and before the end of the season a prime barrel of apples will not be obtainable at less than ten dollars. Why are not our farmers alive to this grand opening. It is because in our Eastern States we have still a preponderance of routine farmers, who cannot get out of the ruts. The Experiment Stations and Agriculture Colleges are slowly bringing about a change, but we shall have to industrialize our whole common school system.

I am impressed more and more with the fact that a serious mistake is made in not understanding those varieties which are peculiarly susceptible to plant foes. One may easily make out a list of these, and then one may quite as easily draw up a list of apples which are not insect proof but are by no means selected by moths and the tripeta fly. In the former list one may place nearly all the sweet apples, with Fameuse or Snow, the Autumn Strawberry, and I am sorry to say Jonathan and Northern Spy. But if the Spy blossom very late, it escapes most of the damage. Now for a list of exempt. You will find your Shiawassie trees, your Wealthy, your Astrachan, loaded with fruit so clean that the waste is not over five per cent. I will not undertake a complete list, simply because these lists must vary largely with localities. Each planter must find out for himself on this vital point. It will make a vast difference in his points.

I wish I could impress upon apple growers the necessity of planting stocky trees. Many nurseries, and especially tree peddlers, disseminate whip stalks, which will not develop stout trees, even if they live at all. Buy trees five or six feet high, mulch them when planting with coal ashes and any compost that is handy. Make this matter of mulch a careful item. Coal-ashes alone make splendid mulch, but they do not feed the tree. The main object is to prevent a change of temperature about the roots. They should be mulched not only when planted but at all ages.

The handling of apples for profit must be of a sort to dispose of all grades, but to barrel only the first grade. To do this apples must be handled like eggs—no dropping, no tossing, no pouring, and on no account should the apples be left in piles after picking. Sort into first grade, second grade and third grade; placing the first grade in barrels, turning the third grade into cider, and leaving the middles to do such market or home use as circumstances direct. Only never sell a second grade apple without the purchaser understands it. We have got to get by all tricks of the trade. With these provisions there is no opening at present on the land better than that which is offered to the orchardist. But he must be a true orchardist.

Sample and
Circular
Free.



A House Lined with Mineral Wool

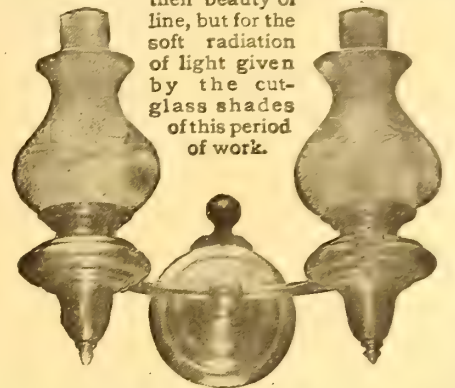
as shown in these sections, is *Warm in Winter,
Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice,
nor insects can make their way through or live in it.
MINERAL WOOL checks the spread of fire and keeps
out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.
140 Cedar St., NEW YORK CITY.

The prevailing interest in lamps, as well as
the furniture of Colonial days, has made the
use of such pieces valuable—not alone for



For the protection of our clients, our trade-mark will
be found on each and every piece of work made by us.

The Enos Company

MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles St.; San Francisco,
1701 Gough St.; Toronto, 94 King St. West;
Montreal, Bank of Toronto Bldg.; Pittsburg,
G. P. Norton, Penn at 4th St.

NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & Co., BOSTON



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER, TILING

An Ideal Floor Covering for Court
Houses, Banking Institutions, Churches,
Hospitals, Libraries, Business Offices,
Restaurants, Vestibules, Elevators,
Kitchens, Laundries, Pantries, Bath-
rooms, Steamships and Floating Pro-
perty generally.

We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street

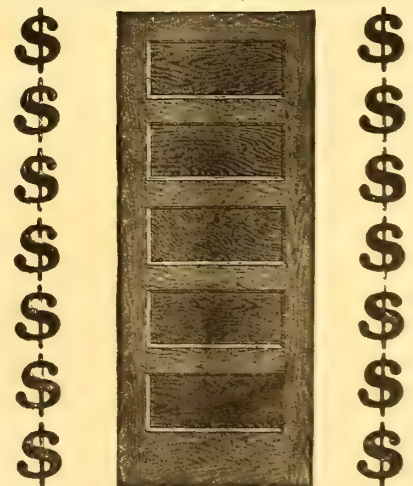
ASK FOR DWIGHT



SHEETS

DWIGHT MFG. CO., NEW YORK

50% SAVED
OAK VENEERED DOORS IN STOCK ALL SIZES.



* 274

MADE IN STOCK QUANTITIES, SOLD AT STOCK PRICES, CARRIED IN STOCK

THE FOSTER-MUNGER CO.

AMERICA'S GREATEST SASH & DOOR HOUSE
CHICAGO, U.S.A.

WRITE FOR VENEERED DOOR BOOK 1448 E



The Peerless Type Endures

The Changes in the new Peerless Models are changes in degree rather than kind. The principles of Peerless construction endure—they have simply been carried further. The result is larger tonneau; longer wheel base; the long springs of last year still longer and flattened, making the car ride easier. A double ignition system is used, with the advantage that one system may be used independently of the other.

Silico Manganese Steel in all driving parts.

Write for our 1908 Catalogue "C" which fully describes and illustrates the Peerless Models

PEERLESS MOTOR CAR CO., 2481 Oakdale St., Cleveland, O.

Member A. L. A. M.

Peerless
All That The Name Implies

7100
A512
Hort.

AMERICAN HOMES AND GARDENS

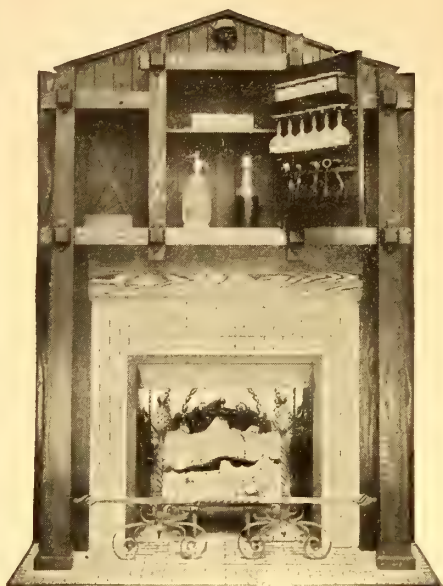


FEBRUARY 1908

VOL. V., No. 2

MUNN & COMPANY, Publishers

PRICE, 25 CENTS



MISSION MANTEL FOR DEN

Artistic Mantels

OUR CATALOGUES contain 130 designs, including Mission, Colonial, White, Mahogany & Oak. Everything, from the very cheapest to the best.

Fireplace Hardware and Tiling of every description.

Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.

Unity Building
Chicago, Ill.

306 Main Street
Jacksonville, Fla.

Factory, Knoxville, Tenn.

Do you Appreciate the Advantages in Using Tiling in Home Building?

Its Durability saves the cost of repairs and replacing. A tiled floor or wall never has to be oiled, varnished, painted or papered. Dirt or liquid matter of any kind will not stain it. The steel nails of the shoe cannot scratch or wear it.

Its Sanitary Qualities and the facility with which it can be cleaned gives assurance that the bathroom, kitchen, butler's pantry, laundry, vestibule and other places where it is used will always be in a clean, sanitary condition.

It's Decorative Possibilities permit the execution in tiling or ceramic mosaic of any possible design or color scheme on the floor or wall.

Tiling is fire-proof, germ-proof, water-proof, damp-proof and vermin-proof.

For interesting booklets on Tiling, distributed free, write

INFORMATION BUREAU OF
THE TILE INDUSTRY

300 Corcoran Building

Washington, D. C.



Beautiful Columns

You can bring to your new home the beauty, art, grace and dignity of the columns of ancient Athens and Rome by using Koll's Patent Lock Joint Columns.

These columns and capitals are masterpieces of architecture—perfect in their classic proportions.

Their mechanical construction is faultless. The lock joint makes it impossible for the staves to come apart. They are made of extra thick stock, perfectly seasoned, and are weather-proof, very strong and very durable.

For interior uses Koll's Patent Lock Joint Columns are made of every variety of hard woods. We make a specialty of columns for pergolas and all garden uses.

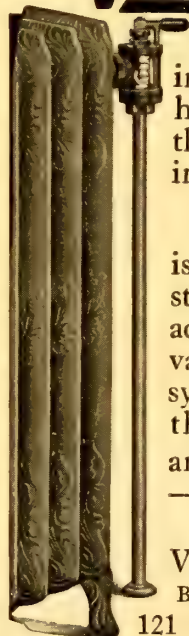
Write to-day for our
illustrated catalog A-19.

HENRY SANDERS COMPANY

805-1005 Elston Avenue, Chicago

Eastern Office: 1123 Broadway, New York

VAPOR



If you are considering steam or hot-water heating, don't do a thing more until you investigate Vapor.

VAPOR HEATING is the improvement on steam and hot-water: add together the advantages of these two systems, then subtract their disadvantages and the result equals—Vapor.

Look on heating, free

Vapor Heating Co.

Broomell's-patent Vapor System

121 S. Broad St., Philadelphia

516 Pages, 107 Engravings

NOW READY

Price, Four Dollars

Industrial Alcohol

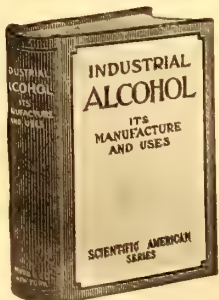
ITS MANUFACTURE AND USES

A Practical Treatise based on Dr. Max Maercker's "Introduction to Distillation" as revised by Drs. Delbrück and Lange

COMPRISING

Raw Materials, Malting, Mashing and Yeast Preparation, Fermentation, Distillation, Rectification and Purification of Alcohol, Alcoholometry, The Value and Significance of a Tax-Free Alcohol, Methods of Denaturing, Its Utilization for Light, Heat and Power Production, A Statistical Review, and the United States Law

By JOHN K. BRACHVOGEL, M.E.



THE value and significance of a tax-free alcohol have been so widely discussed in the press and periodical literature of the entire country, that it is unnecessary to emphasize the great importance of the subject, especially to our agricultural and industrial interests. For years we have been far behind the nations of Europe in this regard, and in consequence our literature has been sadly lacking in authoritative works covering this phase of industrial activity. This book was designed with the especial purpose of filling this want, and it is the latest and most comprehensive work of its kind which has been published in this country.

Few in number are those to whom this book would not prove of interest and value. The farmer, the manufacturer, the power producer, the householder, will all find that denatured alcohol is of such importance to them, that its use and introduction will effect savings and economies which were hitherto impossible of accomplishment.

FOR SALE AT ALL BOOKSTORES

SEDGWICK THE ARCHITECT



Send One Dollar For

A Beautiful Book
BEST HOUSE PLANS

It Contains 150 Designs
MEDIUM COST
HOUSES

\$1,000 to \$10,000
Two Supplements Included
Send 10c. postage for new
Improved Portfolio of
Modern Churches.

This Handsome House Cost \$3,500.00; Complete Plans \$15.

1028 H Lumber Exchange, Minneapolis, Minn.

GROWN IN NEW JERSEY

under soil and climate advantages—and ready to start growth again, anywhere, as soon as planted. Pomona Nurseries

TREES AND PLANTS

are the satisfactory kind. A complete assortment especially strong in Hardy Flowering Shrubs, Evergreens and Strawberry Plants. Landscape plans prepared and executed. Catalog free.

T. E. Steele, Dept. 32, Palmyra, N. J.

Target and Arrow Old Style Tin

AUG 12 1985

LIBRARIES

has protected this building for 20 years



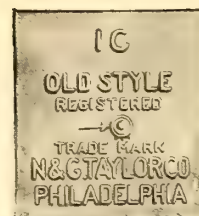
Everybody in Birmingham, Alabama, knows the Hood Building, located at the corner of Third Avenue and 20th Street and owned by Mr. William Hood.

At the time it was built, twenty years ago, "Target-and-Arrow Old Style" tin was selected for the roof. Although subjected to the

roughest kind of treatment by telephone men, it is still giving good service. When, four years ago, a skylight was cut through the roof, the tin removed was found to be as good as new.

"Target-and-Arrow Old Style" tin offers the same durable qualities today that it did when the Hood Building was built. Its record proves that it is the most durable roofing material to be had.

Two booklets should be in the hands of prospective builders and property owners—"A Guide to Good Roofs" and the "Tin-Roofers' Hand Book." We send them free to interested parties.



Reg. U. S. Patent Office.
There are over 250 imitations of this brand. Look for the "Target-and-Arrow" trade-mark on the genuine "Old Style."
Architects will find our catalogue, on pages 306, 309 of "Sweet's Index."

N. & G. TAYLOR COMPANY (Established 1810) **PHILADELPHIA**

BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont

This \$30.00 Book Case and \$22.50 in Cash Are Yours



For 75 Subscriptions you can win this \$30.00 Book Case and \$22.50 in Cash

Pianos, Automobiles, Gasoline Launches, Boats, Cameras, Canoes, Kodaks, Typewriters, Jewelry, Silverware, Bicycles, Trip to Japan, Trip to Europe, Three Weeks' Vacation at the Greatest Pleasure Resort in the World. These are some of the prizes to be given away this season.

Don't Fail to Investigate At Once Our Big Offers

There are *twenty series* of unprecedented premium offers. Each series consists of several prizes of which you can take your choice. *There are enough prizes for all.*

THE METROPOLITAN MAGAZINE is launching the greatest Subscription Campaign ever inaugurated in the history of the publishing business. We are offering a wonderful series of valuable prizes and liberal commissions this season to representatives who secure subscriptions for the Metropolitan Magazine.

THE PRIZES ARE NOT COMPETITIVE

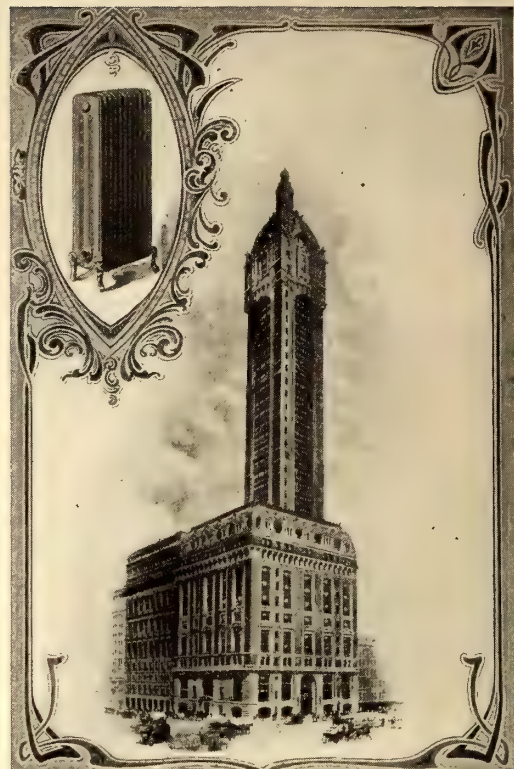
THE METROPOLITAN MAGAZINE

Dept. A.H.G., 3 WEST 29th STREET
NEW YORK

IF YOU WILL SECURE 75
SUBSCRIPTIONS TO THE
**METROPOLITAN
MAGAZINE**

Everybody Can Win This Prize!
There are Hundreds of Others
from which to Choose

Every Subscription Taken
Means a Prize and a Cash
Commission For You



Kinnear Pressed Radiators

Selected for

THE SINGER BUILDING, NEW YORK

Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

On the Wall—Off the Floor
Out of the Way

If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.

Write for Catalog "D" for any desired information.

THE PRESSED RADIATOR CO.
PITTSBURGH, PA.

PREVENTS DRAFTS, DUST AND WINDOW RATTLING.



IVES' PATENT
Window Stop Adjuster.

HEAVY BED

PATENTED.

The only Stop Adjuster made from one piece of metal with solid ribs and heavy bed that will not cup, turn or bend in tightening the screw. Manufactured only by The H. B. IVES CO., New Haven, Conn., U. S. A. (Fifty-page Catalogue Mailed Free.)

LIVE GAME

The celebrated Hungarian and English Partridges and Pheasants, the large Hungarian Hares, all kinds of Deer, Quail, etc., for stocking purposes.

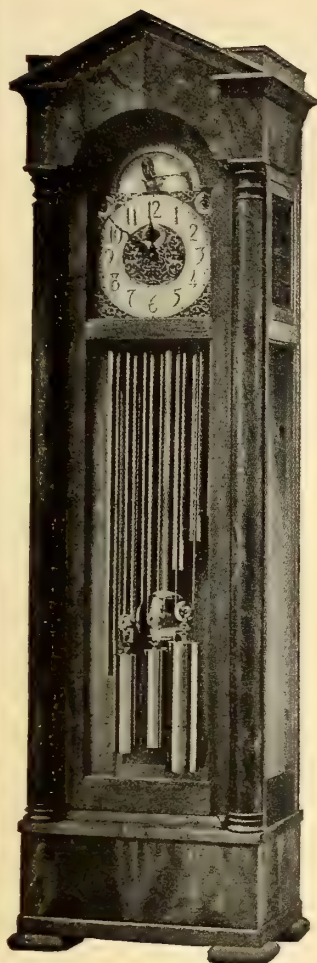
Fancy Pheasants, Ornamental Waterfowl and Live Wild Animals of every description.

Write or Price List

WENZ & MACKENSEN, Dept. N., YARDLEY, PA.

We will send
A AMERICAN HOMES & GARDENS
and Scientific American
for one year to one address for
FIVE DOLLARS

Regular Price
Six Dollars



HALL CLOCKS

That are beautiful in design, finest in construction, richest in tone of chimes and superior time-keepers are some of the reasons that have made our business grow so rapidly.

Waltham Clocks

have a standard of value, whether it is a Hall Clock, "Banjo," Marble Clock, or Regulator.

Nothing Better at Any Price

If your local jeweler does not sell our line send direct for our new illustrated catalogue

Waltham Clock Company
WALTHAM, MASS.



This Beautiful Residence was built of Concrete Blocks made on

The Hercules Machine

If you are going to build any kind of a structure, from an ordinary stable to a handsome residence, you ought to sit down right now and send for our catalog.

It will tell you a great many things about concrete construction that are worth knowing.

It will tell you about the Hercules Concrete Block Machine—and show you many illustrations of residences, apartment houses, churches, business blocks and manufacturing plants built of blocks made on the wonderful Hercules.

Concrete is cheaper than wood or brick; it will last longer, and when the blocks are made on the Hercules great architectural beauty can be attained.

Send for catalog to-day, it's free to you.

Century Cement Machine Co.

180 W. Main St., ROCHESTER, N. Y.

Inexpensive Country Homes

A Practical Book for Architects, Builders, and Those Intending to Build

A HANDSOME CLOTH-BOUND PORTFOLIO, consisting of 88 pages, about 11x14, printed on heavy plate paper, and containing 43 designs, with floor plans of practical, tasteful and comfortable country homes, ranging in cost from \$1,000 to \$5,000 complete. The designs have been carefully selected, as embodying the best efforts of various architects throughout the country. Every one of the houses has already been built, and all of the illustrations are half-tone engravings, made direct from photographs of the completed structures, taken specially by the SCIENTIFIC AMERICAN artists. In many cases two perspective views of the same house are shown. Several illustrations of inexpensive stables are also included among the designs.

The location of the dwellings, the cost, owners' and architects' names and addresses are given, together with a description of the dwelling, thus enabling, if desired, a personal inspection of the dwelling or direct correspondence with the architect or the owner.

ARCHITECTS, BUILDERS, AND THOSE INTENDING TO BUILD

will find many new and valuable suggestions among the up-to-date designs illustrated in this handsome portfolio.

PRICE \$2.00 POSTPAID

MUNN & CO., 361 Broadway, New York



Imposing Architectural Effects

are obtained by the intelligent use of statuary in connection with the architecture of buildings.

Mullins Art Architectural Sheet Metal Work

has genuine artistic merit—is light and very durable—made from artists' own models or selected, if you prefer, from our great variety of artistic stock designs. There is a wide range for selection and charming architectural effects are assured.

Our Large Catalogue of designs will be sent you on request.

The W. H. Mullins Co. 202 Franklin St., Salem, O.

Makers of everything in Sheet Metal.

Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO

JUST PUBLISHED THE NEW AGRICULTURE

By

T. BYARD COLLINS

8vo. Cloth. 376 Pages

100 Illustrations

Price, \$2.00, Postpaid



HIS new and valuable work sets forth the changes which have taken place in American agricultural methods which are transforming farm life, formerly so hard, into the most independent, peaceful and agreeable existence. Farm life to-day offers more inducements than at any previous period in the world's history, and it is calling millions from the desk. The present work is one of the most practical treatises on the subject ever issued. It contains 376 pages and 100 illustrations.

In brief, the Contents are as follows

- CHAPTER I. This chapter contains a general statement of the advantages of farm life.
CHAPTER II. Deals with the vast systems of irrigation which are transforming the great West, and also hints at an application of water by artificial means in sections of the country where irrigation has not hitherto been found necessary.
CHAPTER III. Gives the principles and importance of fertilization and the possibility of inoculating the soil by means of nitrogen-gathering bacteria.
CHAPTER IV. Deals with the popular awakening to the importance of canals and good roads, and their relation to economy and social well-being.
CHAPTER V. Tells of some new interests which promise a profit.
CHAPTER VI. Gives a description of some new human creations in the plant world.
CHAPTER VII. Deals with new varieties of grain, root and fruit, and the principles upon which these modifications are effected and the possibilities which they indicate.
CHAPTER VIII. Describes improper methods in agricultural practice.
CHAPTER IX. Devoted to new machinery by which the drudgery of life on the farm is being eliminated, making the farm a factory and the farmer the manager of it.
CHAPTER X. Shows the relation of a body of specialists to the American farmer, who can have the most expert advice upon every phase of his work without any expense whatever to himself.



MUNN & CO., Publishers



361 Broadway, NEW YORK



DISCRIMINATING PEOPLE WILL FIND IN

RUBEROID RED ROOFING

A LASTING, WEATHERPROOF, FIRE-RESISTING COVERING, COMBINED WITH A LASTING BEAUTY. IT IS

*The Only Permanent Roofing
With a Permanent Color*

The well-known qualities of Ruberoid Roofing serve as a protection from the heat of the summer and the cold of the winter, while its deep red hue lends a touch of color to the surroundings. Suitable for all buildings. Color guaranteed for five years. Contains no tar or paper. Will not melt, rot or corrode. Insist upon having the genuine. Look for the name "RUBEROID" stamped on the back. Write for samples and prices.

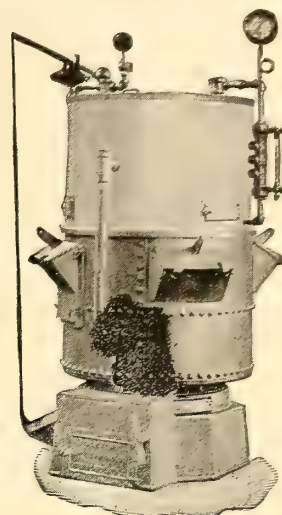
THE STANDARD PAINT COMPANY

Sole Manufacturers

General Offices: 100 WILLIAM STREET, NEW YORK
Branches: Chicago, St. Louis, Kansas City, Philadelphia, New Orleans, Boston

GORTON

SIDE FEED BOILERS SIDE FEED



For Steam
and
Hot Water
Heating

Insure a
Warm
Building
Day
and Night in
Coldest
Weather

Send for
Catalog

GORTON & LIDGERWOOD CO.
96 LIBERTY STREET, NEW YORK
Old Colony Bldg., Chicago 77 Oliver St., Boston



THE NEW CEILING AND SIDE WALL ON THAT ROOM

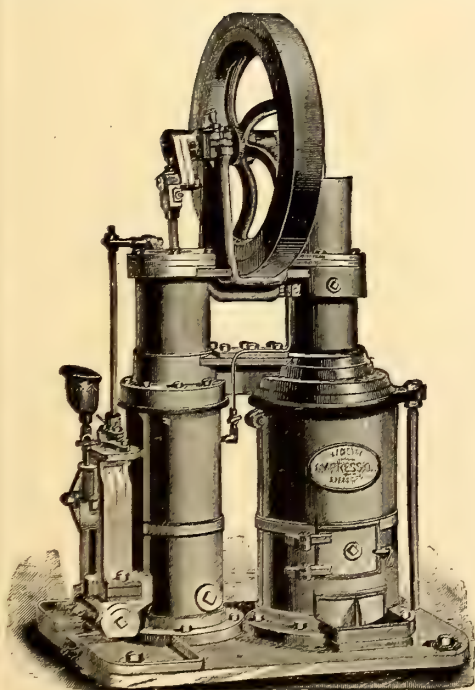
What shall it be? Steel, of course—because it is the most modern, sanitary and inexpensive, practically lasts forever.



Write to-day, giving dimensions and particulars. We will go into the matter with you thoroughly.

"When it has the ELLER trade-mark, it's the best in steel."

ELLER MFG. CO.
CANTON, OHIO



Improved Rider Hot Air Pumping Engine

— AND —

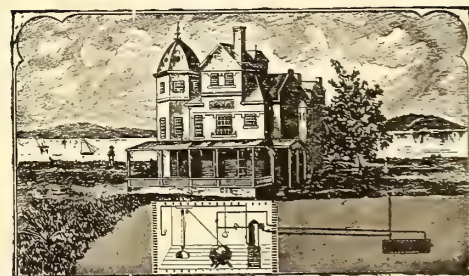
Improved Ericsson Hot Air Pumping Engine

PRICES GREATLY
REDUCED

Send for Catalog "E" to nearest office

Rider-Ericsson Engine Co.

35 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



Our remarkable recent inventions enable us to offer the public an intensely brilliant

Smokeless Gas

at much less cost than city gas, better, safer and cheaper than electricity, and costing but one-fourth as much as acetylene.

Most Durable and Least Expensive
Apparatus to Maintain

in effective perpetual operation. Gives services of lighting, cooking and heating. Fullest satisfaction guaranteed, and easy terms. The very apparatus for suburban homes, institutions, etc. We construct special apparatus also for fuel gas for manufacturing, producing gas equivalent to city gas at 50 cents per 1000 cubic feet, and made to respond to very large demands; also for lighting towns, etc.

C. M. Kemp Mfg. Co., Baltimore, Md.

Hall Marks

Sargent's Artistic Hardware is the "Hall Mark" on the perfectly trimmed house.

If you are building or remodeling do not make the mistake of leaving to one less interested, the selection of hardware for your home.

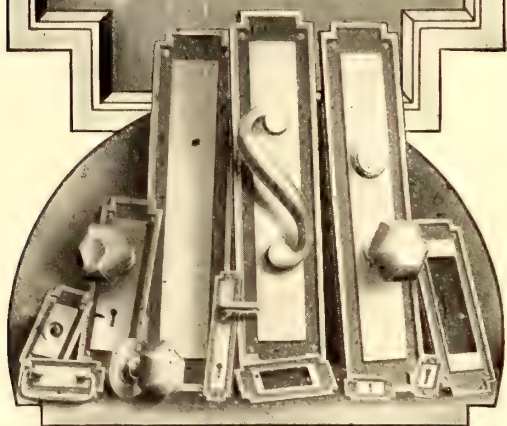
Sargent's Artistic Hardware

offers a wide variety of beautiful designs that harmonize perfectly with any style of architecture or finish.

If you will write for a copy of Sargent's Book of Designs (sent free) you will find it of valuable assistance in the choosing of your hardware trimmings. This book is replete with suggestions for home-builders and tells about the Easy Spring Principle of Sargent's Locks.

Ask for a copy to-day.

SARGENT & CO., 156 Leonard St
New York.



BOOKS

relating to Architecture, Decoration, Furniture, Rugs, Ceramics, etc., will be recommended and supplied by our well-equipped Book Department.



MUNN & COMPANY
Publishers of Scientific American
361 Broadway, New York

BOUND VOLUMES
of American Homes and Gardens
\$3.50

Prepaid in the United States and Canada

MUNN & CO., 361 Broadway, NEW YORK

Cottage Designs

THESE books offer to architects, builders, homeseekers and investors by far the most complete collection of plans ever brought out, while the price is so low as to place them within the reach of all who have an interest in the building of homes. The designs are compiled with a view to representing all grades of cost, from the simplest types of cottages, as illustrated in the first series, to the comparatively elaborate structures reaching to \$10,000 or more, in cost, treated in the fourth series, so that examples are given covering nearly every requirement, with respect to cost, in inexpensive homes.

No. 1. Cottage Designs with Constructive Details

A series of twenty-five designs of cottages, most of which have been erected, ranging in cost from \$600 to \$1,500; together with details of interior and exterior finish, all drawn to convenient scale, and accompanied by brief specifications. Illustrated with 53 full-page plates of floor plans, elevations and details.

No. 2. Low Cost Houses with Constructive Details

Embracing upward of twenty-five selected designs of cottages originally costing from \$750 to \$2,500, accompanied with elevations, floor plans and details of construction, all drawn to scale, together with brief descriptions and, in many instances, full specifications and detailed estimates of cost. Illustrated by 61 full-page plates of floor plans, elevations and details.

No. 3. Modern Dwellings with Constructive Details

A selection of twenty designs of artistic suburban dwellings erected in various parts of the country, at costs ranging from \$2,000 to \$5,000; embracing floor plans, elevations and constructive details, showing interior and exterior finish, and drawn to scale, together with extracts from the specifications. Illustrated by means of half-tone reproductions, from photographs of the completed structures, and 61 full-page plates, of floor plans, elevations and details.

No. 4. Suburban Homes with Constructive Details

Comprising twenty selected designs of attractive suburban homes, ranging in cost from about \$3,000 upward; embracing floor plans, elevations and constructive details, showing interior and exterior finish, all drawn to scale, together with extracts from the specifications. Illustrated by means of half-tone reproductions from photographs of the completed structures, and 75 full-page plates of plans, elevations and details.

One Dollar Each, Postpaid
(SOLD SEPARATELY)

MUNN & CO.

Publishers of Scientific American
361 Broadway, New York



GARDENING BOTH AT THE NORTH AND SOUTH

By E. P. Powell

NORTHERNERS are rapidly learning that they can make garden in the North for six or seven months, and then go to Florida and make a very successful winter garden. In this way the whole year is utilized, while a large amount of expense is deducted in the way of coal bills and winter clothing. I know one bee keeper who takes up two or three thousand pounds of honey at his northern home in Ohio, then turns to Florida in time to take up two or three thousand pounds collected by his southern bees. Another, after his northern work is done, gets to his orange orchard just about the time for the early varieties to be gathered, and clears a thousand dollars before the first of April. He then returns to his northern farm. In my own case I finish my work in New York State about the middle of November, and reach Sorrento, where I am planting all sorts of fruits and growing vegetables.

Those who choose to grow for market plant their potatoes in January, and their melons a little later. A vegetable garden for home use, however, may be planted at any time you please—as well early in November as later. You will then have your lettuce for Christmas, and your celery in January; cabbages, carrots, beets certainly by New Year's, and your green peas about the same time. By successive plantings, we have our string beans and other vegetables always fresh through the whole winter. This is in the highland counties, and around the lakes which abound here. Melons are planted on high land, potatoes almost anywhere, and other vegetables are grown for the most part on the lake beaches. Around all these lakes there is a margin of flat land, always saturated with water, and made up of muck with a good percentage of sand. Southern vegetables, like cassava and sweet potatoes, take admirably to either high land or low land. These, if shipped to the northern market, get there so early that they have no competition and can command prices. It is a charming sight to see the southern and the northern vegetables growing side by side.

The coast counties, while growing fewer in variety, are peculiarly adapted to celery and lettuce. There are miles where you will see nothing but fields of the most perfectly developing celery, with lettuce between. The first crop is sown in November and sent north in January; the second crop is immediately started, and shipped in March. Another planting follows for summer sale. The soil is sandy and easily worked, but rich. Irrigation can almost invariably be accomplished by a flowing well. These wells strike water at a depth of twelve or fifteen feet, and gush out any amount of water needed. It is carried in underground pipes, and fed out to the roots. Of course, these border counties are not altogether wholesome for summer residence, but are all right for the migratory farmer.

My own home, near Sorrento, on Lake Lucy, is on very dry and high land. We reach water at a depth of about sixty or eighty feet—securing good wells as a rule. It is always best to get well through the sand, into rock. Water can also be obtained from the lakes, which lie like gems, all around among the pine woods. Those who do not care to do anything more than raise their home fruit and vegetables, can secure a competence for the future by buying a strip of pine forest. Although a large part of this has been ruined by turpentine tappers, there still is a good deal that can be obtained, and at low prices.

(Continued on page ix)

Flemish Renaissance Furniture

FEW styles of furniture have suffered more at the hands of modern designers than the Flemish Renaissance; therefore, when fine reproductions are placed upon the market it is a pleasure to call attention to their good qualities.

There is great dignity in the Flemish Renaissance and when properly interpreted it is not incongruous in a modern house. It possesses those sturdy, substantial characteristics which make it eminently fitting for library, hall, and dining room.

Flemish Renaissance was an outgrowth of the Italian Renaissance mingled with Spanish influence and infused with qualities of its own, which give to it distinctive character. Its origin came at the time when Charles, King of Spain, was Emperor of Germany and also Count of Flanders and Duke of Burgundy.

Holland and Flanders reversed the usual order of Renaissance development. The early and middle periods were less creditable than the later phases.

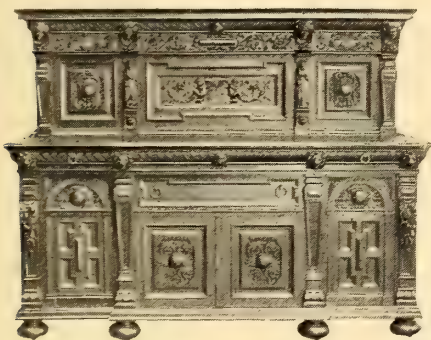
The Dutch and Flemish brought their work to perfection after the year 1600.

If the English were the great furniture makers of the eighteenth century, the inhabitants of the low countries were the great furniture makers of the seventeenth century.

During the sixteenth and seventeenth centuries Flemish and Dutch designs were so closely allied that the two adjectives are often used interchangeably. Previous to this date there was a great difference in the arts of the two countries; Flanders was more closely in touch with France and Holland with Germany. In the hands of the Flemish furniture makers the grotesque heads and masks of the late Italian Renaissance were adapted to a simpler, sturdier form of ornament.

The Arabesque, the Cartouche, and the various forms of animal and floral details which both French and Italian carvers had used until they were little more than grotesque flourishes, took on a new meaning. Columns, pediments, and mouldings were introduced in a constructive way, thus becoming a part of the actual furniture.

The illustration produced shows the fine constructive qualities which mark the earlier designs.



"A Flemish Sideboard," model from Berkey & Gay Furniture Co., Grand Rapids, Mich.

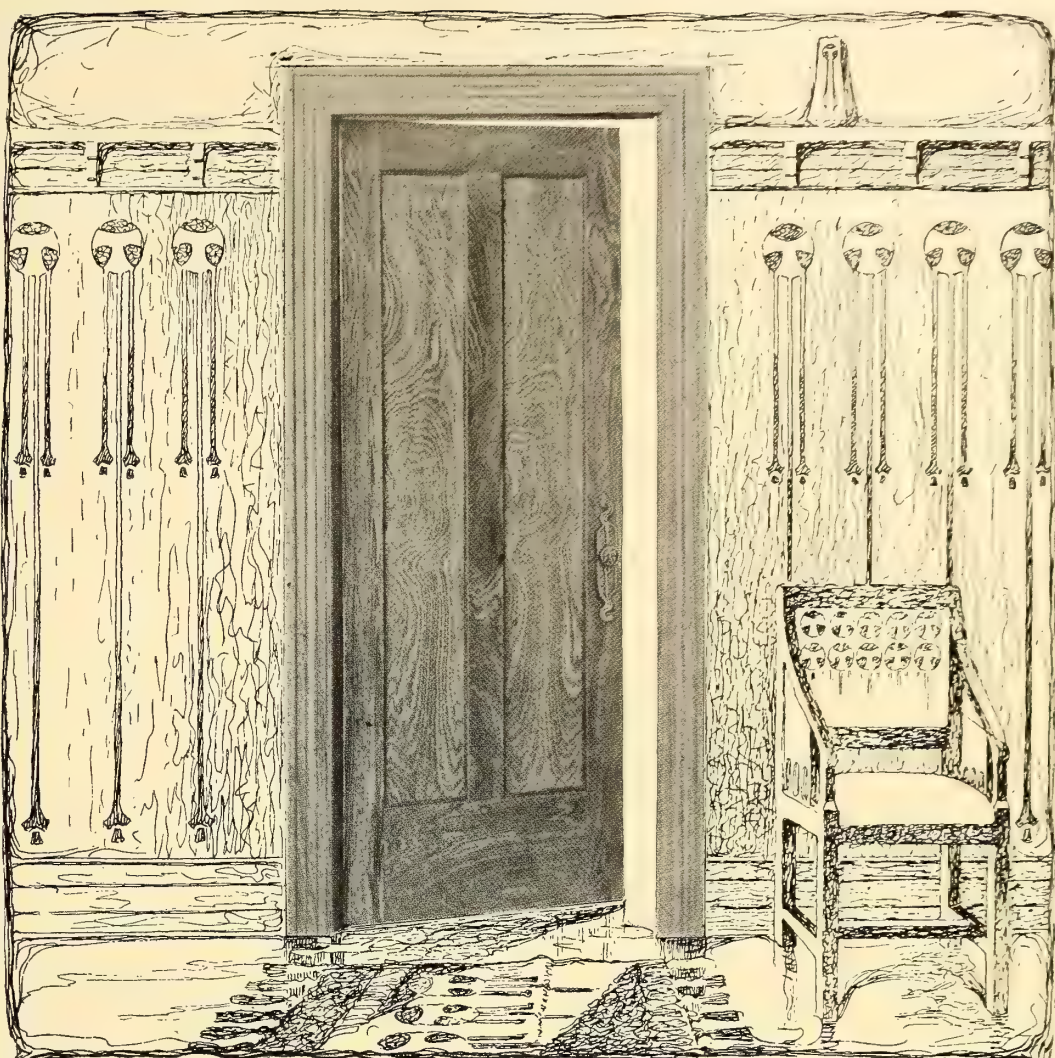
Such work compares favorably with seventeenth century pieces, and is made at a price which is very reasonable, considering the grade of the sideboard.

Prior to the sixteenth century there was no real dining-room furniture. The great halls of the day were used as dining places, and were fitted with furniture which served several purposes. When the hall lost its medieval significance the modes of living changed. Dining in public went out of fashion, and the dining-room, pure and simple, came into existence. It was at this period that the sideboard, the round or square dining table, and chairs which were used solely at meals, first made their appearance.

In selecting reproductions or adaptations of old designs the wise householder will seek those pieces which perpetuate the seventeenth century spirit.

Flemish oak furniture in an appropriate setting has an exceedingly rich and substantial effect.

Note. No furniture manufacturer in this country has brought out more reproductions of the Flemish Renaissance than the Berkey & Gay Furniture Co., Grand Rapids, Mich. The furniture of this period is entertainingly described in their handsome brochure "Furniture of Character," which will be mailed to all desiring it, if they will send 15 cents in postage to Dept. M. their office, Grand Rapids, Mich.



Beautiful, Well-Made Doors

more than any other one thing, give a dignified, refined and substantial effect to your building.

Morgan Doors

are perfectly designed, substantially constructed and beautifully finished—they are perfect doors from every standpoint.

Morgan Doors will never warp, crack or shrink. They become a permanent part of the building, making it more desirable to live in and adding to its permanent value.

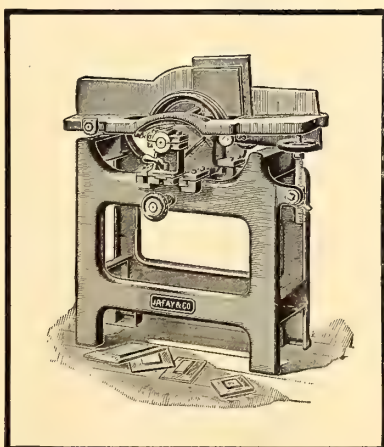
The name "**Morgan**" stamped on the top of each door is your guarantee of absolute satisfaction. Made in any style of architecture, Empire, Colonial, Mission, Chateau, etc.

Write to-day for our handsome illustrated book "The Door Beautiful," which will give you helpful ideas and show the details of the real beauty of Morgan Doors.

Morgan Company, Dept. A, Oshkosh, Wisconsin

Distributors:—Morgan Sash and Door Co., Chicago, Ill.; Morgan Co., Oshkosh, Wis.; Morgan Company, Baltimore, Md.

RAISING PANELS

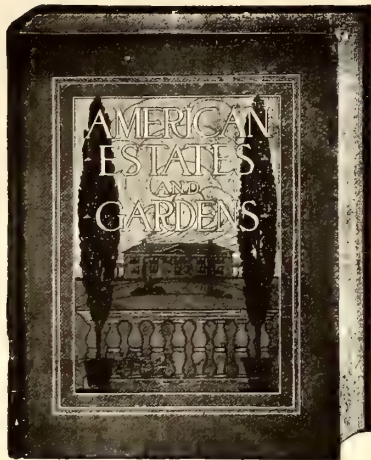


Raising panels is an easy matter when you are equipped with our **No. 1 Hand Feed Double Head Panel Raiser**. Because it is simple in construction, not liable to get out of order, and doesn't require an expert to operate it. The table and all other working parts are planed true, have all necessary adjustments, and permit the operator to work close to the cutterheads. The fences remain always in proper position relative to the cutters, and are adjustable for different thicknesses of panels, and will hold them perfectly rigid while passing between the heads. The mandrel has three bearings, with mandrel pulled between bearings, and these are movable together horizontally across the tables.

Descriptive circular sent on request. Write for it.

J. A. FAY & EGAN CO., W. 209-229 Front Street, CINCINNATI, O.

\$13 Value



For \$7.50

4to, 11 x 13½ inches
Illuminated Cover
275 Illustrations
340 Pages

Price
Ten
Dollars

American Estates and Gardens

By BARR FERREE

Editor of American Homes and Gardens Corresponding Member of the
American Institute of Architects and of the Royal Institute of British Architects



AMERICAN ESTATES AND GARDENS is a sumptuously illustrated volume in which, for the first time, the subject of the more notable great estates, houses, and gardens in America receives adequate treatment. It is a volume of 350 pages, enriched with 275 illustrations, of which eight are in duotone.

An effort has been made to select as great a variety as possible of the styles of architecture which have been introduced into this country as being specially adapted to the peculiar conditions of American country life.

Although the exteriors of some of the houses shown in this work may be familiar to a certain number of readers, few have had the privilege of a visit to their interiors, and, for that reason, special attention has been given to reproductions of many of the sumptuous halls and rooms of people of wealth, and no better way can be obtained of learning how the favored few live.

The illustrations are in nearly all cases made from original photographs and are beautifully printed on double coated paper. The book is attractively bound. This book will prove one of the most valuable books for the home, and will fill the wants of those who desire to purchase a luxurious book on our American houses.

MUNN & CO.

SCIENTIFIC AMERICAN OFFICE
361 BROADWAY NEW YORK

MESSRS. MUNN & CO.

Date

Enclosed find \$7.50, for which please send me *American Estates and Gardens* and (renew) (enter) my subscription for *American Homes and Gardens* for one year, in accordance with the terms of your special offer.

Name..... P. O.

P. O. Box or Street..... State



WISE are the winter tourists who take The New York & Porto Rico Steamship Company's special three-week's cruise to and

Around Porto Rico

upon one of their superbly appointed and modern steamers, making the grand tour of the island and stopping at many interesting points.

These trips are the perfection of tropical voyages. The ship is the traveler's hotel during the entire voyage. All staterooms are outside rooms and the steamers contain every modern convenience.

Special tourist rate for this cruise, \$140—which includes every expense.

Write for booklet giving complete details of the trip and attractive pictures of Porto Rico scenery.

THE NEW YORK & PORTO RICO STEAMSHIP COMPANY,

12 Broadway, New York.

Or RAYMOND & WHITCOMB CO., all Principal Cities, 25 Union Square, New York.

Made their mark
Dixon's Pencils
Write for
illustrated
booklet W free.
JOSEPH DIXON CRUCIBLE CO.
Jersey City, N. J.

F. WEBER & CO.

1125 CHESTNUT STREET, PHILADELPHIA, PA.

ST. LOUIS, MO.

BALTIMORE, MD.



DRAFTSMEN'S and ENGINEERS' SUPPLIES

New: "FABRIANO" HAND-MADE DRAWING PAPER

Quality SUPERIOR to any other Hand-made Paper in the market.

Sizes equal to Whatman's, PRICES MUCH LOWER.

Descriptive Circular and Sample Book furnished on Application

OWN A FACTORY

and make \$10.00 a day making Concrete Building Blocks. Experience unnecessary. Big demand for blocks everywhere and immense profits.

Pettyjohn Machine

for \$33.25 and only up.



Guaranteed and sent on trial. Sand, water and cement only materials required. If you intend to build it will pay you to buy a Pettyjohn Machine and make your own blocks. Beautiful booklet on this great industry—FREE.

THE PETTYJOHN CO., 617 N. Sixth St., Terre Haute, Ind.



BRISTOL'S Recording Thermometer

Located within house, records on a weekly chart outside temperature

Also, Bristol's Recording Pressure Gauges, Volt, Ampere and Watt Meters. Over 100 different varieties, and guaranteed. Send for Catalog B.

THE BRISTOL CO., Waterbury, Conn.
Chicago, 753 Monadnock Building
New York, 114 Liberty St.

It has been extremely interesting to me to test some of the traditions of the country. One of these denied the possibility of growing apples in Florida. I did not believe the tradition, and am testing it. During the last two summers, which have been unusually dry and hot, I am able to grow successfully some twenty or thirty varieties. Among these are Grimes Golden, Jonathan, and other sorts that are known to be fond of sandy soil. The chief difficulty with growing such northern fruits is the fact that during the middle of the day the soil becomes heated six inches or more in depth—hot enough to dry up the little fibres of the roots. I prevent this by heavy mulching. Just as soon as the tree is planted I spread about it coarse grass or other loose material, over which is spread a coating of sand. You may run your hand into the soil underneath this mulch, and, at the hottest hour of the day, it remains cool. Most of our cherries and plums will also do fairly well with this same treatment. Quinces thrive admirably; also most of our northern grapes. As for peaches, it seems better to adopt the new stock which has developed from the Chinese peento. These new peaches are crossing with the old Persian sort quite rapidly, and the South is being enriched with a fruit which will be even better than our Crawfords and Elbertas.

Right along with these northern fruits I am growing loquats, pomegranates, mulberries, and all sorts of citrus fruits. Pineapple growing will have to be a specialty, still farther to the south. We are gradually eliminating the more tender sorts, that can not stand a bit of frost, and are evolving those which are quite hardy. The Government expects to soon be able to supply orange stock that will be hardy as far north as the Ohio River. One of the grape fruits will stand considerable frost, and remain entirely uninjured. The loquat is an evergreen small tree, standing about twelve feet high and twelve feet in diameter when full grown. It is loaded with bunches of delicious flowers all winter. These become bunches of pear-shaped fruit, with a cherry flavor. I believe that most Northerners consider this one of the most delicious fruits in Florida. It stands an occasional frost, and if the earlier blossoms are cut off, the later manage to give us considerable fruit. In March the whole country is full of mulberries. They grow as large as a man's finger, and are delicious. Birds eat them, hens eat them, and the hogs are specially fond of them. They make the most delicious preserves—which will sometime become a matter of commercial importance.

I have only hinted at some ways in which the northern farmer may make his winter home in the South, and certainly not lose by it. He had better buy his land at once, and build his house—not a mere shack of a home, but a tidy and comfortable house. Land is going up steadily in price, and he can not lose by securing at least fifty or a hundred acres. It is generally sold in sections of eighty acres, and quarter sections. Peaches find a ready market near by. If my experiment with apples succeeds, the fruit will be in great demand. Potatoes always pay, both the Irish and the sweet. Sweet potatoes are now bringing one dollar a bushel. He will live most of the time out of doors, and rarely need to wear coat or vest. His house should, however, be provided with one or more fireplaces, where, at five o'clock in the evening, pine cones or pine knots can give him a blaze. In the morning he may desire a little heat while bathing and dressing. Broad verandas should look out upon the lakes and orange groves and pine woods.

In other words, let the Northerner come here to create a home as the first aim, and to

Complete Outfit

HAND AND FOOT-POWER MACHINERY

OUR No. 7 SCROLL SAW is warranted to be well made, of good material and workmanship, and to saw pine three inches thick at the rate of one foot a minute

SEND FOR CATALOGUE

W. F. & JOHN BARNES Co.
567 Ruby Street Rockford, Ill.

Price
\$15.00



ALCOHOL

Its Manufacture
Its Denaturation
Its Industrial Use

The Cost of Manufacturing Denaturized Alcohol in Germany and German Methods of Denaturation

are discussed by Consul-General Frank H. Mason in Scientific American Supplement 1550.

The Use, Cost and Efficiency of Alcohol as a Fuel for Gas Engines

are ably explained by H. Diederichs in Scientific American Supplement 1596. Many clear diagrams accompany the text. The article considers the fuel value and physical properties of alcohol, and gives details of the alcohol engine wherever they may be different from those of a gasoline or crude oil motor.

The Production of Industrial Alcohol and Its Use in Explosive Motors

are treated at length in Scientific American Supplement 1581, valuable statistics being given of the cost of manufacturing alcohol from farm products and using it in engines.

French Methods of Denaturation

constitute the subject of a good article published in Scientific American Supplement 1599.

How Industrial Alcohol is Made and Used

is told very fully and clearly in No. 3, Vol. 95, of the Scientific American.

The Most Complete Treatise on the Modern Manufacture of Alcohol

explaining thoroughly the chemical principles which underlie the process, without too many wearisome technical phrases, and describing and illustrating all the apparatus required in an alcohol plant is published in Scientific American Supplements 1603, 1604 and 1605. The article is by L. Baudry de Saunier, the well-known French authority.

In Supplements 1607, 1608 and 1609 we publish a digest of the rules and regulations under which the United States Internal Revenue will permit the manufacture and denaturation of tax-free alcohol.

ANY single number of the **Scientific American** or **Supplement** will be sent for 10 cents by mail. The entire set of papers above listed will be mailed on receipt of \$1.10. Order from your newsdealer or from

MUNN & CO., Publishers

361 Broadway, NEW YORK

FLOORS



ROOFS



RESIDENCE OF MR. J. GRANT FORBES, DOVER, MASS.

Mr. James Purdon, Architect, Boston
DeLancey A. Cameron, Builder, New York

THE above is an illustration of the work being done on the NEW house, the house that has come to stay, the house that will not get old, will stand for ages but will not age.

In this operation the walls and partitions are built with concrete blocks, and capped over the entire area with reinforced concrete floors and roof supported on the concrete walls and partitions.

This house is fireproof, weatherproof, vermin proof.

Clinton Wire Cloth Company
CLINTON, MASS.

Ceilings

FIREPROOFING DEPARTMENT
ALBERT OLIVER
1 MADISON AVE., NEW YORK

WASHINGTON: ROSSLYN SUPPLY CO.
SYRACUSE, N. Y.: PARAGON PLASTER CO.
ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
SAN FRANCISCO: L. A. NORRIS, 835 MONADNOCK BUILDING
SEATTLE: L. A. NORRIS, 909 ALASKA BUILDING

Partitions

HOW ARE THE BEAMS HELD WHERE THEY ABUT THEIR SUPPORTS?



Are they Cut Away by
Framing?

Do You Depend Merely
on Spiking?

The Best Way is to Use
Our Joist Hangers.

LANE BROS. CO. (The Door Hanger Manufacturers) 434-466 PROSPECT ST.
POUGHKEEPSIE, N. Y.

make money as a secondary point—he will probably do both. Florida is a happy land, and here among the high lands is the most healthy spot in the United States. I have been here four winters and have known of but one death within a range of several miles; that was of a negro baby. Where the soil is too light we have legumes, such as velvet bean, cow peas, and beggar weed, which, after being cut two or three times for hay, can be plowed under to add nitrogen to the soil and increase the humus. Florida would have been the richest of all States had it not formed the detestable habit of burning over the wild land once a year in order to furnish fresh grass for the cattle that run loose. The bottom of the lakes is from one to three feet in depth with vegetable deposit. This same deposit would have been all over the State had it not been annually burned away. A stock law is, however, in sight, and will soon be enacted. It is as easy matter to finish our southern gardening and orange picking in time to get to our northern farm early in April. Of course this does not cover the case of those who choose to go into peach growing, but the oranges will be practically gone to market by the first of April. We can lock our houses and leave them with entire safety. My next neighbor has locked his house for twelve years, and never had any meddling either indoors nor out. Negroes abound, but they are an honest and reasonably intelligent and thrifty set. With all the rest we escape the wear and tear of zero weather. We are as happy as the birds which sing all winter and the bees that make honey in January. We can bathe in the lake on Christmas, and pick our roses every day in the year.

GARDEN NOTES

By Eben E. Rexford

THOUGH spring is still a long way off at the North, it is not too early to begin to get ready for it. Do not arrange to plant your vegetables in the same places, the coming season, that they occupied last year. A rotation of crops should always be planned for, if possible.

If hotbeds are to be made, get the frames and sashes ready while there is plenty of leisure to do the work well. Trellises for tomatoes can be made to better advantage now than when the time comes to use them.

Look over the list of seeds you planted last year and discard such as failed to give satisfaction. There are so many first-class varieties of vegetables catalogued by all leading seedsmen that one is not justified in selecting inferior sorts. A comparison of several catalogues will show that there are certain varieties of standard merit upon which all seedsmen unite. These are the kinds it is safest to invest in. One makes a mistake in buying cheap seed. By that is meant the seed offered by irresponsible dealers at often less than half the prices asked by old reliable firms. It pays to patronize the seedsmen who have reputations to live up to.

If you have no bed of asparagus, do not fail to make a planting this coming spring. No family ought to be without a good supply of this most delicious vegetable. It is easily cared for, and gives generous return for a small amount of attention.

Asparagus, rhubarb, horseradish and other vegetables of a permanent character should be assigned a place in the garden where they will not be interfered with each season. Grass and weeds should be kept down about them, but their roots ought not to be disturbed by plow or harrow.

If the currant bushes were not pruned last



AMERICAN HOMES AND GARDENS



Price, 25 Cents. \$3.00 a Year

CONTENTS FOR FEBRUARY, 1908

	PAGE.
THE STAIR HALL—House of Edward A. Schmidt, Esq.	42
MONTHLY COMMENT	44
NOTABLE AMERICAN HOMES—The House of Edward A. Schmidt, Esq., Radnor, Penn- sylvania	By Barr Ferree 45
THE COLLECTING OF OLD PEWTER	By Phebe Westcott Humphreys 52
THE WHITE FARM AT CRICHEL	By W. G. Fitz-Gerald 56
SUNKEN GARDENS OF CALIFORNIA	By Charles Frederick Holder 59
RESIDENCE OF H. E. BISHOP, ESQ., AT NORWALK, CONNECTICUT, By Francis Durando Nichols	63
MOVABLE HOMES	By Ernest Myer 68
THE SUBURBAN HOME OF G. W. GRAHAM, ESQ., LAWRENCE PARK, BRONXVILLE, NEW YORK	By Walter Williams 69
AN EXPERIMENT IN ARTS AND CRAFTS	By Mary H. Northend 72
A SIMPLE PLANTING FOR SMALL HOUSE GROUNDS	By George S. Wickham 75
A HOUSE AT BERKELEY HILLS, CALIFORNIA	By John Sherman 76
BUILT-IN FURNITURE IN THE HOME	By Louise Shrimpton 78

Gardening Both at the North and South.

The Sowing of Seed.

Garden Notes.

New Books.

Some Questions Answered.

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada \$3.50 a year

Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



House of Edward A. Schmidt, Esq.,—The Stair Hall Is Paneled in Dark Oak; the Stair Balustrade Is Elaborately Carved

AMERICAN HOMES AND GARDENS



Estate of Edward A. Schmidt, Esq.—A Glimpse of Path and Planting

Monthly Comment



THE happy life is the newest mode in human existence. Strange, is it not, that no one ever thought of that before? And yet it has taken a charming and accomplished lady from worn-out Europe to tell Americans of something many of them thought they already had. It is stranger still that this most interesting of modern prophets should hail from England, the land of fog and damp and rain, where to be happy would seem oftentimes to be an exertion, but where, because of their very climate, they may need such preachments the most. And a good thing it is, this new gospel of the happy life; for why live and not be happy? The simple life has now been with us for some time, and, singularly enough, seems not to have won the support such a delightful idea suggested. It is, of course, most interesting to live the simple life when one can live no other; but in this complicated modern age it is sometimes as difficult to be simple—save the mark!—as to be complex. Even the greatest of all apostles of the simple life was continually intruding into the domain of the luxurious and the wealthy, while most vigorously preaching his favorite doctrine. How, then, could less strong-minded folk resist the seductions of the very life he was preaching about? But to be happy is surely more general and more delightful in every way. Does it make one happy to dine with a chimpanzee? Nothing is easier, nowadays, than to secure a thoroughly well-behaved one as a guest of honor. Does one crave for a thousand horsepower automobile, or a dirigible balloon of one's every own? Surely nothing but the shallowness of one's pocketbook prevents the acquisition of such additions to one's happiness. Of course, one need not go to such expense to be happy; but it is obvious that the moment one takes happiness as the chief end of life, little matters like expense need not be considered.

AND why should not the happy life be the life of all of us? If it is a life that needs cultivation, then by all that's happy, let us cultivate it. Surely we need not try to be unhappy or sad, or sordid, or uncomfortable; all of these things come to most of us so quickly and so readily that if we could avoid them they would be cast out of the range of human intelligence. But to try for happiness—not elaborated, costly, overdone happiness—but just such happiness as comes or can come in an ordinary everyday way, and into an ordinary everyday life, is a fine and wonderful thing which, could it be obtained by an effort, would easily be worth any effort it demanded. Happiness is not within the reach of every one; there is much sorrow and sadness and trial and privation in the world; but one may at least try to be happy, and if the effort be not too great one may be comforted and helped. Surely, it is better to look forward to a true ideal of happiness in life—a right ideal—than to set before one as a daily text that the world is a wilderness of sorrow and a vale of tears.

Is the modern architect the legitimate successor of the ancient architect? So far as being the master mind that designs and dominates the building he unquestionably is; but as a matter of fact the duties required of the modern architect are so exclusively modern and so tremendously varied that no one now knows what an ancient architect could have been like, what his duties were and how he performed them. The great buildings of previous times constitute some of the most precious and most remarkable monuments of human intellect, for all great buildings have an intellectual value apart from their constructional or physical value. The

modern knowledge of architects is, on the whole, limited to a comparatively recent period; we do not know, for a fact, what the old architects did and what relationship they bore to their buildings. But we can at least go back as far as the Renaissance, and every one who knows anything of architecture at all knows that the architects of that epoch left some marvelous monuments behind them. Many of these Renaissance architects were men of manifold genius, workers in sculpture and in gold and silver; some of them were painters; scarce a one but was master of several arts, and who applied his knowledge and skill in these arts to the more permanent one of architecture.

THE modern architect is in a wholly different class. Of art he knows only one, and that is his chosen art of architecture. And this, often enough, is not practiced as an art, but as a business, or possibly as a profession. Many people, indeed, will tell you that architects do not even understand architecture, and support this monstrous statement with actual examples of strange and weird things that their own architects have done for them or of which they have heard in the case of other victims. This, however, is quite beside the more general point that while the modern architect is the historical successor of the ancient architect, he stands on a very different platform, he is required to know many things the older man never so much as dreamed of, his duties are apt to be more practical than artistic, and he belongs in a wholly different class. No longer does the universal genius exist in architecture. The modern architect is concerned with too many things, he must know too much, he must be familiar with matters that he can not himself know of, in that he must know enough to engage the best specialist for the many specialistic matters that enter into the complicated art of modern building, which by courtesy is called architecture.

BUT the modern architect is slow to learn his limitations. He yearns for supremacy and pants for control. He must, he lays down as his first and last principle, be the Boss. Being boss he takes everything into his own hands; yet he hardly puts pencil to paper before he finds he must call in others—men engaged in other occupations and trained in other knowledge. So he yields his structural work to an engineer; the sculpture he turns over to a sculptor; the heating and ventilation has its own experts; even the furnishing and woodwork are often designed by specialists, who bring a fine quality of commercialism to their performances. Some of these things are old arts, but most of them are new, and the old ones he yields only by compulsion and because his own hands can not do the work he must give a portion to others. But when it comes to color the architect feels quite at home. He may know nothing about this, and probably does not, but he never lets a hint of his ignorance escape him. Color of all sorts, painted decorations, frescoes and what not are applied by the architect under his immediate personal supervision, and often in such a way that his own name is emblazoned as the author more conspicuously than the man who actually performed the work. The result is very obvious. Color as color, color as an aid to building, color as a sister art of architecture, color as a rational and beautiful embellishment, has long since disappeared from architecture. Dull skies and damp climates are somewhat brought forward as explaining this situation; but the distinguished conceit of the architect, in taking upon himself functions he does not understand and work he can not perform, is, in many cases, the real determining factor in this debasement of a noble art.



Notable American Homes

By Barr Ferree



The House of Edward A. Schmidt, Esq., Radnor, Pennsylvania

MR. SCHMIDT'S house at Radnor, Pa., is a picturesque half-timber structure. The first story and the whole of the stair bay is of stone; the remainder is of stucco, with black timbers and white panels. It is a house picturesque from the ground up; that is to say, it has a picturesque plan, with many wings, projections and bay windows; it has a picturesque grouping of roofs, with many gable ends and dormers and broadly projecting eaves; the chimneys are of varied

shapes and interestingly grouped; and the whole is firmly knit together by a very pronounced sense of unity.

The porte cochere is of stone, and is applied to one angle of the entrance front. It consists of four great four-centered arches, deeply molded, with piers decorated with narrow niches, and surmounted by a pierced balustrade. Just without it is a mammoth bed of rhododendrons, in the center of which stands a marble hermes.

The vestibule is a small square vaulted chamber of stone. It is paved with brick, on which is spread a rug. On the wall



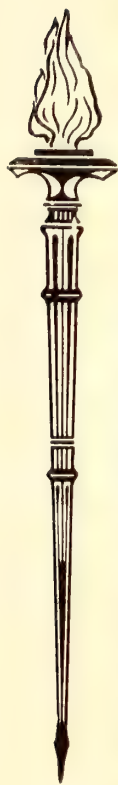
The Distinguishing Picturesque Quality of the House Is Amply Expressed in the Gabled Roof, Numerous Chimneys and Dormers

immediately in face is a large piece of figure tapestry, and below it is an immense davenport. It is lighted by a pair of windows, beneath which is a sculptured flower box.

Glazed doors, on the right, admit one to the stair hall. This is dominated by a vast bay window, which fills almost the whole of the wall adjoining the porte cochere. It is shallow in projection and is filled with leaded glass. The stairs rise below the window and mount on two sides of the hall. The room is completely paneled in dark oak, and has a floor of the same rich-hued wood. The hand rail is elaborately carved, with an interlaced pierced design. The beamed ceiling has white panels. There are many decorative objects here. On the upper walls are great pieces of Gobelin



A Continuous Band of Shrubbery Surrounds the Outer Edge of all the Lawns; low Blooming Plants Mark the Beginning of the Tree Enclosure



The Terrace Around the House Is Broad Enough to Allow Space for Wide Walks and Lawns

tapestry; on the stair landing a tall case clock; beside the doors to the main hall is a pair of elaborately designed wrought iron candlesticks; a richly carved alabaster vase stands below the stairs; and on the side walls are groups of shields and spears. A great brass lantern hangs from the ceiling.

Another pair of glazed doors admit to the main hall. While not the center of the plan, this room is unquestionably the center of the house. It is a large square apartment decorated in a very elaborate manner. The walls are divided into large panels by decorated pilasters which support the cornice. With the exception of the wall adjoining the entrance all the intervening space is paneled in wood. The wall constituting the exception has low bookcases beneath panels filled with old gold and dull yellow damask. The ceiling, which is decorated with a very elaborate geometrical design, is slightly curved. The mantel and fireplace is at the opposite end from the entrance; the opening is of white marble, with an arch closed by a pierced metal screen, glazed. Above is a richly carved old clock applied to a festoon of red velvet. The furniture, of red velvet and gold, includes many rich pieces, including a superb table and an elaborately gilt commode. A great piece of Flemish tapestry covers a part of one wall. The hardwood floor is almost completely covered with an immense Oriental rug.

On the left is a raised alcove which constitutes the music room. On two sides are low bookcases, above which the walls are covered with old gold and yellow damask—the material that also appears in the panels of the main hall. These, in their turn, form a background to numerous oil paintings hung upon them. This room is lighted by a single clustered window filled with leaded glass. The ceiling has beams of oak with white panels. In the center stands a grand piano. Opposite this alcove is a broad entrance, with two columns of yellow marble that open onto another short flight of steps leading to the other parts of the house.



The Porte-cochere Is of Stone as Distinguished by



The Lily Pond Lies in a Deep Ravine Where It is Shaded with Forest Trees, and the Neighboring Lands Are Beautifully Planted with Gay Flowers



The End Containing the Stair Hall Great Window



The Terrace Is Hedged, with Steps and Vases of Plants at the Point of Entrance

The walls on the stairs are completely paneled in wood, and above is a corridor or passage, with rooms opening on either side, while at the further end connection is made with the kitchen and service rooms.

The first room on the left is the living-room or library. It has a hardwood floor with an Oriental rug. The walls are covered with green damask. The plain ceiling is white. One whole side constitutes an inglenook. In the center is the fireplace, let into a piece of yellow marble, which fills the whole of the lower wall. Above is a hooded mantel shelf. At each end are built-in seats, and on either side of the mantel is a small niche-like window, each finished with a very complete but mimic equipment of lights and curtains. On each



side of the fireplace is a tall brass candlestick. At the entrance to the room are two yellow marble columns with gilt capitals.

Immediately beyond is the billiard-room. It is paneled in oak to the beamed ceiling, which has white panels. At the end of the room is a large bay window which completely dominates it; the clustered lights are filled with leaded glass. The floor is oak and the rugs Oriental. The entrance is effected by a large round archway; in the adjoining wall, being thus between the billiard-room and the library, are two glazed round arched windows, the glass containing arms in colors. The furniture of the room is in brown leather.

Across the passage, on the right, and which has a paneled wainscot below walls covered with green brocade, is the dining-room. It is paneled in oak, with a broad plain yellow frieze. The beams of the ceiling are picked out with gold and the panels are of warm brown leather. The windows have drab sash curtains. At one end is a large sideboard; at the other an immense credence table, both elaborately carved. The fireplace is on one side, with an opening faced with yellow brick and a broad shelf above. On the opposite side is a large crystal cabinet. The furniture is covered with green velvet. At each end is a small cabinet.

While the house rises directly from the ground at the entrance under the porte cochere it is actually built on a terrace, which is very distinctly developed on the other sides. It is completely inclosed within a hedge growing at the summit of the grassed slopes which retain it, and interrupted only where the paths lead to the lower grounds, which are reached by steps, at the top of which are vases filled with plants. A very delightful place this terrace is, for it is quite wide enough to be a garden in itself, with broad, well-kept paths and ample lawns. The planting here, however, is restrained, and is scarcely more than a few individual evergreens, the more elaborate gardening being reserved for the broader spaces beyond. The

immediately in face is a large piece of figure tapestry, and below it is an immense davenport. It is lighted by a pair of windows, beneath which is a sculptured flower box.

Glazed doors, on the right, admit one to the stair hall. This is dominated by a vast bay window, which fills almost the whole of the wall adjoining the porte cochere. It is shallow in projection and is filled with leaded glass. The stairs rise below the window and mount on two sides of the hall. The room is completely paneled in dark oak, and has a floor of the same rich-hued wood. The hand rail is elaborately carved, with an interlaced pierced design. The beamed ceiling has white panels. There are many decorative objects here. On the upper walls are great pieces of Gobelin



A Continuous Band of Shrubbery Surrounds the Outer Edge of all the Lawns; low Blooming Plants Mark the Beginning of the Tree Enclosure



The Lily Pond Lies in a Deep Ravine Where It is Shaded with Forest Trees, and the Neighboring Lands Are Beautifully Planted with Gay Flowers

The walls on the stairs are completely paneled in wood, and above is a corridor or passage, with rooms opening on either side, while at the further end connection is made with the kitchen and service rooms.

The first room on the left is the living-room or library. It has a hardwood floor with an Oriental rug. The walls are covered with green damask. The plain ceiling is white. One whole side constitutes an inglenook. In the center is the fireplace, let into a piece of yellow marble, which fills the whole of the lower wall. Above is a hooded mantel shelf. At each end are built-in seats, and on either side of the mantel is a small niche-like window, each finished with a very complete but mimic equipment of lights and curtains. On each



The Terrace Around the House Is Broad Enough to Allow Space for Wide Walks and Lawns

tapestry; on the stair landing a tall case clock; beside the doors to the main hall is a pair of elaborately designed wrought iron candlesticks; a richly carved alabaster vase stands below the stairs; and on the side walls are groups of shields and spears. A great brass lantern hangs from the ceiling.

Another pair of glazed doors admit to the main hall. While not the center of the plan, this room is unquestionably the center of the house. It is a large square apartment decorated in a very elaborate manner. The walls are divided into large panels by decorated pilasters which support the cornice. With the exception of the wall adjoining the entrance all the intervening space is paneled in wood. The wall constituting the exception has low bookcases beneath panels filled with old gold and dull yellow damask. The ceiling, which is decorated with a very elaborate geometrical design, is slightly curved. The mantel and fireplace is at the opposite end from the entrance; the opening is of white marble, with an arch closed by a pierced metal screen, glazed. Above is a richly carved old clock applied to a festoon of red velvet. The furniture, of red velvet and gold, includes many rich pieces, including a superb table and an elaborately gilt commode. A great piece of Flemish tapestry covers a part of one wall. The hardwood floor is almost completely covered with an immense Oriental rug.

On the left is a raised alcove which constitutes the music room. On two sides are low bookcases, above which the walls are covered with old gold and yellow damask—the material that also appears in the panels of the main hall. These, in their turn, form a background to numerous oil paintings hung upon them. This room is lighted by a single clustered window filled with leaded glass. The ceiling has beams of oak with white panels. In the center stands a grand piano. Opposite this alcove is a broad entrance, with two columns of yellow marble that open onto another short flight of steps leading to the other parts of the house.



The Porte-cochere Is of Stone as Is the End Containing the Stair Hall Distinguished by Its Great Window



The Terrace Is Hedged, with Steps and Vases of Plants at the Point of Entrance

side of the fireplace is a tall brass candlestick. At the entrance to the room are two yellow marble columns with gilt capitals.

Immediately beyond is the billiard-room. It is paneled in oak to the beamed ceiling, which has white panels. At the end of the room is a large bay window which completely dominates it; the clustered lights are filled with leaded glass. The floor is oak and the rugs Oriental. The entrance is effected by a large round archway; in the adjoining wall, being thus between the billiard-room and the library, are two glazed round arched windows, the glass containing arms in colors. The furniture of the room is in brown leather.

Across the passage, on the right, and which has a paneled wainscot below walls covered with green brocade, is the dining-room. It is paneled in oak, with a broad plain yellow frieze. The beams of the ceiling are picked out with gold and the panels are of warm brown leather. The windows have drab sash curtains. At one end is a large sideboard; at the other an immense credence table, both elaborately carved. The fireplace is on one side, with an opening faced with yellow brick and a broad shelf above. On the opposite side is a large crystal cabinet. The furniture is covered with green velvet. At each end is a small cabinet.

While the house rises directly from the ground at the entrance under the porte cochere it is actually built on a terrace, which is very distinctly developed on the other sides. It is completely inclosed within a hedge growing at the summit of the grassed slopes which retain it, and interrupted only where the paths lead to the lower grounds, which are reached by steps, at the top of which are vases filled with plants. A very delightful place this terrace is, for it is quite wide enough to be a garden in itself, with broad, well-kept paths and ample lawns. The planting here, however, is restrained, and is scarcely more than a few individual evergreens, the more elaborate gardening being reserved for the broader spaces beyond. The





The House Is a Spacious Stone Dwelling with a Half-Timber Upper Story



The Main Hall Is Paneled in Oak with a Curved Ceiling Richly Decorated with a Geometrical Design

trees without the terrace, while by no means crowded, are still sufficient to relieve the immediate proximity of the house from all sense of barrenness.

The scheme is fine, for it gives a house park immediately around the dwelling, emphasizes and beautifies it, and adorns it in a very gracious and refined manner. At the back, and overlooking all the lands below the terrace, is a spacious porch, furnished as an outdoor living-room. Its roof serves as a balcony for the second story, where the hot summer sun is screened by an awning that can be removed in winter or rolled up on dull days. In the immediate foreground, below

finite variety in leafage and in bloom. This scheme has been carried out with fine success, and one wanders across rich lawns to richer foliage and flower borders that line the property in every direction.

But even this was not sufficient. Every possible advantage has been taken of the natural configuration of the land. Where it sloped, the paths go down; a grotto is built beneath a hillside, built of stones, with a fountain below and many growing plants, begonias and other damp-loving plants, depending even from the roof. Further on a flight of rough stone steps, almost overgrown with the vines that throng it



The Porch on the Terrace Is Completely Furnished as An Outdoor Living-room

the terrace, is a great bed of cannas, salvias, abutilons and low-growing plants.

Of the beauty of the general planting scheme is it possible to be too enthusiastic? Mr. Schmidt's place has been under cultivation for a number of years, and it is, therefore, in a fine state of maturity. The lawns, which meet the eye in every direction, are of beautiful spaciousness and have an ampleness that is quite as unusual as the richness of their verdure.

The general idea has been to keep the house as free as may be from great old trees; to keep it, in short, in the midst of splendid fields of grass, and then to plant and decorate the borders in such a way that the inclosing growth is like a festal garland, stretched around great sheets of green, a planting alive with color and with beauty, affording an in-

on either side, lead to the summit, where a pergola is abloom with clematis, and a summer house is almost hidden in the thicket.

Still further down, the trees which have always grown here hide a mimic brook. Beyond a rustic bridge this has been swollen into a lily pond, with gaily flowered borders and rich hedges of ornamental plants. A tree fern grows in the shadow of the forest, and the plump-plump of frogs warns the visitor he is not alone.

At another spot one reaches a broad path called the center walk. It is lined on either side with standard catalpas and evergreens. At the end, just where it dips downward, is an arch; and here is the vegetable garden, gaily surrounded with flowers, as interesting and as beautiful as any part of the grounds. A beautiful weeping willow closes the vista.



The Center Walk Leads to the Kitchen Garden ; It is Bordered with Standard Catalpa Trees and Evergreens

There is the vastest interest in these lands, so highly are they cultivated, so beautifully are they planted, so masterfully have they been arranged. At no point is there any forcing for effect—that is, the beauty of it. Delightful as the grotto is it would not be half so happy had there not been a natural hillside in which to arrange it. Beautiful as the lily pond is it would not be half so lovely had there not been the stream from which it could naturally be made nor the fine old trees that so densely overshadow it. That Mr. Schmidt has a fine and ably kept greenhouse is apparent, not from its glass-enclosed treasures, but because its resources have been spread upon his lawn in a natural way, decorative plants being used in a naturally decorative way, stood just where they ought to stand, used just so they will do the most service and give the most beauty. There is no sense of over adornment, no lack of proportion, no crowding of effect. But it is seldom that so much pure plant beauty has been so ably displayed even in such extended spaces.

There is no secret in the way that success has been achieved in this charming place. The natural lay of the land, the gently rolling hills, the broad open areas, the somewhat sudden descent to a lower level at the brook and pond, all these lent themselves in the readiest way possible to the obtaining of fine landscape effects. And they did so naturally. The very land seems

to have been adapted by nature for the planting put upon it, and it needed only a wise and artistic utilization of the natural advantages to yield results at once entirely satisfying and entirely beautiful.

And while there is spaciousness here there is no solitude. The stretches of lawn and the screens of trees are ample enough to give every possible retirement and privacy to the house; one may walk through quiet paths without being overlooked by the inquisitive eye of a neighbor or chance passer-by; yet there is life all around one; other houses appear above the branches of distant trees or across long vistas of lawn. And all the neighboring properties, with their own fields and their own trees and woods, seem a part of a completed picture, of which any one estate may be taken as a center and to the full effect of which each contributes its own quota of natural loveliness.

The outlook from almost any part of Mr. Schmidt's grounds is highly characteristic of the whole vicinity. The lands of two counties—or is it three?—is completely pre-empted with fine estates of a beautiful character. The splendid roads carry one past splendid places, the houses, for the most part, completely sequestered within spacious grounds. The full beauty of these is not always realized from without; but many a stray glimpse gives evidence of the care lavished upon the grounds within, and



A Marble Hermes Stands in the Rhododendron Bed Beside the Porte-Cochere

what is true of one place is true of many others. The whole great region is, in fact, a gigantic park; varied utterly in its development and treatment, yet beautiful throughout, full of the deepest natural interest, and distinguished by many points of charm and beauty.

The general park-like effect of this whole region is immensely impressive. It may not be unique, yet it is sufficiently unusual to be at once distinguished and notable. One at least can not go astray here in searching for points of interest nor for sights with which to delight the eye. And one can at least be certain that each private roadway that turns into a private estate will lead to handsome grounds, laid out with exquisite care, and to a house that may have unusual interest in itself.

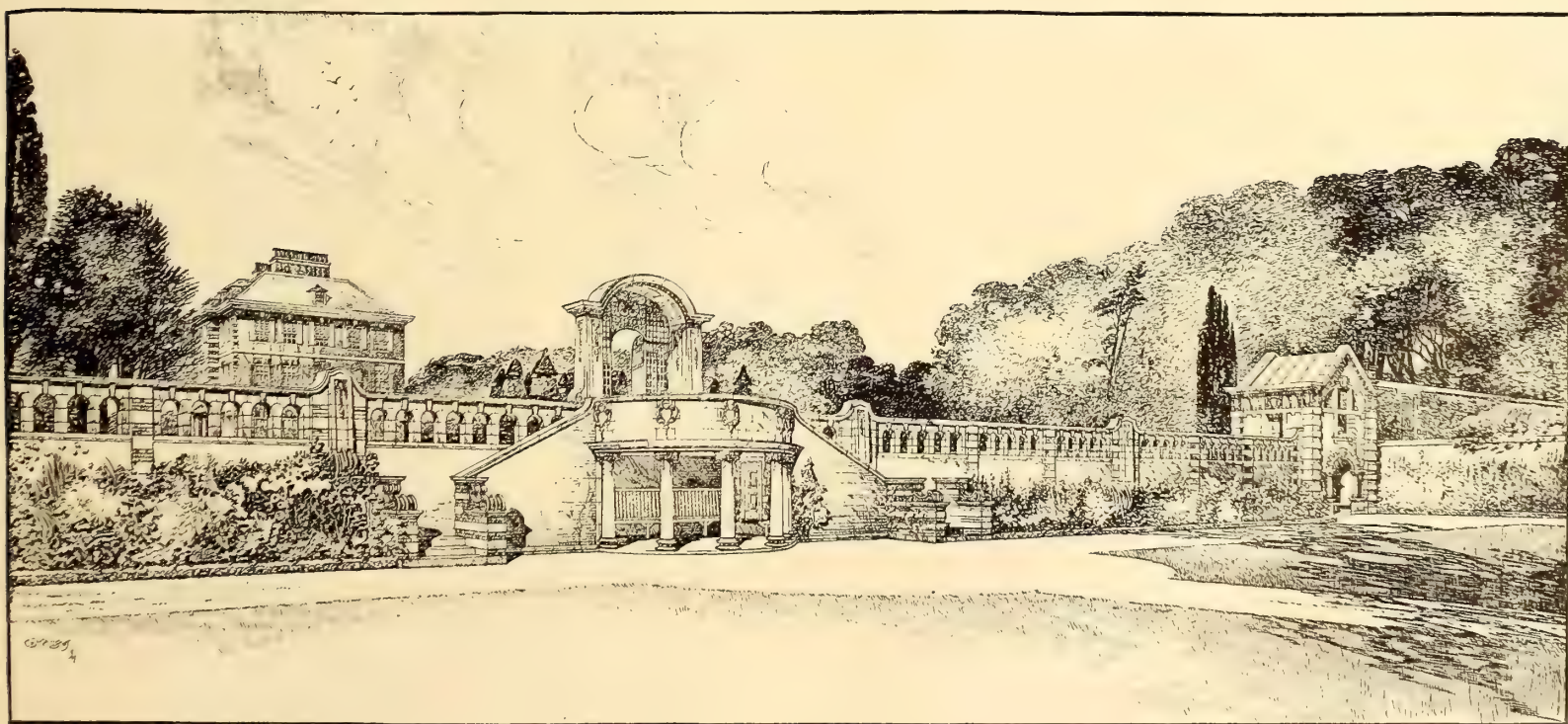
Mr. Schmidt's house makes no pretensions, either in its exterior or interior, that concentrate attention upon it to an exclusion of interest in the grounds. I have already adverted to the beauty of its situation and to the splendid man-



The Vestibule Is a Vaulted Chamber Walled with Stone

ner which it is immediately surrounded. But it may not be amiss to once more direct attention to it as being very completely suited to the general environment. There is a fine harmony between the house and grounds that deserves more than a passing word; a harmony of purpose, a unity in feeling, an intimacy of relationship that is of a quite unusual character. These qualities, are those that every skilful architect aims to develop in places such as this, and which Mr. John Windrim, of Philadelphia, the architect of Mr. Schmidt's house, has realized in a very striking degree. One is constantly seeking for such results, looks for them as ends to be obtained as a matter of course, and is invariably surprised — exactly as one must be impressed — whenever they are found

brought, as here, to a fine fruition of maturity. It is, of course, impossible that the house should match the landscape in the sense that it be identical with it; but the house should be suited to its surroundings, and seem to belong to it.





The Collecting of Old Pewter

Treasured American Examples Are Being Brought to Light by Enthusiastic Collectors

By Phebe Westcott Humphreys

Illustrated by S. Walter Humphreys

A TRIP abroad was once considered a necessity for the collector in quest of old pewter if the best specimens of old manufacture were to be secured. It is only recently that the antiquarians of Uncle Sam's domain have awakened to the fact that some of the choicest examples of early pewters have long been hidden away in the garrets of New England and Pennsylvania, and other States; and their discovery has brought to light many curious incidents of the early days when it was the custom of industrious householders to manufacture pewter spoons and other small housekeeping utensils as they were needed. This custom seems to have been very general among the first settlers in various parts of the American colonies.

The New England States offer a field especially attractive to the collector of Colonial pewter, as this was a district singularly rich in pewter making, the art of which appears to have flourished in America as early as the first part of the seventeenth century. It is claimed that in New England there were numerous pewterers whose operations extended

from a period previous to 1640 down to the beginning of the nineteenth century. It was also in New England that the Babbitt metal—which is considered a choice addition to pewter collections—originated. Authorities state that the manufacture of pewter in the United States in those early days never approached the condition of a fine art. The pieces produced were severely plain and undecorative. The usual vessels were tankards, basins, porringers, bowls, plates, chargers or circular platters, spoons, candlesticks. At a later day, when pewter was replaced by Britannia ware and the Babbitt metal, whole tea services were manufactured, often in graceful shapes, but usually devoid of embellishment. The latter composition was invented by Isaac Babbitt, of Taunton, Mass., about 1825, and was almost identical with the Britannia ware of England. While many examples of the latter are still found in various old New England garrets, and are treasured by collectors because its first manufacture originated in this section, it is the genuine old pewter dating back from the home manufacture, previous to 1640, that is most frequently the object of the quest.

The manufacture of household utensils of pewter was ex-



Modern Bavarian Pewter Vase



Pewter Lamp of Pompeiian Form



Colonial Candlestick

tensively carried on in many parts of New York State in the Colonial period; and later, after many successful experiments in home manufacture, it was quite extensively made in New



An Ancestral Teapot

York City. There were several prominent pewterers there in the first half of the eighteenth century; among the names most familiar in connection with treasured heirlooms are those of Robert Boyle, James Leddel and William Bradford. Following these was Francis Bassett, who had a factory on Queen Street. A Francis Bassett trencher of old American pewter is now on exhibition in the Pennsylvania Museum, in Fairmount Park, Philadelphia. It is marked with his name, and with a series of small stamps—probably borrowed from some European maker. It is claimed that the marks are intended to represent a lion rampant, a pair of scales, a ship, and a castle; but they are so worn and indistinct that their faint outlines can scarcely be distinguished. The entire surface of the trencher is blurred and dented, in-



A Quaint Form of Mug

dicating not only its great age, but also hard usage in the past.

One of the earliest manufacturers of pewter in Pennsylvania was Bartholomew Longstreth, a resident of Bucks County. John F. Watson, the historian, states in his "Annals of Philadelphia and Pennsylvania" that this early pewterer "made for the use of his own family pewter spoons which he

cast in a bell-metal mold as early as the year 1717." There is an example of Bucks County manufacture in the Pennsylvania Museum—a quaint little sugar bowl with incised decorations representing foliage and birds, with the monogram "R. T." and "N. T." While this piece bears no date,



A Pewter Tray, an English Decanter Slide and a Pewter Tankard Used at Clean Drinking Manor, Md., During the Revolution

its history can be traced back to the middle of the eighteenth century, and it is claimed to have been in use in a Bucks County family for one hundred and fifty years. The decorations, evidently produced with a notched wheel, were, according to family tradition, added at a later date by a traveling peddler.

In Philadelphia and vicinity there were many celebrated pewterers during Colonial times and the latter part of the eighteenth century; prominent among them were Thomas Danforth, George W. and William Will, Robert and John H. Palethorp, Parks Boyd, B. Barns, Christian I. Heavo and Thomas Rigden. Famous old homesteads in historic Germantown, as well as in the business section of Philadelphia, are noted for their associations with pewter manufacturing, while additional glory is accorded to some because of the destruction of valuable pieces of pewter for forming bullets for the American soldiers during the Revolutionary



Pewter Shrine Service; European Costumes Applied by Chinese Artists

war. The old Metzger homestead of Germantown—which unfortunately has recently been destroyed by the march of municipal improvements—was at one time celebrated as the "Pewter House of Germantown." It was here that Joshua Metzger lived when interested in the home-made pewter industry, and where he lived when called to take up arms for his country; and here his wife Elizabeth and his daughter

Betsy assisted the Revolutionary patriots quite as valiantly at home while engaged in melting up the pewter spoons and teapots, and turning out precious bullets, which they sent to the American soldiers. It is stated that during the famous

Battle of Germantown scarcely a spoon or teapot, or any other pewter utensil, was to be found in the immediate vicinity, as the patriotic residents took them freely to the Metzgar house to have them transformed into bullets to increase the American supply of ammunition.

When the Philadelphia suburb of Bryn Mawr was known as "Humphreysville"—a name derived from Benjamin Humphreys and his mother Elizabeth, who were among the earliest settlers there, and the largest property owners in the vicinity in 1685—there was evidently more pewter in use there than in any other part of Pennsylvania. Pewter

is claimed to have been manufactured in this place as early as in New England—in the middle and latter part of the seventeenth century. The Humphreys, descendants of these early settlers, include among their most treasured heirlooms rare pieces of pewter, dating back two hundred years or more.

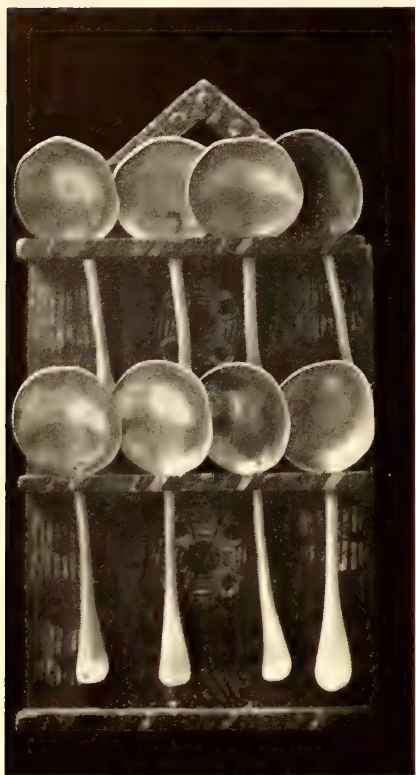
Thomas Danforth was one of the most prominent of the early pewter workers of Eastern Pennsylvania, and his pieces

were usually marked; sometimes with the name "T. Danforth, Philadelphia," and later with a circular stamp about the size of a five dollar gold piece, inclosing a figure of the American eagle standing on an oval bearing the initials "T. D.," surrounded by twenty-eight stars.

A rare shrine service is found in the Dr. Robert H. Lamborn collection of pewter in the Pennsylvania Museum. It consists of a large central incense burner and side vases of incense receptacles. The work represents the application of European designs to Chinese art, each of the pieces being supported by figures of men in high hats, knee breeches, and swallow-tail coats, certain parts of the costumes being covered with colored lacquer, the hats, for example, being a bright pink. These figures, which stand about a foot in height, are well executed, and the material is of excellent quality.

The curator of the Pennsylvania Museum, Dr. Edwin A. Barber, who has given the writer much valuable information concerning the earliest of Colonial pewters, has produced some particularly interesting facts concerning special types of wine flagons, curious shaped ale mugs, and fluid lamps of various ornamental forms. It is claimed that there are many qualities, real or imaginary, which are attributed to pewter, such as its peculiar adaptability to the use of malt liquors. The old judges of the merits of ale and beer tell us that these beverages never possess so rich a flavor when drunk from other vessels as when quaffed from pewter mugs. This idea has persistently obtained through all the centuries of pewter making, even to the present day, and it is a matter of historical record that in the year 1828

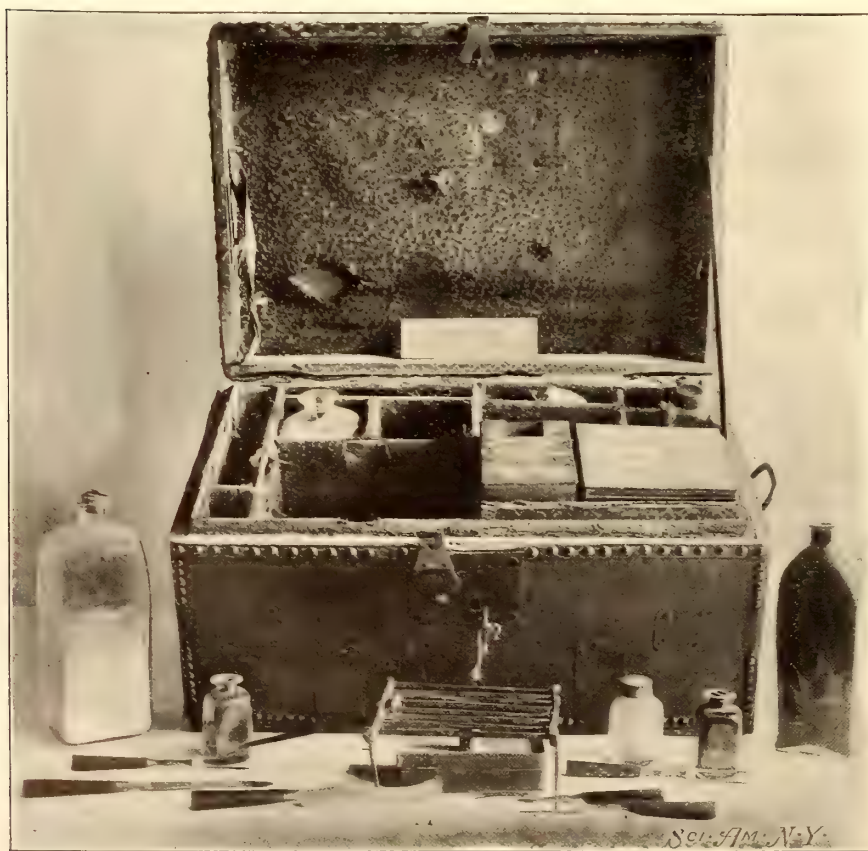
a certain faction of the Democratic party in New York City, which was opposed to the Tammany candidates, were known by their opponents as "pewter-muggers," because their meetings were held over pewter mugs in a well-known resort in Frankfort Street. This fact of the pewter serving



Colonial Spoon Rack and Spoons



A Colonial Pewter Teapot



Washington's Mess-chest and His Camp Outfit with Its Articles of Pewter Ware



Matchlock (Snuffers). Used at Clean Drinking Manor During the Revolution

the double purpose of giving additional flavor while forming a convenient receptacle for the liquors, accounts for the numerous varieties of mugs, goblets, flagons and tankards in museum collections.

The illustrations show some of the best types

of this particular type of pewter, and the treasured Colonial teapots might be included in the list of pewter vessels used for flavoring, as some experts go so far as to claim that the flavor of tea as well as that of spirituous beverages was improved when served from pewter pots. In the two Colonial

out any attempt at ornamentation, but which show fine texture and luster because of their plainness.

The pewter ware of Washington's mess chest and his camp outfit are treasured not alone because of their associations but also for their characteristic types of early Colonial



A Sixteenth Century Pewter Flagon, Surrounded with Two Bands of Allegorical Figures in Relief



Pewter Salver, Embossed with Medallions, Containing Allegorical Representations. Made by F. Briot in the Sixteenth Century



An Old German Tankard, Made in Nuremberg, 1695. Height, 2 Feet 2½ inches; Diameter at Bottom, 11 inches

teapots illustrated the tall and slender specimen is the type usually found in celebrated collections. There is a quaint ancient teapot in the Humphreys collection, standing on low feet of heavy pewter and with the breadth through the body of the pot measuring nearly as great as the height. The tankard illustrated in connection with the pewter tray and an English decanter slide, used at Clean Drinking Manor, Md., during the Revolution, is a form frequently found in old collections to-day. There is one similar, carefully preserved in the writer's family, that is used "on state occasions" as a syrup jug, as it closely resembles the old stone molasses jugs with the tight fitting lid of Colonial days. A curious type of tankard, made in Nuremberg in 1695, is of the proportions most frequently found, measuring in height somewhat over twice its diameter. Its peculiarity consists in the novel ornamentation bearing the Hall Marks.

The sixteenth century pewter flagon, surrounded with two bands of allegorical figures in relief, displays an interesting method of early decoration, and the allegorical figures also found on the salver made by F. Briot in the sixteenth century, is another good example of the intricate designs in which the early pewter manufacturers delighted in decorating their wares. There is a slightly similar salver in the Pennsylvania Museum very elaborately embellished with relief medallions illustrative of Bible stories. In the center is a representation of Noah and his family surrounded by beasts, offering sacrifices to God after leaving the Ark. Around the border are designs representing the Garden of Eden, the Temptation, the Expulsion, and Abraham about to sacrifice Isaac. The spaces between these medallions are filled with a handsome pattern consisting of a vase surrounded by arabesques and two cherubs' heads above. These beautifully embellished specimens are in decided contrast to the majority of salvers, plates and long oval platters found in many Colonial collections, which are entirely plain, with-

pewter; and the matchlock snuffers which were used at Clean Drinking Manor, Md., during the Revolution, present a distinct form. The early Colonial candlestick is severely plain in direct contrast to a beautiful fluid lamp in the same collection. The latter is highly ornamental, being a copy of Pompeiian forms. There are several fine specimens of fluid lamps and wine flagons of Colonial days in the Bloomfield Moore collection of the Pennsylvania Museum.

No collection of pewter is considered quite complete without an ancient spoon rack filled with quaint old pewter spoons of battered form and unwieldy dimensions. The oldest samples plainly show the method of their manufacture—that of casting. In fact, many old pewters still plainly indicate their distinct methods of shaping. It is well known that all pewter wares were shaped chiefly in three ways. Measures and spoons are said to have been cast in molds of brass, made of two closely fitting but detachable halves, the surface of the mold being powdered over with sandarach or painted over with white of egg or oil before use, to prevent adhesion. Plates and dishes were made preferably by hammering, while in large establishments, sugar bowls, milk jugs and similar articles were often produced by "spinning," that is, by pressing a flat piece of pewter against a rapidly revolving blunt tool, and thus raising it into the desired shape.

At the Chicago Exposition in 1893 highly decorative work in pewter was exhibited in the Bavarian section. One piece that attracted especial attention of experts was a tall vase or standing cup, the work of Anton Schriener. This is a sample of more recent work, exemplifying modern attempts to revive the manufacture of art pewter. But these modern pewters have not met with popular favor; other metals have taken the place of the old "tin and temper," and the only pewter utensils of real value to-day are the treasured heirlooms, the museum collections, and those of the antiquarian displaying distinct and characteristic types.



Two White Pets of the Household

The White Farm

at Crichel

Lady Alington's Charming Hobby

By W. G. Fitz-Gerald



EVERY mistress of a country home loves to have her pets around her—ponies and dogs, birds and flowers. But I know of many foreign women of rank and wealth who maintain perfect zoological gardens on their premises. Sarah Bernhardt, as all the world known, keeps lion cubs, monkeys and tiger cats, not to mention the snakes she used to fondle when touring in "Cleopatra." Then, too, many British women of noble birth own zoos of their own—the Duchess of Bedford, for instance, at Woburn Abbey, and Lady Edmund Loder, in Sussex. Both keep herds of deer, kangaroos and zebras loose in their parks, besides lions, tigers and bears in specially built houses, merely for the amusement of guests.

But perhaps the most charming hobby of this kind is that of Lady Alington, whose magnificent country home at Crichel, in Dorsetshire, is famous all over the south

of England for its "White Farm." Both husband and wife detest town life, and are passionately devoted to animals and birds. Lord Alington has bred race horses for many years—among them the famous "Common," who was sold for seventy-five thousand dollars after winning the Derby. In



Some of the White Animals of the White Farm



The White Mule Is a Gift to Lady Alington by the Sultan of Turkey

the same week a couple of Lady Alington's horses were likewise sold, and the three together fetched the record price of one hundred and ninety-five thousand dollars.

Crichel is seven miles off the railroad—an enormous ancestral mansion standing in a finely timbered park hundreds of acres in extent. From the village gates one drives up to the house along a road by a long narrow lake, bordered with huge old elms. And its waters are fairly alive with wild fowl—widgeon, teal, water-hen, wild duck, and scores of strange birds from Asia and Africa which appear to be perfectly at home.

These timid visitors return year after year at their appointed season, well knowing they will never be disturbed, for Lady Alington will not permit any shooting of wild fowl on her great estate. At the head of the lake stands the old house itself, whose upper windows command far-

stretching vistas of woodland and meadow, garden and lawn.

Close to the house, and by the side of the lake, may be seen the little parish church of Crichel. The White Farm was established twenty or thirty years ago, and stands apart upon a hill, half a mile away to the left as one drives up the carriage way through the park toward the house. Near the entrance appears a long low building over which three flags are flying. This is one of

the race horse stables, and these yellow silk flags bear the names of three of Crichel's most famous winners. As one

nears the farm the impression is gained that there must be something unusual about the place. For the long low stable buildings, the tall masts, cages, dens, aviaries, outhouses, and even fences and gates, are all of spotless white. The little gardens, too, before the various houses contain only white flowers—the azalea, lilac, hyacinth, primula, cyclamen, and lilies of the valley.

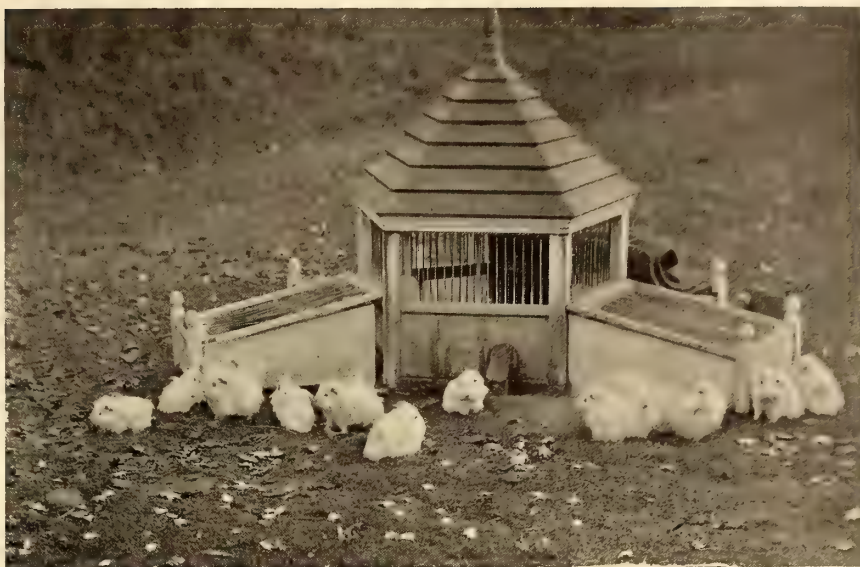
The moment you turn in at the big white gate you find yourself in the midst of a teeming popula-

tion of bird and animal life. And all of them are a pure white and spotlessly clean. The head keeper laughingly declares that the moment a dark hair or feather develops

headquarters rows of white cages are built into a hawthorn hedge and filled with some of the rarer breeds of white pigeons and guinea pigs. And beyond is quite an extensive domain given up to snow-white rats and mice. Perhaps the rarest and most interesting member of the white family, however, is the mule which was presented to Lady Alington by no less a personage than the Sultan of Turkey himself. Everywhere this titled couple go news of their hobby seems to precede them, and distinguished foreigners always appear anxious to add to the unique collection. Thus Lord Rothschild, who at Tring Park maintains one of the most perfect private zoological gardens in the world, has given Lady Alington several snow-white "ze-

animal or bird is banished! Perhaps the most striking creatures are the white peafowl. Now the many colored peacock with which we are all familiar is a beautiful enough bird, but never in my life had I seen anything so perfect as the snow-white specimen at Crichel. The white peacock, indeed, with his rich silken spotless plumes and aristocratic bearing, will always stand out in my mind as the loveliest creature I ever beheld.

Not far from his



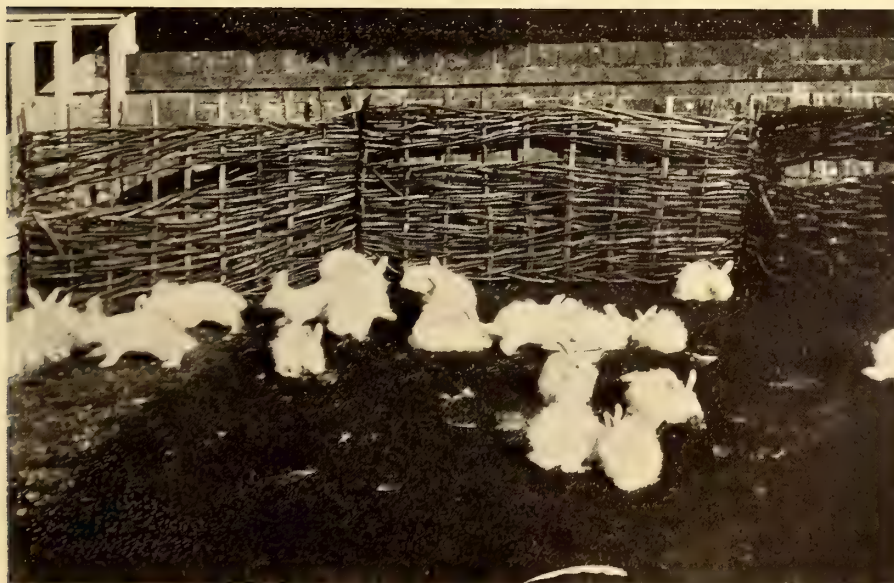
Rare Long-haired Guinea Pigs



Rare Albino Birds
White Java Sparrows Below



White Mice Are Among the Special Pets
of the Attendants



Long-haired Guinea Pigs at Large



The White Pigs Are Always Clean



An Indian White Deer Is One of the Notable Animals of the Farm



The Snow-white Peacock Is One of the Loveliest of Creatures and Always Interesting

broids"—a most graceful and charming animal, bred between a zebra and a donkey. These hybrids were regularly used in harness by Lady Alington, but they did not live long; and as the sole survivor threatened to die of sheer inactivity, he was handed over to the village baker, who uses him to this day in the work of distributing bread to the countryside.

You will be shown a collection of superb Angora sheep and pigmy bulls from India, as well as those immense mountain goats known as "ovis poli" from the little-known mountain regions of Kashgar in Central Asia. Several of the governors of the Australian colonies have contributed snow-white kangaroos, which are quite the pet of Crichel—especially the little ones, who are allowed complete freedom, and will often leap out of a thicket of lilac with disconcerting suddenness.

Of white rabbits and guinea pigs there must be nearly a thousand; and one can only briefly mention in passing the magnificent ostriches from South Africa, the snow-white turkey cocks and ducks, fowls and even pigs. The pigeon houses were especially interesting. In the first place they were a model of spotless cleanliness and snow-white enamel. The whole farm appears to be alive with them, and the sight of their colonies whirling in mid air above their cotes at feeding time is one of the most charming sights imaginable.

When one of the keepers whistles, a veritable cloud of snow-white pigeons will almost obliterate the sun and then swoop down to the ground, making the air fairly vibrate with the whirl and swish of their sword-like wings.

There are in the White Farm many albinos of a very peculiar kind—white jackdaws and blackbirds, for instance. There are dozens of big Swiss goats, and even Thibetan yaks—those curious hairy dwarf cattle which are ridden like horses and bear packs like mules in the high passes of the Himalayas, between India, Thibet and China.

There are parrot and cockatoo houses filled with the customary snow-white birds; and even the very pigs of Crichel are decidedly white, and what is still more remarkable, they contrive to keep themselves so. The white deer from India and Central Africa are extremely rare and timid creatures; and next door to them will be seen innumerable white Leghorn poultry.

Lady Alington is famed all over Great Britain for poultry keeping and rearing. She has won many prizes at international shows, and made a reputation that extends on to the Continent of Europe with her wonderful bantams. There are white donkeys at Crichel, too; a flock of white Sebastopol geese, and, of course, scores of lovely graceful swans upon the lakes. Among the rarer birds are a number of pure white sparrows from the far-off island of Java, with red beaks and pinkish eyes. Some time ago there were several white thrushes, but these did not live long.

The White Farm is looked after by three married couples, with subordinate attendants; and the entire staff are evidently enthusiastic in carrying out her ladyship's wishes in the matter of most scrupulous cleanliness and close attention to all their pretty charges.



A Flock of Sebastopol Geese Passing Before the White Pigeon House



White Angora Goats and the White Indian Bull

Sunken Gardens of California

Charles Frederick Holder



IT IS not difficult to explain the charm of Southern California and the consequent rush of thousands to the southwest coast as winter approaches. Many years ago some one discovered the San Gabriel Valley as Dana, in his "Two Years Before the Mast," in a climatic sense discovered the coast line region, and gradually the country and its charms became known. There is very little to it—a strip alongshore, several hundred miles of valleys and mountains, mostly mountains or tilted mesas, good farming land up on end and literally between the desert and the deep sea; really the most out-of-the-way region imaginable; like some fairy land hedged about by threatening genii, as without the railroad Southern California would still have been in the hands of the few pioneers who had the nerve and pluck to cross fiery deserts or make the interminable trip around the Horn or across the Isthmus.

But the railroad has opened up this lotus land where everything is reversed—as winter comes in the East summer may be said to arrive in California. True, the indigenous people

call it winter, and there is snow on the mountains, cold nights, and fires and overcoats in the evening, but the strangest winter possible. As an illustration, in the fall of 1907, the country had three inches of rain which in a week or two converted the gray dry plains into a coat of green, so that people leaving the East in the fall found the California winter a season of verdure, warm days, and the country running riot with grass, wild oats and flowers.

It is these conditions which have attracted people to California, and in the vicinity of the San Gabriel Valley and Los Angeles a principality has been built up consisting mainly of the homes of wealthy men from the East who came originally as tourists, but who, delighted with the climatic conditions and possibility of outdoor life all the year round, decided to remain.

So the country has been built up literally, not by pioneers—though there have been many and good men and true who have blazed the way—but by men of wealth who did not have the patience or inclination to wait, but have insisted upon results at once. This, then, is the reason why men



In the Garden of J. D. Hooker at Los Angeles



The March Japanese Garden at Pasadena



A Bit of Japan Trans



A California Cañon Transformed Into a Sunken Ca

SUNKEN GARDENS



nted to California



Great Trees in the Busch Garden



len : the Adolphus Busch Garden at Pasadena

OF CALIFORNIA



The March Japanese Garden at Pasadena



A Bit of Japan Transplanted to California



Great Trees in the Busch Garden



A California Cañon Transformed Into a Sunken Garden: the Adolphus Busch Garden at Pasadena

SUNKEN GARDENS OF CALIFORNIA

who visited Los Angeles twenty years ago are amazed at the wonderful city to-day, with its 350,000 inhabitants, and towns like Pasadena, with a population of 35,000.

The soil of Southern California is very responsive, and it is no exaggeration to say that one can make more of a showing here in five years than in the East in ten. This has been another reason for the rapid upbuilding, and as a result, where the tourist expects to see pioneer towns, he finds beautiful places, as at Pasadena and Santa Barbara. Redlands and other towns seem to have leaped into the limelight and are famous for their beautiful homes. The really interesting feature about it is to see how clever eastern landscape gardeners have seized the opportunity afforded by the climate and wealth to produce beautiful places.

Just how a marvelous change can be produced is seen in the following. A vacant lot covered with weeds, without a tree on it, was taken in hand by a gardener while the house was going up in October. He purchased four date palms of the *Canariensis* variety, twenty feet high and weighing several tons, with a magnificent spread of branches. The writer watched them being moved. They were tunneled, wrapped, boxed, hoisted on to a dray, hauled a mile to the lot where an excavation had been made, lowered carefully, and filled in. These palms formed a splendid row in front of the house, and they did not fade, did not lose a leaf.

Then the gardener laid out his garden. He brought seven-year-old oranges, lemon and grape fruit trees, put in a good size eucalyptus, peach, apricot and a number of other trees. This was in October. The house was finished in February, at which time it was surrounded by a lawn and garden. It had trees and shrubs which in the East would have taken several years to grow. That was seven years ago, and during this time pines and other trees were planted which are now thirty and fifty feet high. If one was asked to guess the age, judging by Eastern standards, he would say fifty years. Such are the possibilities in Southern California. A barren lot can be taken and planted and in a year be covered with semitropic vegetation and made to look as though it had always been so.

And here is the secret. A man of sixty comes to the country. He is asked if he is going to build, and replies, "No, I shall not live to see it finished." He is finally induced to try it, and to his amazement finds that a year later the passing stranger would take his place for one of the old ones of the town. This has a charm for many men who have been engrossed in business until the counting room is second nature. They come here on the down-hill side of life and find there is ample time for home building yet, and ample opportunity to make one of the most beautiful and entertaining experiments, one which is not only a delight to the man himself, but the neighbor, the passer-by, the experiment of taking a barren lot and by touching it with the wand of money and good taste, converting it into a virtual paradise of flowers and shrubs. Hundreds of examples of this may be seen in Southern California from Santa Barbara to San Diego, where the crudest places have been made a delight to the eye.

Such an experiment is shown in one of the photographs which accompany this paper, showing the work accomplished by Adolphus Busch of St. Louis, who appears to be the kind of a citizen who takes delight in giving other people pleasure, who thinks it worth while to help the town look its best. The evidence of it is that here and there you see in Pasadena a lot with no house on it, but laid out with a beautiful lawn and a man at work on it every day. It puzzles some people to understand why this lot is cared for so carefully when there is no one living on it; but the owner of the lot is thinking of the people who pass every day and have to look at it, and for their benefit he makes it attractive—practical philanthropy to the whole people the reader will agree.

The writer has said this about Mr. Busch as a sort of introduction to more elaborate work he has carried on with the same motive—to give the public something beautiful to look at; at the same time it is referred to to illustrate the point that wonders can be performed in this country with the crudest material.

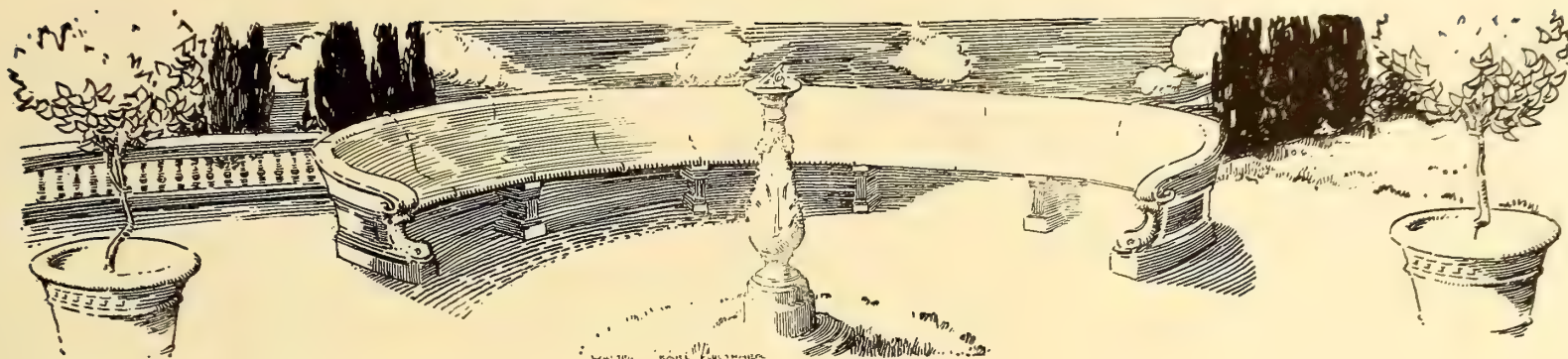
Pasadena stands at the head of the San Gabriel Valley, to the west, and is rapidly filling the space from the Sierra Madre to the Mission hills, a space of eight or nine miles. Its western boundary is the Arroyo Seco—a deep, attractive cañon bearing a little stream and filled with the natural verdure that has drifted down from the mountains. A boulevard has been built on the highest ground abutting this cañon, cut through the original orange groves planted twenty-five or thirty years ago, and on its front are some of the finest places in California. The arroyo side, the cañon front, through some perverse reason, is the back door when it should be the front, and for many years it was left rough and unattractive, but it is gradually being cared for, which means, left to nature or kept in good shape.

The most impossible, difficult region along this arroyo, it happened, was back of Mr. Busch's place which faces the boulevard to the east. In the old days there was a very small cañon here and the rain water from the vicinity cut it away. Oak trees grew in it, and a really attractive little cañon took shape, used by all the old timers as a cut off.

When the street was closed it left an unsightly gulch and a cape or promontory of land which apparently was impossible. True, the oaks were fine, and in winter the *Ademostoma* and *Heteromeles* made the little cañon bloom; but in summer it was an eyesore, as the cliffs washed away and fell in, and it presented an uncompromising appearance, until Mr. Busch appeared, and then so far as can be learned his artistic eye seized upon this undesirable spot on the arroyo and saw great possibilities, and giving a brief outline of his scheme to a landscape gardener he told him to go ahead and make it as beautiful as he could, so that the public would have something to enjoy as they passed by the arroyo road. The picture of what it is now is given and shows one of the most beautiful of sunken gardens; not for its elaboration of detail, but for its simplicity. The scheme seems to be grass and lawn, and nothing in the world is more attractive. The gardener left the place very much as it was, but he filled in the gulch where it had washed and took the cañon, the old wash, as his sunken garden. The side of the cliffs that were so disagreeable to the eye he terraced so that the torrential rains would not wash them away; then when he had the region graded, after months of work with scores of men, he covered the surface with loam and leaf mold, working it over and over until it formed an "epidermis," and then planted grass. As the first rain came that year some genii appeared to have waved a wand, as, like magic, this rough, weed-haunted spot became a think of beauty. I think the most beautiful thing I have seen in nature was the meadow in the great park south of Boston where you can see it rising like billows and disappearing literally over the edge of the world.

This sunken garden is such a park in miniature, beautiful rounded hills, curves of perfect beauty, restful to the eye, soothing to the mind, and suggestive of contentment. There may be larger sunken gardens, more elaborate ones, but this means more than any of them, as to keep up and maintain so vast an area of green grass in summer in California means the expenditure of not only a small fortune yearly but the utmost care on the part of a small army of men. Yet this is done, winter and summer, that the passer-by may enjoy it. Is it appreciated? I think so, as thousands of people go to see it. A little street leads to it, where one can stand and look down on it, the great hill of green melting into the greens of the arroyo. You can follow the green cañon to the left as it sinks away, see fine old California oaks in

(Continued on page 68)



Residence of H. E. Bishop, Esq., at Norwalk, Connecticut

By Francis Durando Nichols



THE recently completed residence of H. E. Bishop, Esq., at Norwalk, Conn., is most interesting. The house shows a careful conformity to the historical style of its prototype, an old Virginia house. The quaint windows with their small panes, and the porch inclosed with glass, add quite a pleasing feature to the white-painted shingled house. The entire house is crowned with a roof which is an exact copy of its prototype, making it quite distinctive in character. The site chosen for the house was fortunately an elevated corner lot, more spacious by far than is usually to be had in the popular residential section of a city. Taking its situation as a keynote, the designer has given his composition an effect of massive elegance which makes it one of the most striking houses in its vicinity.

The front entrance is approached by a walk extending in either direction from both streets, and its relation to the porch steps has been enhanced by the groups of planting arranged along the side of the house and at the porch.

The house, of wood construction, is erected on a foundation of rock-faced gray stones. The frame work is covered on the exterior walls with shingles showing nine inches to weather, painted white, and harmonizing well with the apple-green painted blinds and the roof, which is also shingled

with white cedar and left to weather. The granite steps and porch, inclosed by an iron railing with brass mountings, is quaint in its detail and forms a harmony with the rest of the house. The porch is inclosed with screens and blinds in summer and glass in winter, and makes an all-the-year-round living porch. From this entrance one enters the hall, which is, as is all the rest of the house, furnished in a pure Colonial style with a superb collection of Colonial furniture. The hall, trimmed with white pine, is treated with ivory-white paint. A chair rail extends around it and up the stair-

way and around the second story hall, forming a Colonial wainscoting. The walls above have a covering of a pleasing neutral tint, and the whole is finished with a massive wooden cornice. The staircase, with oak treads, white-painted balustrade, and a mahogany rail, and the open fireplace with its red tiled facings and hearth and Colonial mantel are quite the features of the hall. The grandfather's clock placed in the corner, the Sheraton side-table along the wall, and the Colonial chairs are harmonious in effect.

The drawing-room, at the left of the entrance, has a white-painted trim, a low Colonial wainscoting and a false fireplace furnished with a Colonial mantel painted white and supplied with a mahogany shelf. The walls above the wainscoting are covered with yellow-striped wall paper, which harmonizes with the white-



The Enclosed Porch at the Front Entrance Is the Feature of the Facade



The Hall Has a Colonial Wainscoting, an Ornamental Stairway and Antique Furniture



The Fireplace and Book Cabinet

painted trim and the blue draperies, hung over thinner white ones, and which fall in graceful folds from brass rods placed at the top of the windows. The furniture of the room is excellent. The old Empire sofa thrown across one corner of the room, the Chippendale chair placed at one side, the two old teatables and the Hepplewhite side table and the beautiful Empire mirror over the table, together with the fine old Sheraton screen, help to make a delightful room.

The great living-room and den are to the right of the entrance, and are treated in the same general style as the drawing-room. The wall space above the wainscoting is, however, covered with a green wall covering. The den is separated from the living-room



Old Staffordshire Ware, Including Some of the State Plates, Placed on the Wall Above the Plate Rack Ornament the Dining-room



The Old Desk and Windsor Chair Carry Out the A from the Living-room by a Massive



the Features of the Living-room



An Empire Sofa, Chippendale Chair and Sheraton Screen Are Some of the Furnishings of the Drawing-room

by a fine design carried out in a plaster archway supported on fluted columns with Ionic capitals. The open fireplace, built of red brick, has a hearth of red tile and a Colonial mantel. A quaint Colonial bookcase is built in at one side of the fireplace. Fresh from the hand of the builder, the room must have presented an effective, but severe, elegance, which was soon dispelled by the artistic furnishings with which it is supplied. The soft green draperies at the windows over thinner curtains of white Madras lend a pleasing tone to the room, while the fine old Empire sofa at one end, the old banjo clock, the two Empire tea tables, the corner chair of Chippendale make, the thousand-legged table, the Sheraton side table, the old desk and Windsor chair in the den, carry out the



Unique Effect Sought in the Den, Which Is Separated
Archway and Is Full of Quaint Comfort



An Empire Sofa, Banjo Clock, Windsor Chair and a Thousand-legged Table Are a Part
of the Living-room Furniture



The Hall Has a Colonial Wainscoting, an Ornamental Stairway and Antique Furniture



The Fireplace and Book Cabinet Are the Features of the Living-room



An Empire Sofa, Chippendale Chair and Sheraton Screen Are Some of the Furnishings of the Drawing-room

painted trim and the blue draperies, hung over thinner white ones, and which fall in graceful folds from brass rods placed at the top of the windows. The furniture of the room is excellent. The old Empire sofa thrown across one corner of the room, the Chippendale chair placed at one side, the two old teatables and the Hepplewhite side table and the beautiful Empire mirror over the table, together with the fine old Sheraton screen, help to make a delightful room.

The great living-room and den are to the right of the entrance, and are treated in the same general style as the drawing-room. The wall space above the wainscoting is, however, covered with a green wall covering. The den is separated from the living-room

by a fine design carried out in a plaster archway supported on fluted columns with Ionic capitals. The open fireplace, built of red brick, has a hearth of red tile and a Colonial mantel. A quaint Colonial bookcase is built in at one side of the fireplace. Fresh from the hand of the builder, the room must have presented an effective, but severe, elegance, which was soon dispelled by the artistic furnishings with which it is supplied. The soft green draperies at the windows over thinner curtains of white Madras lend a pleasing tone to the room, while the fine old Empire sofa at one end, the old banjo clock, the two Empire tea tables, the corner chair of Chippendale make, the thousand-legged table, the Sheraton side table, the old desk and Windsor chair in the den, carry out the



Old Staffordshire Ware, Including Some of the State Plates, Placed on the Wall Above the Plate Rack Ornament the Dining-room



The Old Desk and Windsor Chair Carry Out the Antique Effect Sought in the Den, Which Is Separated from the Living-room by a Massive Archway and Is Full of Quaint Comfort



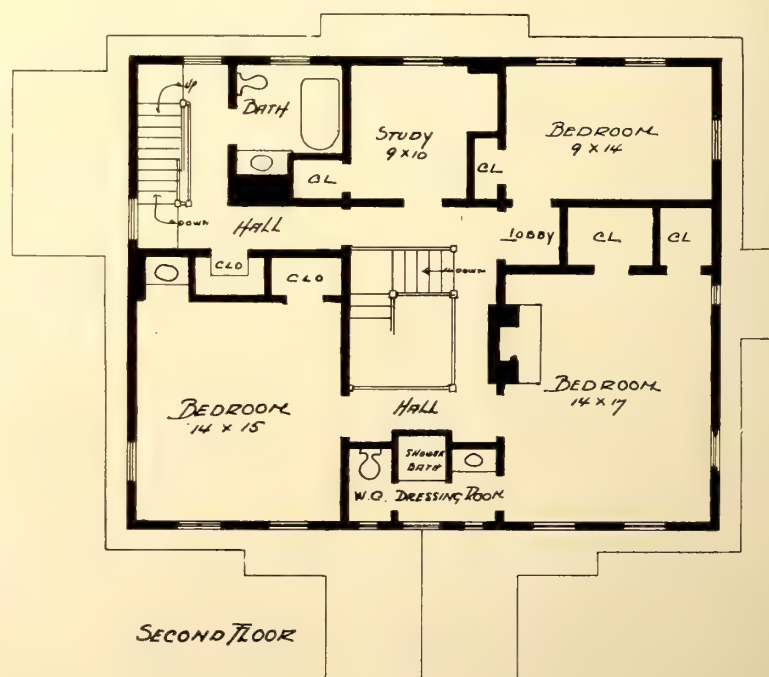
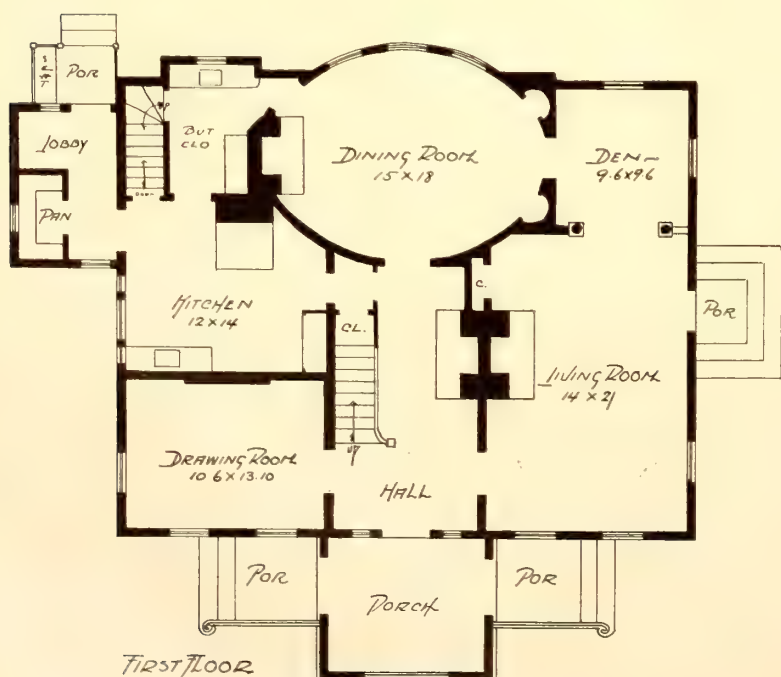
An Empire Sofa, Banjo Clock, Windsor Chair and a Thousand-legged Table Are a Part of the Living-room Furniture



The Exterior of the House Is a Clever Copy of "Shirley" in a Modified Form

Colonial effect very agreeably. The dining-room, at the end of the hall, is built in an oval form, which makes a particularly interesting room. The side walls have a paneled wainscoting, which is finished with a mahogany plate rail. The

posite the fireplace is a door opening into the den, on either side of which are cabinets built in with glass doors, in which are many rare bits of old china. Placed about the walls and resting on the plate rack are some fine specimens of old Staf-



wainscoting is painted white and the walls above are covered with a crimson wall fabric. An open fireplace occupies one end of the room, with red brick facings and hearth, and a handsome Colonial mantel with paneled overmantel. Op-

fordshire ware. Among them are the plates known as the Landing of the Pilgrims, Harvard College, Baltimore Exchange, Erie Canal, New York City Hall, Fair Mount, Merchants' Exchange, the Landing of Lafayette, together with



The Dining-room Has an Old Empire Dining Table, Chippendale Chairs, and a Hepplewhite Sideboard

many of the State plates. This collection is a very rare and excellent one.

The old Colonial dining table of the Empire period, the Hepplewhite sideboard, and the fine old Chippendale chairs are harmonious with the treatment of the room. A door opens into the butler's pantry, which is fitted with sink, drawers and dressers complete. Stairs to the second floor lead out of this room. Another door opens into the kitchen, which is fitted with sink, range, dresser and rear entry with store pantry and space for ice-box.

The second floor contains four bedrooms and bathroom. The owner's suite has white-painted trim and quaint old figured white paper above the gray painted wainscoting, furniture of mahogany, with high-posted bed and other pieces to correspond. The

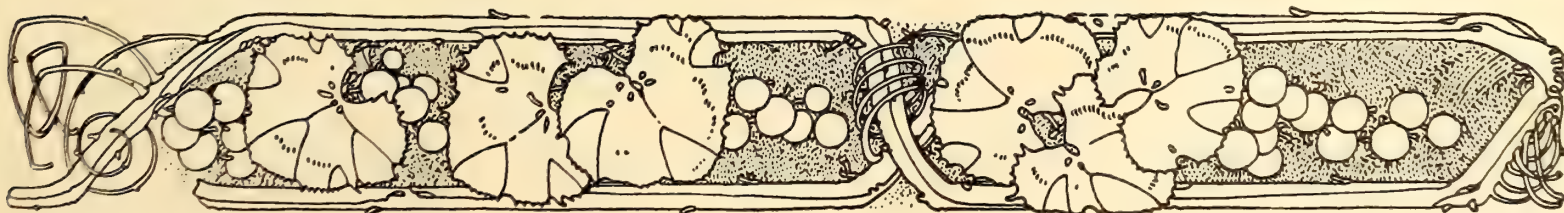
fireplace has red brick facings, a tiled hearth and a Colonial mantel. A shower bath, lavatory and toilet is provided in the dressing-room, which is placed off the bedroom. The corresponding bedroom in the front of the house is finished with white trim, lavender striped paper of Colonial design and old mahogany furniture. The two rear bedrooms are treated in white, with blue crape paper hung on the walls of one room and figured chintz on the other. The bathroom has a tiled floor and wainscoting and porcelain fixtures with exposed plumbing.

There is a guest room, two servants' bedrooms and bathroom, and a trunk room on the third floor.

Mr. Joy Wheeler Dow, of Wyoming, N. J., was the architect.



The Rear of the House Is as Attractive as the Front



Movable Homes

By Ernest Myer



FEW persons are so unhappy as those who continually move their homes. These poor unfortunates have, in truth, no real home in its proper sense, but a mere abiding place, occupied for a longer or shorter period, as circumstances may determine, and then left for something else. There can, of course, be no association with the house or place of residence under such circumstances, which thus becomes a mere shell, a temporary shelter, of absolutely no permanent interest and the object of very little temporary regard.

The movable home is an American product, and if not peculiar to the United States, it at least finds its most conspicuous development within our own borders. The results of this method of living are very much more widespread than may be apparent on the surface, but no aspect of it is more serious than the spirit of unrest, and the lack of love of home that it promotes. The Bedouin with his desert tent is scarce more restless than many an American family constantly on the move.

The family that has to move should be carefully distinguished from the family that does so for—shall it be said?—mere pleasure. Unavoidable movings, especially when occasioned by unfortunate circumstances, are always to be deplored and must be regretted by every one. The deliberate

movings are undesirable ones, the migrations made by people who move from house to house because they may gain a few dollars by the sale of the old house; those who move simply to escape the payment of rent are, of course, in a class by themselves, indelibly branded with a mark that proclaims their offense.

The home movers, however, who move into a house only in order that they can move out of it—at a profit—form a considerable body of people who have no idea they are wronging themselves. They do not know they are missing the joys of a permanent home, or that they are thrusting away from themselves some of the noblest of human sensations. They live, of course, and have a place of residence; but of a home that is a true home they have no knowledge, real or imaginary.

One of the finest sights of England is the old home which has been the family headquarters not alone for generations, but for century after century. That many of these houses are grand and stately is quite true, and these qualities, apart from their individual associations, are often wonderfully attractive. But apart from their mere physical characteristics there is a hominess in these old places that saturates their very floors and walls and gives them a quality that, in an equal sense, has not yet been approached by any American dwelling.

Sunken Gardens of California

(Continued from page 62)

the very center, then it turns to the right. If you follow this, and you can on certain days, the west side of the slope becomes visible, terraced and planted with trees, and down its side flows a little stream. The top of the dome is also planted with a forest of rare trees. By following down toward the arroyo the lower level is seen laid out in lawns, and here is a grove of oaks reaching down to the very water's edge. No better example of private grounds, beautified for the benefit of the public, as the owner is rarely here, can be seen in California.

This attitude holds to a large extent in Pasadena. There are few if any fences on the Orange Grove boulevard referred to. The lawns are kept up to concert pitch, slope down to the street without any obstruction, and afford a park effect, giving, as a result, a boulevard or street two miles long that attracts much attention for its beauty; but when you analyze it, it is only grass, and of course the verdure of semitropic palms and other trees.

On this same avenue is a beautiful classic sunken garden on the Merritt estate, as attractive as many seen in Italy, and wholly on conventional lines.

The spirit or the idea of the sunken garden is carried out in many private places in Los Angeles. The original rough outlines of the land are preserved and adapted perhaps to a Japanese garden, made effective with clumps of bamboo and other decorative shrubs and grasses. One of the most at-

tractive Japanese gardens out of Japan is seen in Pasadena on the ground of Mr. March. Here the perfection of art as applied to outdoor life is seen: green lawns, undulating like billows, with strange creeping trees, artistic in spite of the degeneration of the type. Indeed in this town sequestered in the valley of the old Mission, one may find many charming gardens; this feature has made the town famous as suggesting its outdoor life and possibilities.

On the same arroyo described is the Barker place, where the natural shape of the hill has been left and the situation similar to that of the Busch place except that the house, a fine example of Colonial architecture, stands on the hill which slopes away to the arroyo on one side and into a street, once a cañon, on the other. Slopes of green grass, pines, and indigenous forest trees render the place one of the beauty spots in California. On the summit a conventional pergola adds to the attractiveness of the grounds, and affords a lounging place from which to enjoy a series of vistas of distant hills rolling away like billows to the far-off sea; of the main range of the Sierra Madre, grim and uncompromising; of the peak of San Antonio white with snow. From these Pasadena gardens, with the odor of the orange blossom and violet cloying the air, one may see the snow rolling up the north slope of this sentinel of the desert; see it reach the summit eleven thousand feet in the air, and go drifting off over the valleys and orange groves at its feet.

The Suburban Home of G. W. Graham, Esq.,

Lawrence Park, Bronxville, New York

By Walter Williams



MR. GRAHAM'S suburban home at Bronxville, N. Y., is designed in the English villa style, and shows what can be done in the building of a small country house along these lines, and at the same time permitting it to have sufficient artistic value to give it a charming character.

The house is built on the side of a hill, and with the building of retaining walls which extend in either direction from the front line of the house, a natural graded lawn is obtained at the front and at the level of the roadway, while at the rear a



The Hall Is Finished with a Forest-Green Effect for the Trim and a Gray Tint for the Walls



The Porch at the Entrance Is Quite Chapel-like in Its Effect

greater depth gives an extra story to the house, the entrance to which is reached from the grade line. The site is well studded with a forest of trees which form a very excellent setting for the house and adds dignity to the already delightful site. While it is not a large plot, it has the appearance of a greater one for the reason that it blends itself with the neighboring grounds, presenting the appearance of one estate.

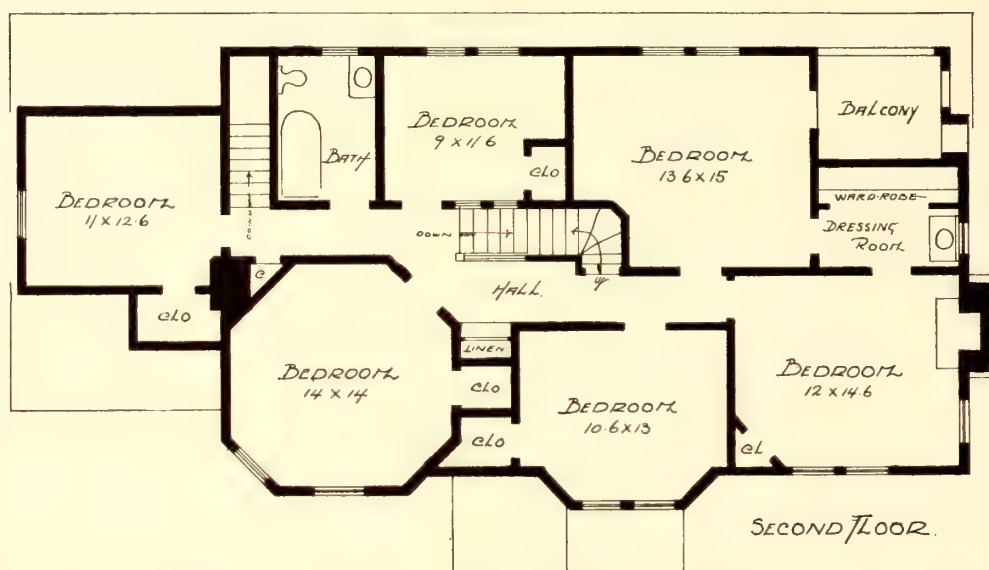
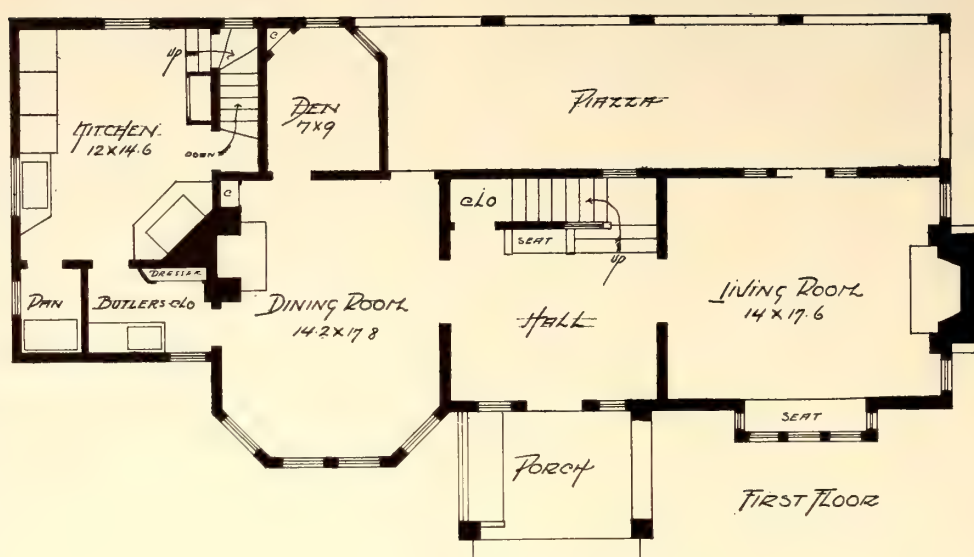
The building is treated in an artistic manner with an excellent harmony of color. The house is kept close to the grade at the front, and from this point to the peak the entire building is covered with stucco placed on a wooden frame construction, the finishing coat being put on in a rough manner, brushed out and left with an irregular surface. The trimmings and all exterior woodwork are painted a rich brown color, harmonizing well with the gray of the stucco work and the soft green stained shingled roof, the latter blending itself and dying away into the soft green of the trees which overhang it.

An attractive feature of the house is the entrance porch being separated from the piazza, which is placed at the rear of the house, forming a center where the family life is spent during the warm season of the year; this piazza is inclosed within glass in winter and is used for a sun-room.

The square hall, which is placed in the center of the house, gives access to the two principal rooms on the first floor. It is finished with a forest green effect, with gray tinted walls. It contains a paneled seat and staircase of simple but artistic

construction. To the right of the hall is the living-room, which is also finished in forest green. The walls are covered with a gray wall paper, on which is a figured design in brown. The fireplace is built of red brick with the facings and a hearth of the same, and has a mantel of unique and simple design. Bookcases are built in on either side, and they extend around a part of the room. There is a window seat in the bay window.

Opposite, and across the hall, is the dining-room, which is trimmed with Flemish oak. It has a fireplace built of red brick, with the facings and a hearth of the same, and a mantel. The walls are covered with a paper in autumnal brown



and red coloring. Off the dining-room and connecting with the piazza, with an outside entrance, is the den, finished the same as the dining-room.

From the dining-room a door opens into the butler's closet, fitted with a sink, drawers and dressers complete. A second door opens into the kitchen, which is furnished with a range, sink, laundry tubs, dresser, besides a pantry large enough to admit an icebox.

The second floor is treated with excellent effect, and has a white painted trim, and each room has a wall covering of one particular color. There are four large bedrooms and a bathroom on this floor, besides one servant's bedroom over the kitchen extension, reached by



The House Is Built of Stucco from the Grade to the Peak, and the Whole Is Covered with a Shingled Roof Stained a Soft Green Tone



The Walls of the Living-room Have a Gray and Brown Covering, and a Trim Finished in Forest Green

a private stairway from the kitchen. The owner's suite contains a large open fireplace, with brick facings and hearth, and a mantel, and the two rooms of which this suite consists are connected by a dressing-room, provided with a large wardrobe and a lavatory. Ample storage space is found in the attic, which is an open one. The cellar contains the furnace room, fuel room, storeroom and servants' toilet. There is a splendid opportunity for a laundry or kitchen in the cellar, and there is also a fine space for a bowling alley, which could be easily built in along the rear wall and extending along the entire depth of the house.

We have, then, a suburban house, quite ample in size and yet of real modesty in design and form. It is a house beautifully adapted to its somewhat difficult site, thoroughly convenient

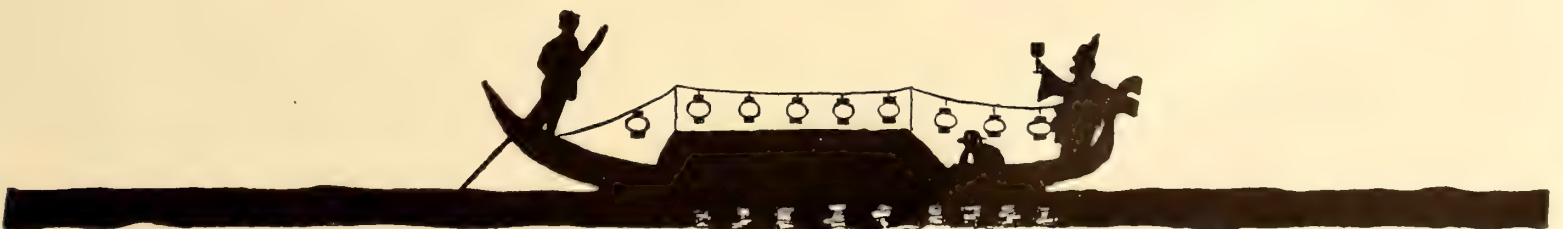
in plan, charmingly arranged within, and endowed with all the true qualities of a home. Like many successful houses, its success is largely due to the exceedingly fortunate manner in which house and environment are blended.

And this is precisely as it should be. It is for the obtaining of exactly this result that architects are employed and care taken in the designing of structures. Yet even when quite sufficient care is taken in the design of a house, the home quality, the livableness, as it were, is too often absent. Mr. Graham's house shows this in a very marked manner. His house has achieved, therefore, a measure of success that does not always attend the building of dwellings of this size.

Mr. William A. Bates, of New York, was the architect.



Autumnal Brown Is the Color Scheme of the Dining-room. The Trim Is Finished in Flemish Oak



An Experiment in Arts and Crafts

By Mary H. Northend

WHEN, less than a dozen years ago, a group of summer visitors to quaint old Deerfield, Mass., conceived the idea of reviving some of the old-time arts, especially the embroidery still produced by some of the descendants of the early settlers, they probably had no idea of starting an industry that would spread in different directions until there would be, as there is to-day, what are called arts and crafts shops in twenty-five different States, not only giving employment to many who need it, but adding numerous household articles, both useful and beautiful for all time to come. For just here let it be said that these reproductions of old time articles are honestly made and made to last, not yielding up their usefulness by contact with the world as do so many of the machine-made products of the modern factory.

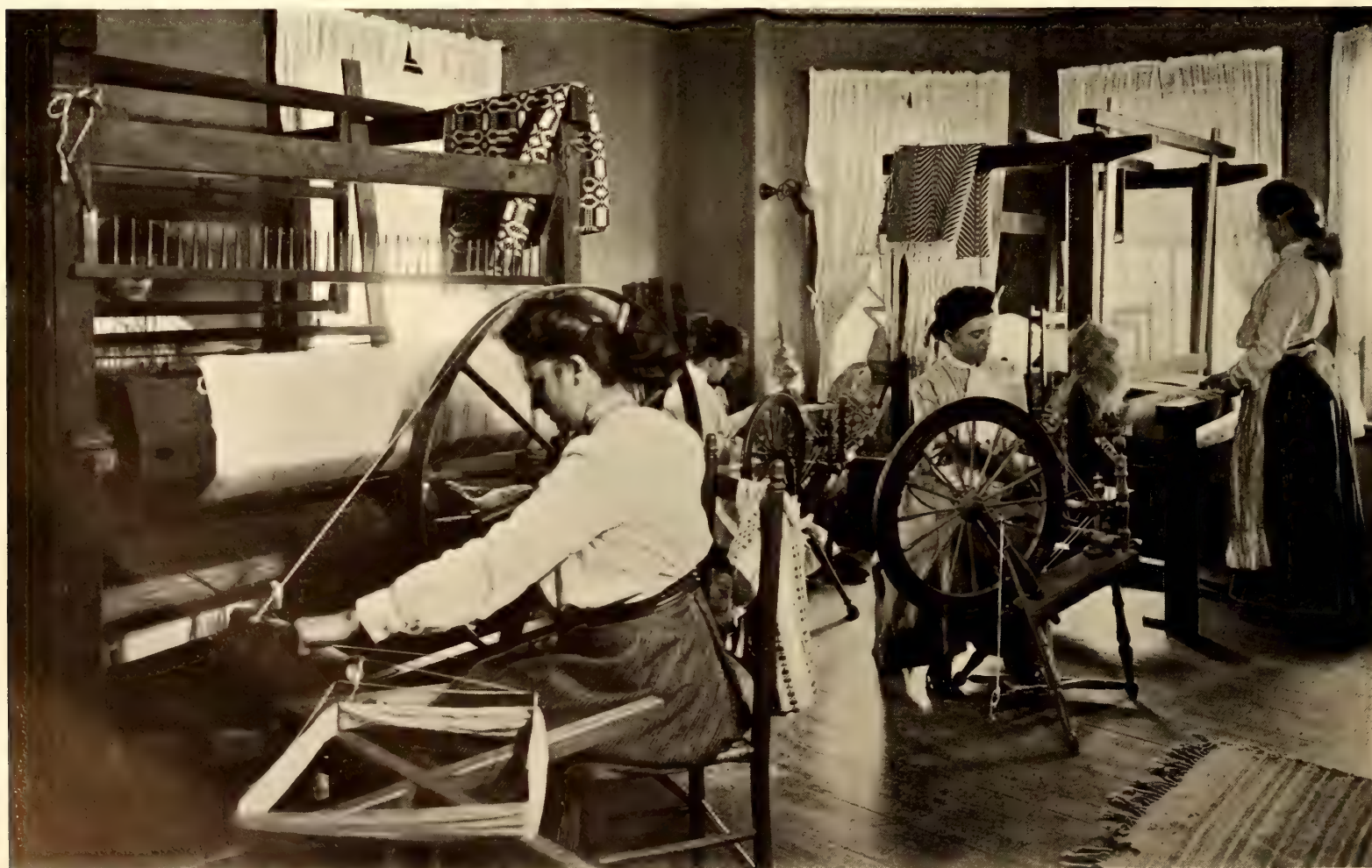
This revival of the old arts and crafts is a sort of New England renaissance, the products sometimes changed to adapt them more closely to modern needs and sometimes exact copies of things that were made centuries ago before the Mayflower crossed the ocean. Often designs of lace, embroidery, quilt or rug have come down from mother to daughter in a sort of artistic succession, as generally one member of the family inherited the taste and the skill that make her handiwork as acceptable to-day as was that of her forebear a hundred years ago. Sometimes the art would seem to have vanished, for nobody had skill enough to execute it, and then it would be revived as some girl would

"hark back" to the ancestor who had had the nimble fingers and the artistic sense, and then she, too, would be able to reproduce the forgotten stitches or the forms of some cherished bit of needle work or lace, yellow with age and almost ready to crumble beneath her touch.

Perhaps it was when the discovery was made that these articles, reproduced to-day exactly like those of the olden time, found ready sale and good prices, that the necessary impetus was given to what has now become a recognized industry, employing men, women, boys and girls at profitable wages.

The work differs in different localities. It remained for a Marblehead physician to find in the industry, not only a source of benefit to the world at large, but a means of treating his patients suffering from nervous diseases in various stages.

He has built, on a rocky point that runs out into the sea on the rough coast of Marblehead, a sanitarium and handicraft shop combined. It is almost surrounded by the blue waters of the sea, bluer nowhere than at Marblehead, in contrast with the white foam of the waves breaking on the craggy shore; and the air is so full of health that the environment must hold a balm for even the sickest nerves. But the wise physician who evolved this method of healing, holds the idea that mind and body must be occupied a part of each day if the strained and worn nerves would get back to normal condition. So his patients take up weaving with the hand-loom made in ancient Colonial days. Perhaps they will



Rug-making as a Cure for Nervousness



Reeling Thread

fabricate an old-fashioned quilt or counterpane in the indigo blue and white or the herring-bone pattern. If they make it according to the early fashion, its three strips will be as heavy as a board and about as comfortable to sleep under. One wonders what dreams would come to one having courage to pass a night beneath the cumbersome bulk of one that was woven two hundred years ago. Those made at Marblehead will be finished at each end with a knotted fringe, and will be used as portieres or couch covers, or if perchance for a bedspread, will be removed ere sleeping time arrives.

Some exquisite rugs have cream white backgrounds and are sprinkled over with green fish, after a conventionalized pattern, and table covers and scarfs of odd designs are a part of the work. Nothing is common, for the simplest piece has something unique, either in color, shape, weave or design, yet probably our fore-mothers knew them all, as they wrought them out patiently by candlelight, or in the short winter days, for future use, and for generations yet to come.

All around them the modelers find patterns for their fascinating work, for the deep, dark caverns of the sea bear many a treasure which their cunning fingers can reproduce and find health and pleasure in the doing. The various seaweeds, which the stones tear from their rooting place and the waves cast up on the shore, make exquisite designs for ornaments. One worker fashions a rose bowl, whose decoration is cuttlefish, and another is ornamented with the long



Making Warp

arms of the octopus on the pale green surface. Vases, candlesticks, pitchers, bowls for lamps, bonbon dishes, etc., are adorned with sea weeds, or with crabs, or sea spiders, or star fish, and the potter's wheel goes whirring on turning them out from the red clay, which comes from Beverly not far away, and the fingers of the erstwhile nervous patients grow wonderfully deft, and the wires that send messages all over the body transmit one of calm and quiet to the brain, which never tires with this fascinating labor. The pottery is fired in a kiln built for the purpose in the basement.

The Sloyd workers are a merry group and give emphatic denial to the statement often so fatuously made, that women can not handle tools. He who runs may read a different story in the articles made by these enthusiastic girls, and with it all they gain what is even better than their finished work, good as that is, and this is an intelligent self-activity that develops character as well as heals wounded nerves.

The sitting-room of the building is on the second floor and has four large windows with an outlook on Marblehead harbor, famous the world over. Here the women weave the



Lace Making

raffia baskets and are so full of fun over them that no one would suspect they were nervous patients taking a cure.

One of the most fascinating of the revived arts and crafts is the lace making. There is lace galore in every shop in every village in the country, but it is machine made, and no matter how fine or intricate the pattern, it is never quite the same as that made by hand, which, when the charm of antiquity is added, is a precious thing indeed. There are priceless pieces in the Vatican that took a lifetime in the making and plutocrats to-day have a fad for collecting laces that is worthier of imitation than many of their caprices. Pillow lace making, it is said, was introduced into England in the reign of Henry VI by some refugees from the Netherlands, and was soon acquired by some of the English, whose descendants migrated to the new world and settled in Ipswich, Mass. Quite a lace industry flourished there in days gone by, and the wealthy dwellers in Salem, then in the height of its prosperity—in Newburyport and in Boston—ordered laces for wedding gowns and veils, many of which are still preserved with the greatest care and sometimes figure at a twentieth century function to adorn the costume of the modern bride.

For the lace making of to-day sometimes the old lace

pillows and bobbins are brought out of ancient chests in the garrets or mahogany desks and drawers, and the bobbins go clicking away as the twentieth century girl tries to make lace as did her ancestors, more than a hundred years ago, from a pattern pinned to the pillow in front of her. To-day, as



Weaving a Rug

many years ago, the best cotton for the finest lace is brought from Europe.

A flourishing lace industry is carried on in Boston, and the

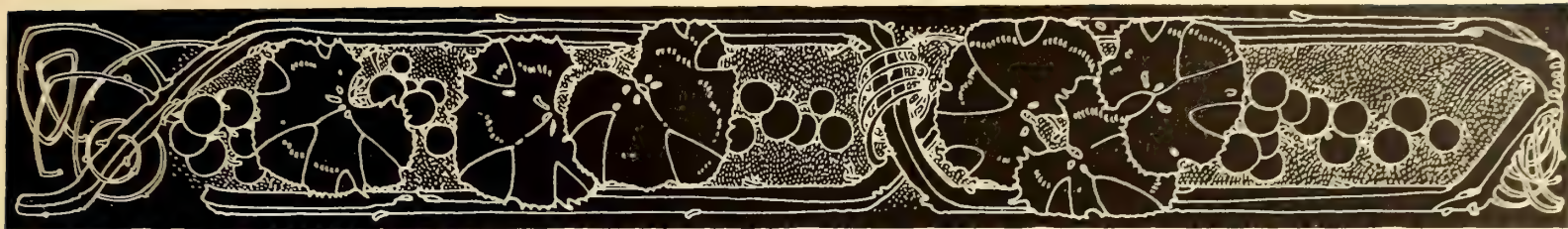


Modeling Pottery

girls are able to make fairly good pay by this handicraft. It started under the auspices of the South End House, one of the college settlements, as an experiment, but soon gave sufficient reason for its being, by turning out good work, for which ready sale was found. The original instructor of the girls was a lace enthusiast, who has some rare pieces of her own and who can make the finest rose point and the old Venetian laces, an art which is probably known to but few people in this country and which she acquired in Europe. Besides the making of various kinds of lace, the employees do a great deal of repairing of almost priceless pieces which would otherwise be sent abroad for this purpose. Silver work and spinning are other arts successfully practised.



A Corner of the Arts and Crafts Shop



A Simple Planting for Small House Grounds

By George S. Wickham



THE annexed diagram offers a suggestion for a comparatively inexpensive planting for small home grounds. It is proposed to plant two sides of the lot in a combination of shrubs, hardy border plants, and bulbs. Here will be ample space for annuals also. This will give flowers from early spring until late in fall, if a judicious selection of varieties is made. The bulbs will come into bloom very early in spring. These will be followed by such early-blooming hardy plants as dicentra, iris, bellis, and phlox subulata. A little later will come the aquilegias, then the peonies, and by and by the hollyhocks, with perennial phlox crowding the latter closely, and ushering in the hardy asters, pyrethrum uliginosum, dahlias, and the later fall flowers. At intervals throughout the season, the various shrubs will add to the procession of beauty, and at no time, from April to November, ought such a combination to be flowerless.

Simplicity of treatment should be followed, because there is not space enough to do elaborate gardening in, and simple effects on small grounds are always most pleasing. I would suggest that before any shrub or plant is decided on or set out, its size, its time of flowering, and its color be ascertained. If these are known, many mistakes can be avoided. I would put the largest shrubs in the corner, working down on both sides with smaller ones until only low-growing kinds appear next the streets. I would follow this plan, also, in locating border-plants. A little study of the characteristics of the material you make use of will enable you to make your border slope down gradually from a height of ten or fifteen feet in the corner, to a foot or two at the ends. By putting tall-growing perennials at the rear, working down toward the lawn with plants of lesser height, you can secure a banked effect which will be very pleasing from every portion of the lot or streets.

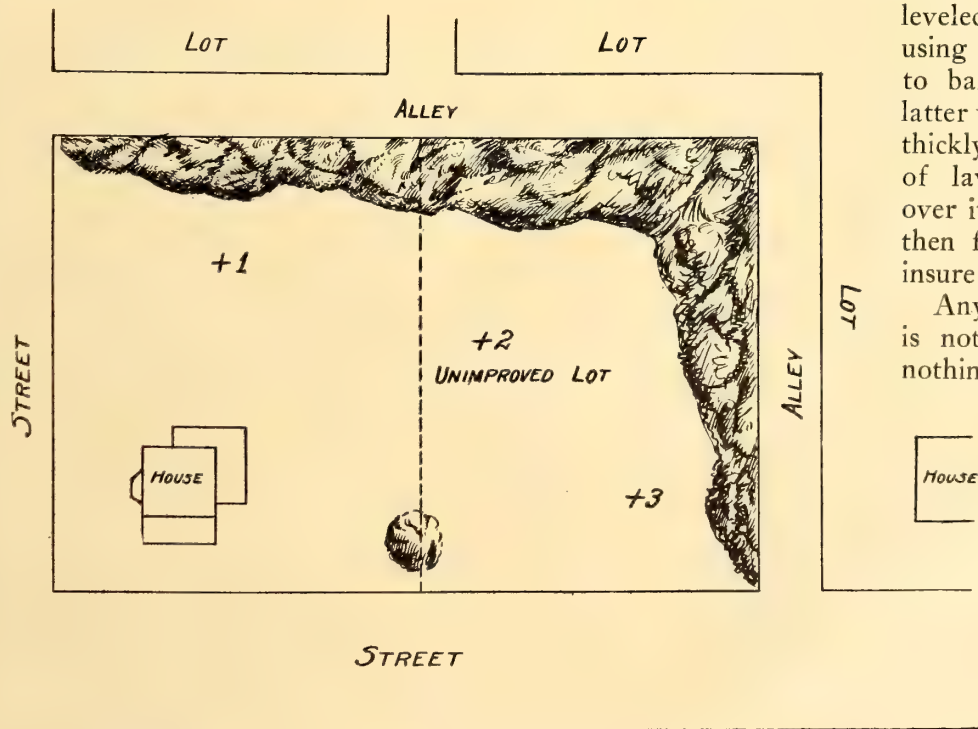
It will be seen that there is nothing arbitrary about the plan for planting outlined on diagram. I would avoid all straight lines in the border. Let curves prevail. Group your shrubs. This does not mean that each group should be made up of one kind. Kinds which harmonize can be combined. Do not make the mistake of planting in rows, or at even distances apart. Between the shrubs, plant your perennials of tall habit, to make a background for lower ones in the front row. Among these plant your bulbs, a mass here, a mass there, each mass confined to its own kind. Where these bulbs grow, annuals can be used later.

I have indicated, at 1, 2 and 3, desirable places for small trees, like mountain ash, cut-leaved birch, or some of the Japanese maples—all of rapid growth, symmetrical habit, and early culture. These sorts do not become too large for small grounds in a few years, as most trees do.

Such an arrangement furnishes an excellent background and setting for the dwelling. It also helps to isolate the place, to a considerable extent, from adjoining grounds, and does this without any offensive exhibition of a desire for exclusiveness. It will be found vastly more satisfactory than scattering shrubs, plants, and flower-beds here, there, and everywhere. Such a plan of planting gives a wide sweep of lawn in unbroken beauty, thus preserving its dignity, and suggesting distance and breadth in such a manner as to make it appear larger than it really is.

In preparing the lawn, have the ground well spaded or plowed, then pulverized, and leveled. Manure it well, using bonemeal in preference to barnyard manure, as the latter will bring in weeds. Sow thickly with the best grade of lawn-grass seed, and go over it from east to west, and then from north to south, to insure evenness of seeding.

Any one can see that there is nothing complicated here, nothing involving expense of any moment, nothing that any one can not have and can not arrange. Yet simple as this outline is I am confident it will yield interesting and good results. Complicated plantings are interesting but unnecessary.



A House at Berkeley Hills, California

By John Sherman

How the Problem of Building a House on a Hillside Was Solved by a New York Architect

MANY a delightful spot has lost its charm through the inability of the architect to design and build a house in keeping and in conformity with the site upon which it is to be built, and in consequence not a few golden opportunities have been lost in the selecting of a site for a home.

The site chosen in this particular case was one which was located on a side of a hill. It was fifty feet in width and one hundred and twenty-five feet in depth, and with a difference in the grade of thirty-two feet from the front to the rear of the plot. The previous owners of the property had been informed that it would be impossible to build upon the site with satisfactory results, so it was fortunate that an

architect was obtained with a keen perception of the true value of the site who, upon observing the group of live oaks growing on the hillside, decided to place a little house among their midst.

The position of the live oaks and the steep grade determined the position and arrangement of the plan of the house, which as marked out is most complete in every detail.

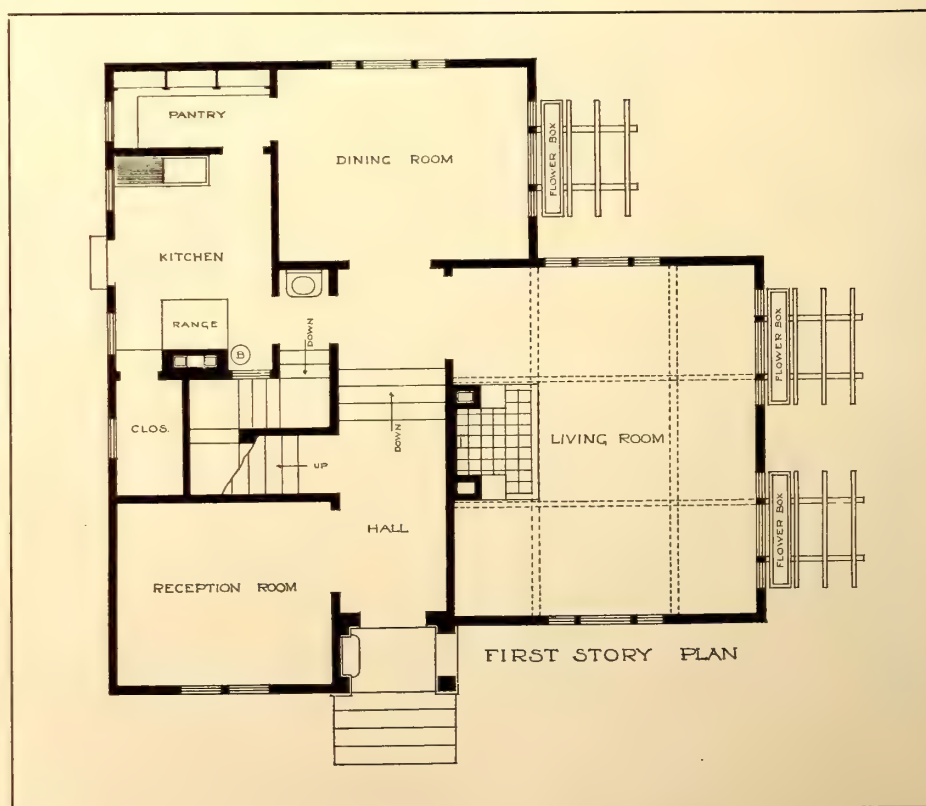
The foundations are somewhat elaborate for a house of this size, but it was advisable to make them as substantial as possible on account of the hillside. The entire foundation is built of concrete, reinforced with three-quarter inch steel rods, and the footings are toothed into underlying hard pan and rock. The steep grade has permitted the building of three stories in the rear and two at the front.



The House Seems to Nestle Among the Tree Tops



Double Rows of Shingles Are Used for the First Story of the House; Regular Shingled Sides Complete the Second Story



A glance at the basement plan will show how steep the grade is and how it made it possible to have the basement entrance at grade level, and also to get a light and airy laundry and servants' quarters with the bedroom floor several feet above the natural grade; also a light and airy cellar with floor still higher up. This basement, containing the servants' quarters and bathroom, keeps the service end of the home free and isolated from the living quarters of the family and also a laundry fitted with laundry tubs, a fuel room, heating apparatus and cold cellar for storage purposes.

The exterior woodwork of which the superstructure is built is of California redwood left unpainted, and which has now taken on a rich golden shade, which together with its excellent weathering qualities, has placed California redwood without a peer for exterior wood finish. The trim and window sashes are painted a dark reddish-brown color in harmony with the color scheme. The roof is shingled and finished similar to the exterior walls. The chimneys are built of red brick laid in Flemish bond with white mortar joints.

The entrance porch has a built-in seat placed at the wall side of the house, while the entrance to the house is obtained through a Dutch door. This hall is trimmed with redwood

with paneled walls, and it has a boxed-in staircase rising out of it. The effect produced by the difference in floor level of the entrance hall and reception-room and the rest of the first story adds considerable charm to its unique character.

The reception-room is daintily treated and furnished in harmony with the purpose for which it is intended.

Descending four steps from the hall another level is reached, from which access is obtained to the living-room. This is one of the features of the house and is most effective and livable, with its flood of light and sunshine, its large quaint fireplace, and its exposed and timbered roof built in truss form. The entire room is trimmed and paneled with redwood toned to a deep, rich, golden-brown, contrasting beautifully with the gray plastered gables.

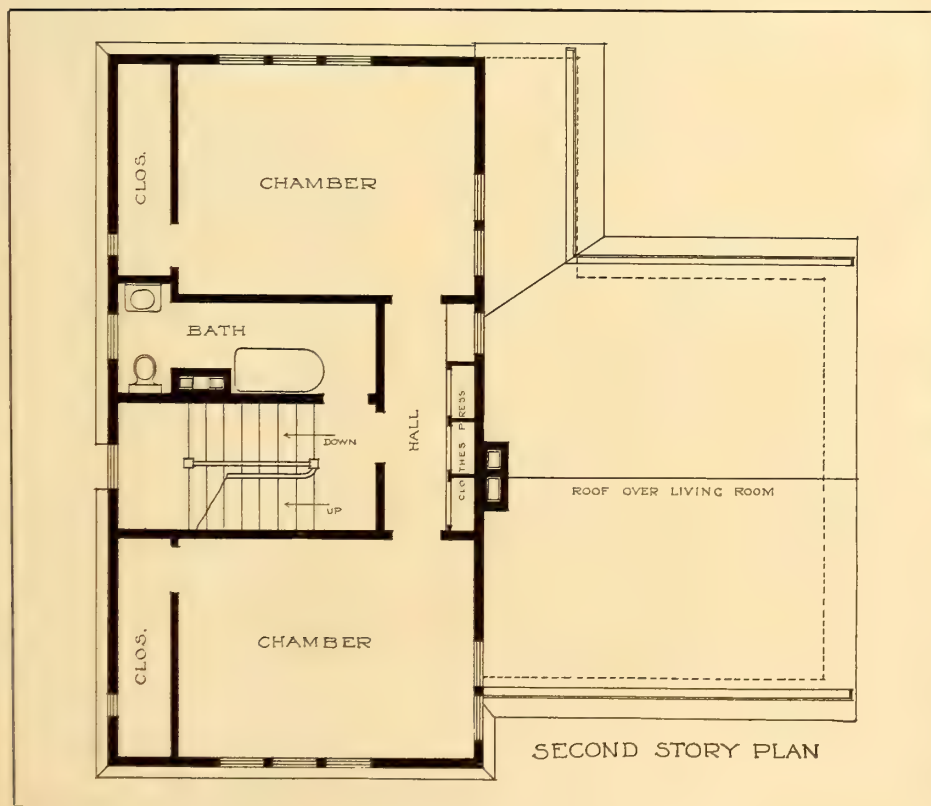
On the same level as the living-room is the dining-room, which is also trimmed with redwood and has paneled walls.

The kitchen is fitted with range, sink and store pantry complete. There are two large bedrooms and a bathroom on the second floor and two bedrooms on the third floor.

Mr. Joseph Duke Harrison, of New York City, was the architect of this house, which was completed just before the San Francisco earthquake in 1906, through which it passed without any ill effects.



The Slope of the Hill Shows the Grade of the Site on Which the House Was Built



The Fireplace in the Living-room Is Built of Common Brick and Has a Hood of Hammered Iron

Built-in Furniture in the Home

By Louise Shrimpton

THE perfect house is rarely found. It is seldom that the test of living in a place fails to reveal its deficiencies, and even if, when built, a house completely suits its occupants, time necessitates changes.

When a room is unsatisfactory, when no amount of furniture or of bric-a-brac avails to really furnish or decorate it, the reason usually is found in the lack of structural features. Every room should have some center of interest. This may be a fireplace nook, a window-seat with interesting outlook, a group of built-in bookcases, or some other fitment. Whatever it is, its treatment must serve to make it the most important feature of the room, with other points of interest subordinated to it.

This matter of interest does not belong entirely to the pictorial aspect of a room. An uncomfortable room is never interesting. An air of comfort, of restfulness, is a vital necessity in a house, and conduces to mental as well as to physical ease.

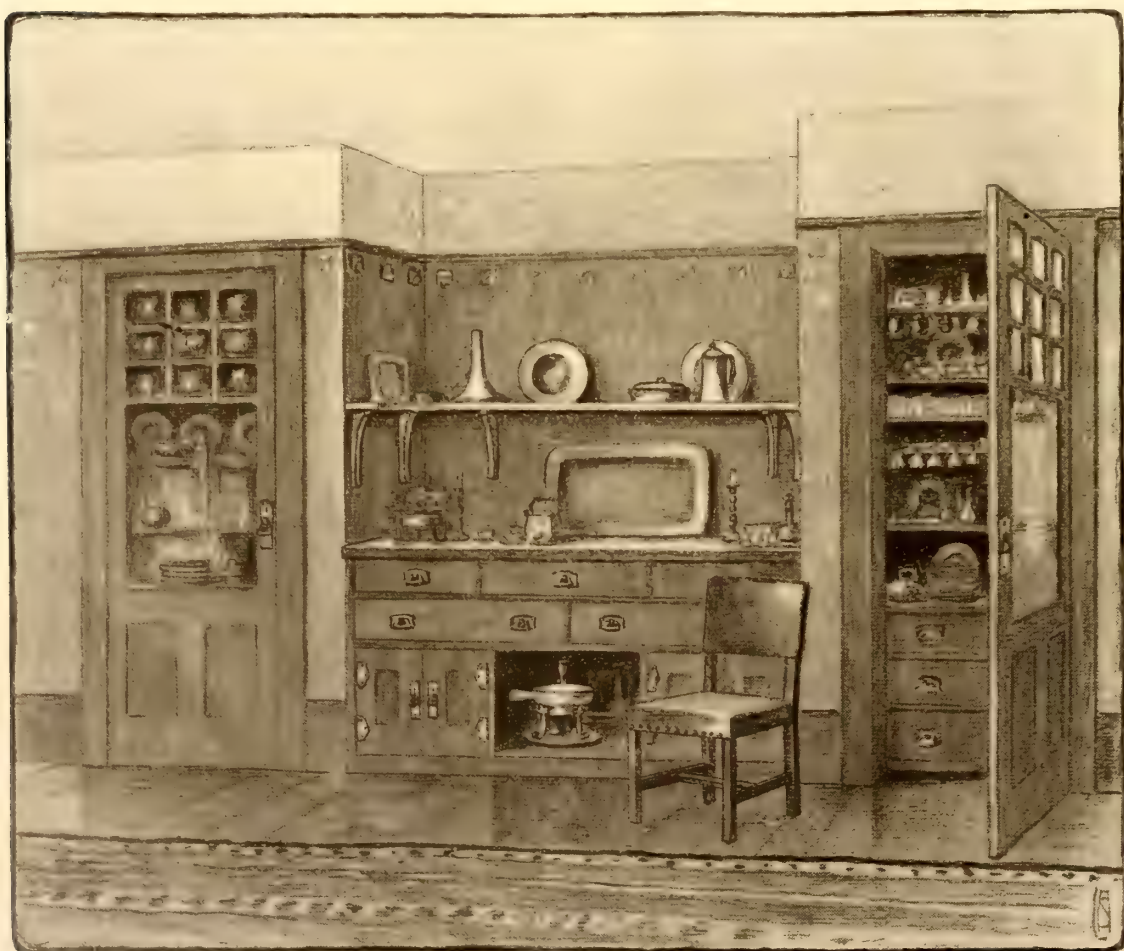
This lack of comfort and of convenience is often felt by women, who realize the need of these qualities in some room in their own homes, and yet who dread to undertake what seems to them a difficult problem. The building of a special piece of furniture to fit a particular place in a room will require, they imagine, the services of an architect, and the making of careful plans, as well as the employment of a skilled cabinetmaker. This, it is felt, would mean great expense as well as a great deal of trouble.

Any clever woman who engages a good builder, one whose

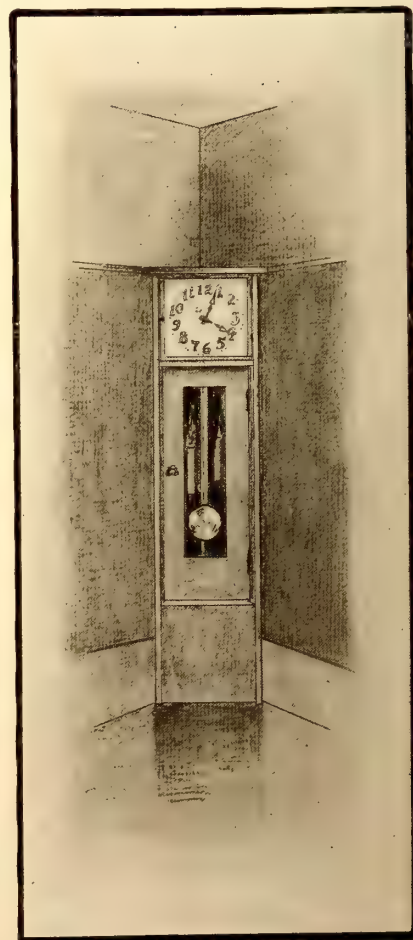
specialty is the making of alterations in houses, or a good cabinetmaker, can, with his assistance, do her own designing, and contrive fitments for her house that are both convenient and beautiful. The expense is rarely greater, and in many cases much less than would be the cost of purchasing good pieces of furniture to serve the same purpose as the fitments.

Each fitment that is built into a room should be simple in construction. If carefully adapted to its purpose, a simple piece is far more effective than one covered with moldings and machine-made ornament, which increase its cost in proportion as they decrease its real value. Good construction and beautiful finish must constitute the chief attraction of this class of furniture. In planning a design the lines of baseboards, frieze and picture molding in the room must be considered, and the fitment made to conform to these or to other architectural lines in the room, or at least to combine agreeably with them. All fitments should be of the same finish as the interior woodwork in a room. In designing cupboards or sideboards, drawers and shelves should be made of proper dimensions for holding table cloths, tray cloths and serviettes. Commodious accommodation for table linen is not often found in the sideboards and serving tables on sale in the shops. Ingenious devices in these and in other pieces of built-in furniture, such as desks, may be indulged in, and opportunity is given to the amateur designer to consider in every possible way her own comfort and convenience.

One of the charms of the structural feature built into a room lies in its perfect adaptability to its place. It is difficult



A Unified Arrangement of Dining-room Fixtures
Built-in Sideboard and Closets



A Grandfather's Clock Built
Into a Corner

to buy a piece of furniture to fit a niche or alcove. It never looks as if it had grown there, as does the built-in piece.

Another attractive quality of the fitment is its exclusiveness. The trial of seeing sideboard and china cabinet exactly like her own, in the house of her favorite neighbor, need not be experienced by the woman who builds her own sideboard and china cupboards to fit the idiosyncrasies of her own dining-room.



Unused Doorplace May Be Used as a Frame
for Bookshelves

The fitment is also a space-saving device. Furniture built into the walls of a room takes up little space, giving to a small room an appearance of greater size, and preserving to the large room its dignity and restfulness.

The building of fitments may easily, however, be carried to an extreme. A dining-room lined with shelves, a bedroom whose walls are completely filled with built-in wardrobes, gives rather the appearance of the interior of a ship's cabin than of a house. The Continental habit of building bedsteads into the walls of a room is also abhorrent to any well-regulated American mind. Any fitment must be so constructed that it may easily be cleaned and ventilated, and if these conditions can not be adhered to, all idea of the fitment for that particular place should be abandoned.

In engaging a builder or cabinetmaker it is advisable to find some man with a small shop of his own, one who takes a conscientious interest and a pride in his work, and is reasonable in his charges.

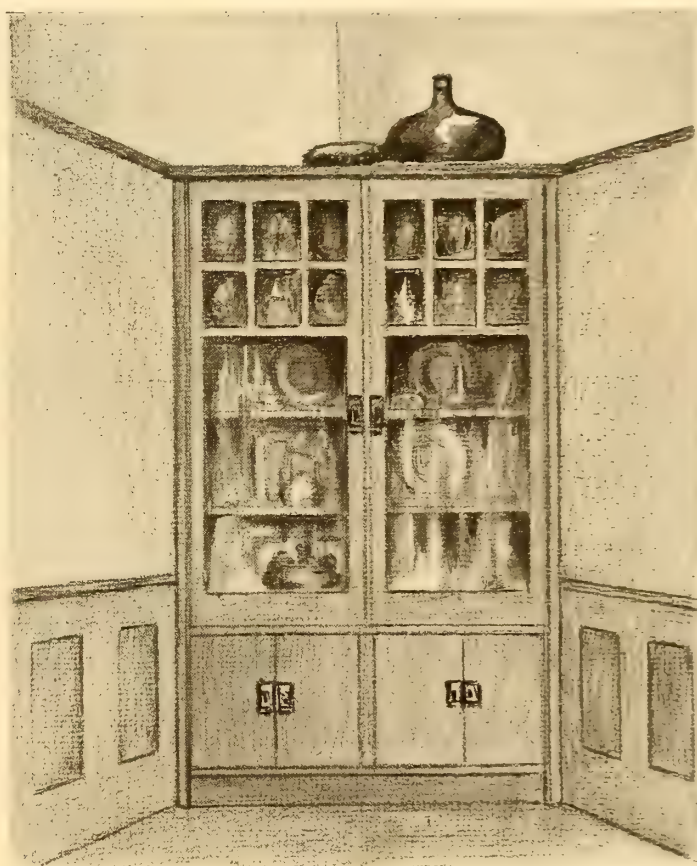
As the prices paid for lumber and labor differ materially in different sections of the country, it is impossible to give estimates that will conform to any and every existent standard. What is considered a fair price in one locality would be exorbitant in another. The price of labor in a secluded country place is usually much less than in a large town, while the fluctuating cost of lumber and of other materials must also be taken into account.

The cost of the fitments shown in the illustrations given in this article has been carefully estimated with a view to building under local conditions by a trustworthy carpenter

and cabinetmaker in one of our large eastern cities. The woods figured on are either pine or chestnut, but plain oak would be only slightly higher in price. Quarter-sawed oak, while beautiful in grain and texture, is expensive, and for built-in furniture chestnut, gum-wood, plain oak or even hard pine will serve every purpose.

The most simple of the fitments shown is a set of shelves, converting into a bookcase the slight recess on one side of a pair of folding doors. If for any reason a door is not used, this is an admirable device for utilizing the space and at the same time procuring an inexpensive bookcase. This set of shelves costs only five dollars, and was put up by an ordinary carpenter for a professional woman, who in this way turned to good account an unused door between her private office and reception-room. The shelves are painted a cream white, to match the woodwork.

A fitment appropriate for library, den, or living-room is also shown. On one side of a window, extending to the wall, shelves are built, with a drawer and cupboard under-



A Corner China Cabinet May often Enliven
a Dining-room Corner

neath. On the other side the shelves are repeated, while a desk arrangement fills the lower part of the case. There is no wood backing the shelves, but the cupboard and drawers are carefully constructed throughout. The desk slide is held up by small wooden supports that, when not in use, are slipped back into the case, together with the slide. In the drawing given the cases are sixty inches high and each thirty-two inches wide; the seat is seventeen inches high, and the desk of the usual desk height. The cost of constructing this fitment, including shelves, window-seat and desk, is estimated at forty-five dollars. The wood used is chestnut, stained a grayish green.

A grandfather's clock built into a corner makes an unique fitment, and one that can be built at small expense, compared with the cost of purchasing either a Colonial reproduction or a modern Mission clock. The case is very simple in construction, six feet high, with a glass panel in front. The



Window and Bookshelves for Library or Den

wood used is chestnut, stained a silvery gray. The clock face is of unstained whitewood, and the figures are of brass, nailed to the face with small brass nails, which are also used to form a circle outside the figures. The hands are of iron. The cost of wood and labor employed in constructing this clock is estimated at seven dollars, while a weight movement of suitable size may be obtained of a manufacturer for from eight dollars up. One without weights costs five dollars, but the weights are an attractive feature of the clock. The metal figures and hands may be purchased at small cost from a clockmaker, and a metal pull is also necessary. The clock is built in this instance to conform in height to the picture molding in the room. The figures on the clock face might be inlaid either in metal or in wood of a different color from the face, by any manufacturer of inlay or marquetry work.

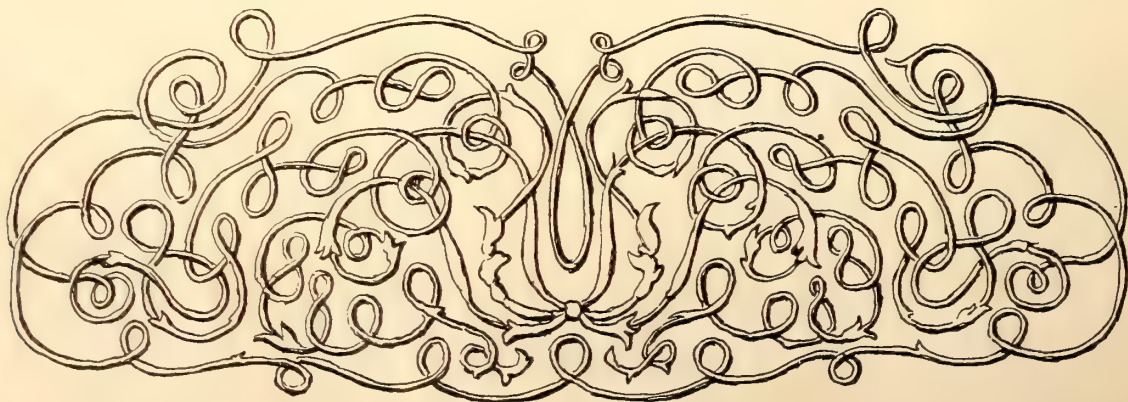
The fittings for a dining-room were constructed in a house built in the architectural style in vogue thirty-five years ago, the period of high ceilings and ugly interior woodwork. The recess and china cupboards were in the wall as originally built. The doors of the cupboards were entirely of wood, and as it stood the whole side of the room was uninteresting in the extreme. Glass has been inserted in the upper panels of the doors, a sideboard was built into the recess, which is six feet long and ten feet deep, and a simple shelf with wooden brackets above the sideboard completes the scheme.

The cost of these alterations and of the sideboard and shelf was forty dollars. The wood employed was chestnut. The two large drawers in the sideboard were planned to hold table cloths, while the smaller drawers are for other table linen. Shelves and compartments for silver are in the cupboards underneath, which are provided with Yale locks. All the metal hardware was obtained of an arts and crafts manufacturer at about forty cents for each piece. The glass doors display to advantage some good porcelain and cut glass, and on the shelf are pieces of dull copper and of pottery. The interior woodwork of the whole room was refinished, being scraped, sanded and stained a warm brown. The sideboard is, of course, finished in the same brown. A narrow wood strip was placed at the level of the tops of the doors, and the ceiling color brought down to the strip, thus lowering the apparent height of the ceiling, and improving greatly the appearance of the room. This is, of course, not included in the estimate given.

The corner china cabinet shown is fifty-two inches high and thirty-nine inches wide. The cost of lumber and of labor in constructing this cupboard is estimated at fourteen dollars. There are four shelves inside. While a corner cabinet is much less roomy than the ordinary china cupboard, it affords a good opportunity to enliven some corner in a dining-room

with glimpses of china and glass, and the expense of this one built in quarter-sawed oak would be much less than if purchased in the shops, in the same wood. A cupboard similar to this was built by an ingenious woman at very trifling expense. She purchased, from an old house that was being torn down in her neighborhood, a pair of china cupboard doors, including cupboards and drawers underneath. Letting these doors come across the corner as they would, a shell was constructed to hold them, and a top put on. The doors were bought for two dollars. The side pieces, top and the wages of a carpenter employed to do the work came to five dollars more. The doors were beautifully finished and of hard wood, and the cupboard is considered very successful.

It frequently happens that the interior fittings of a house do not suit its purchasers. Cupboard doors of mahogany, of black walnut and of oak are ripped out and thrown into the street, and often find their way to a builder or cabinetmaker. If the cabinetmaker is asked to find old doors or fittings of any kind, he will, of course, charge for his time, and the result will prove as expensive to his customer as if new wood is purchased. But in this way costly woods and beautiful paneling may be obtained at no greater cost than much inferior material. It often pays to take time and trouble to obtain good woodwork for the house, even when especial pains means an added cost in time and material.





From "Concrete Country Residences"



From "Reinforced Concrete in Factory Construction"



From "Concrete Construction About the Home and On the Farm"

For Factory For Farm For Home Concrete Construction is the Best

For the benefit of those who desire to make lasting improvements about the FARM, FACTORY or HOME, and as a guide to those contemplating new construction, we have published the following books

For the Suburbanite and Farmer

"Concrete Construction About the Home and On the Farm." A book containing directions for making and handling concrete; also many specifications, sectional drawings and photographs of the smaller constructions that can be built by the layman without skilled labor.

Paper bound copies, free upon request Cloth bound copies, 25c each

For the Home Builder and Investor

"Concrete Country Residences." A book containing photographs and floor plans of over 150 Concrete Houses, ranging in price from \$2,000 to \$200,000. The houses not only show a large variety of design, but are of several different systems of concrete construction. These are not imaginary sketches, but houses already built and designed by the best architects in the country.

Copies (168 pages, size 10x12) will be sent, express prepaid, upon receipt of \$1.00

For the Manufacturer and Merchant

"Reinforced Concrete in Factory Construction."

A book containing (besides several general chapters on concrete, concrete aggregates, methods and materials for reinforcing) ten chapters giving detailed descriptions of ten concrete factories and warehouses erected in various parts of the country by different systems, with photographs and sectional drawings and specifications furnished by the engineers in charge of the work.

This book, profusely illustrated (250 pages, size 6½ x 9), pamphlet bound, sent free upon request to Architects, Engineers and Manufacturers who contemplate building. Cloth bound copies, 50c each

For the Mechanic and Artisan

"Concrete Cottages." A 16-page pamphlet showing photographs, floor plans and specifications for small concrete houses ranging in cost from \$1,500 to \$4,000.

Copies sent free upon request

THE ATLAS PORTLAND CEMENT CO., DEPT. 10, 30 BROAD ST.
NEW YORK

The Home Pinetum

EVERYBODY having a garden or lawn can have a Pinetum. It is now positively known that to live among Pine Trees is to insure good health. We can supply the varieties of Pines to make a Pinetum of any size. This does not necessarily mean a forest of Pines fifty to seventy-five feet high has to develop before healthful results are obtained. We have Pines suitable for gardens of any size—kinds that grow only a few feet tall, and others that grow to almost any height. Give us particulars as to location and size of Pinetum desired and we will give the cost and varieties desirable for your climate and location. Everybody can stay at home and live among the Pines at small cost.

The Home Rosary

EVERYBODY having a garden or grounds can have a Home Rosary to produce enough exquisite flowers to keep the home supplied from early spring until well along into winter.

Our Bush and Tree Roses will give an abundance of bloom the first summer after planting. Mail us sketch and size of the ground you wish to treat and we will mail all particulars, giving the best varieties suitable for your climate, and the cost.

The Home Herb Garden

EVERY home frequently feels the need of Herbs; soups, salads, dressings and flavoring cannot be made with a correct flavor without them. We have all the well known popular Herbs. Ask us about them.

The Home Fruit Garden

NO HOME with surrounding grounds should be without a Fruit Garden. A small space will produce an abundance of fruit if properly planted. Dwarf or Trained Apples, Pears, Peaches, Plums and Cherries can be profitably grown in almost any sunny position; also Gooseberries, Currants, Blackberries, Raspberries, Grapes, Strawberries, Rhubarb, etc. We have all of these and will be glad to make a selection to suit your grounds and tastes.

OUR LANDSCAPE DEPARTMENT is equipped to assist you in the selection of the proper material for every location, or other Landscape problems you may have. We have men and the facilities to carry out all kinds of work.

The supervision of private estates and public grounds a specialty. ASK FOR CATALOGUE VISIT NURSERY

Bobbink & Atkins Nurserymen and Landscape Architects **Rutherford, N.J.**

BILTMORE TREES AND PLANTS

are growing in every section of the United States and in several foreign countries. Their superior quality has been proved in actual tests under widely different conditions. Increasingly they are in demand from quality buyers.

Biltmore Nursery

founded on twenty years' experience, with three hundred acres of grounds, seventy-five thousand square feet of glass, and more than three acres of seed beds, is in position to satisfactorily serve alike buyers in large and small quantities. The Biltmore Nursery catalog is an elaborate and beautiful book of 196 pages, printed and illustrated in a very "different" and surprisingly attractive way.

A copy of this handsome and valuable book free on request to any interested person.

BILTMORE NURSERY

Box 124, Biltmore, N. C.



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.

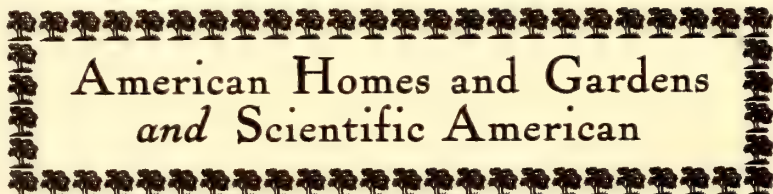
Denver

CHICAGO

Trenton

\$5

Sent
to one
address



American Homes and Gardens
and Scientific American

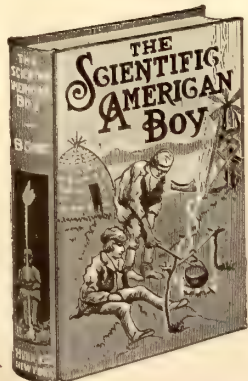
Regular
Price

\$6

The Scientific American Boy

By A. RUSSELL BOND

12mo. 320 Pages. 340 Illustrations. Price, \$2.00, Postpaid.



This is a story of outdoor boy life, suggesting a large number of diversions which, aside from affording entertainment, will stimulate in boys the creative spirit. In each instance complete practical instructions are given for building the various articles. ¶ The needs of the boy camper are supplied by the directions for making tramping outfits, sleeping bags and tents; also such other shelters as tree houses, straw huts, log cabins and caves. ¶ The winter diversions include instructions for making six kinds of skate sails and eight kinds of snowshoes and skis, besides ice boats, scooters, sledges, toboggans and a peculiar Swedish contrivance called a "rennwolf." ¶ Among the more instructive subjects covered are surveying, wigwagging, heliographing and bridge-building, in which six different kinds of bridges, including a simple cantilever bridge, are described.

FOR SALE AT ALL BOOKSTORES

fall attend to them now. Thin out bushes whose last season's growth forms a tangle of branches. Cut away all weak wood. Head back rampant growth. If possible, cut out all old growth, leaving only what is strong and vigorous. Too many persons neglect their currants and gooseberries until they have become diseased. Then they uproot the old plants, and set out new ones, thus losing a season's crop of fruit. By pruning judiciously each year, and removing old branches and all superfluous ones, it is an easy matter to keep these plants so strong and healthy that it will not be necessary to set out new ones. So train the old ones that they are constantly renewing themselves.

Arrange for a liberal supply of manure for the garden in advance of the season. This applies, it will be understood, to barnyard manures, which are best of all for vegetable gardens, in the opinions of our most successful gardeners. Commercial fertilizers are valuable as substitutes, and where one can get nothing else, but it is generally admitted by those who are in a position to know, from long personal experience, that barnyard manures contain the essential elements of plant-life in a greater degree than any others.

Do not fail to give cellar-stored bulbs and tubers a frequent examination. Promptly remove such as show a tendency to decay.

Plants stored in the cellar may require watering. But if the soil retains some degree of moistness, be satisfied with that. More moisture at the roots might cause premature growth. Aim to keep these plants perfectly dormant, if possible, until they are removed from the cellar and conditions are favorable to a renewal of growth.

The flower-garden should not be overlooked when plans for the coming season are made. If any hardy plants struck you as having got into the wrong places, plan to make such changes as will get them where they belong. Much of the attractiveness of a plant depends on its being located where it has the opportunity to display to the best advantage. It may be necessary to experiment somewhat before the right place is found, but it must be found before satisfaction is given by it. This is equally true of shrubs and annuals. Indiscriminate, haphazard planting is responsible for most of our garden failures. It pays to put a good deal of thought on this matter. Our past failures, if properly considered, may be the steps by which success is ultimately arrived at.

If any shrubs seem to have outlived their usefulness, and the chances of renewing them are slight, root them up, and arrange to set out new ones in their place, when spring comes. Discard every shrub that is in any respect inferior. With so many excellent kinds at our disposal one is foolish to give place to anything not possessing great merit.

The plants in the window should be given the best of care, for they will be—or, at any rate, they ought to be—doing their best in the way of flowering at this season. Shower several times a week to keep the red spider in check. Apply fertilizers to such as are growing actively, or have begun to bloom. Give fresh air and all the sunshine possible.

Here is a suggestion about ordering flower seeds that may interest the woman who loves flowers. Club your order with a few of your neighbors, and instead of ordering mixed seeds, as you probably would if you ordered alone, get packages in which each color is by itself. These packages will contain enough to supply several gardens with all those of one color that will be cared for by one person. Much greater satisfaction is secured by planting the several colors by themselves than is possible where mixed seed is used.

GREGORY'S SEEDS

have earned a world-wide reputation. Thousands of farmers and gardeners rely upon them absolutely because they are sure growers. If you have never planted them just try them this year. Our new catalogue helps solve all the problems of planting—will be likely to set you right when in doubt.

IT'S FREE. Write for a copy.
J. J. H. GREGORY & SON,
Marblehead, Mass.

Take off your Hat to the MYERS



For whether you need Hand or Power Pumps, Hay Tools, Store Ladders, Gate Hangers or Pump Fixtures

MYERS' are Always Best

Quality and Service is the Myers slogan—you're always got your money's worth and a bargain besides when you buy from MYERS.

380-Page Catalog with close prices FREE.
P. E. MYERS & BRO. Ashland, Ohio

RENOVATING COUNTRY GROUNDS

Grading
Road Building
Cement Walks
Planting Trees and Shrubs
Sewage Disposal without sewers

FRANK HAMILTON
Landscape Architect
55 Liberty St., NEW YORK

By Contract or on Commission

Our Book "Landscape Gardening for Amateurs"



with over a hundred plans of grounds, flower beds and formal gardens, is a valuable guide to those interested in beautiful surroundings. Ninety pages beautifully illustrated, with necessary information to lay out and plant in an artistic and attractive way Home Grounds, also Sanitarium, School, University and Factory Grounds. Order it to-day. Price, \$1.00, postpaid.

Wagner Park Conservatories
Box 312 Sidney, Ohio

Army Auction Bargains



Tents - \$1.90 up Old Pistols - \$.50 up
Rifles - 1.95 " Officers' Swords, new \$1.75 "
ARMY SADDLES 3.00 " Cavalry Sabres " 1.50 "
" Brides - 1.00 " UNIFORMS " 1.25 "
Leggins, pr. 15 " 7 Shot Carbine " 8.50
1907 MILITARY ENCYCLOPEDIA CAT-
ALOGUE, 280 large pages, containing thousands of
beautiful illustrations—with wholesale and retail prices
of 15 acres GOVT. AUCTION SALE GOODS,
mailed for 15 cents (stamp).

FRANCIS BANNERMAN, 501 Broadway, NEW YORK

Do you enjoy ALL your home?

Is it wise or a good investment to pay \$1,000 to \$15,000 for a house and then be cramped into only a few rooms of it on cold or windy days through lack of proper heating?



Why not get the full value of all the home space day and night, all winter long, by the uniform warmth of

AMERICAN & IDEAL RADIATORS & BOILERS

With stoves and hot-air furnaces the owner exhausts his patience and coal pile—not in the hope of warming all rooms evenly, but to drive the heat to some chill, exposed room. Such attempts usually lead only to overheating one or two inside rooms—bringing added discomfort and fuel waste.

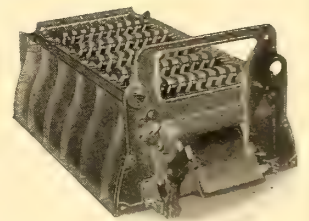
IDEAL Boilers and AMERICAN Radiators supply as much or little Low-Pressure Steam or Hot-Water heat as needed to keep the rooms warmed to the exact degree of temperature desired. *Comfort at a turn of the valve.*

An outfit of IDEAL Boilers and AMERICAN Radiators will outwear the building—requires no repairs. When property is sold you get your money back, or larger rentals to more than cover the cost. Don't delay investigating this sure investment, with its annual fuel and repair savings of 10% to 15% over the upkeep costs of old-fashioned heating methods, besides the greater comfort, health protection, cleanliness, safety, etc.

All parts are fitted at the shops and are therefore quickly put into OLD buildings, farm or city—in mid-Winter—without disturbing occupants. Just the season to get the services of the most skillful fitters—the finest workmanship! *Prices are now most favorable.*

ADVANTAGE 11: All IDEAL Boilers have easy-acting, non-clinkinging grates—so nicely balanced that a child can shake them. Should last 50 years.

Sales Offices and Warehouses throughout America and Europe. Our free catalog, "Heating Investments Successful," explains full ADVANTAGES—and tells how to save heating dollars.



IDEAL Boiler ash-pit and grate.
Notice the rugged grate bars.

AMERICAN RADIATOR COMPANY

DEPT. 6

CHICAGO



THE "GLOBE" Ventilator

is built on honor
and sold on merit

In Galvanized Iron, Brass and Copper
Also with Glass Tops for Skylight

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. *Smoky Chimneys Cured.*

"GLOBE VENTILATED RIDGING"

Manufactured by

Globe Ventilator Company :: Troy, N. Y.

Patented and
Trade-Mark
Reg. U.S. Pat. Off.



Cattle Manure in Bags Shredded or Pulverized

Best for all indoor and outdoor work. No bad odor. Easily applied. Delivered east of Missouri River. \$2.00 per bag (100 lbs.) Write for circulars.

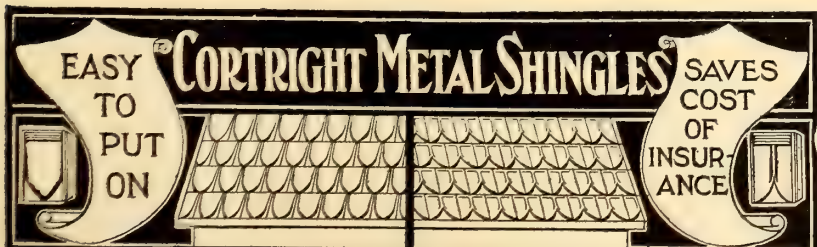
The Pulverized Manure Co.
21 Union Stock Yards, Chicago.

DINGEE Roses



are the best. Always on their own roots. Plants mailed to any point in the United States. Safe arrival guaranteed. Over 50 years' experience. Flower and Vegetable Seeds a specialty. Write for

New Guide to Rose Culture
for 1908—the leading rose catalogue of America. 184 pages. Mailed free. Describes over 1,000 varieties. Tells how to grow them and all other desirable flowers. Established 1850. 70 greenhouses.
THE DINGEE & CONARD CO., West Grove, Pa.



TWO important features that every architect should appreciate. Saving in labor—first cost. Making the building fire-proof—after cost, are two features the owner of the building is pretty apt to want to discuss. Our 56-page booklet, "Rightly Roofed Buildings," is full of pointers of interest to architects—it's free.
CORTRIGHT METAL ROOFING CO., Philadelphia and Chicago

Write
Today
For This
New Book
Use Coupon Below.



It's
FREE
Tells how to beau-
tify your home at
little expense.

Do not finish or refinish your home without first seeing this book. It will save you money. It tells all about wood-finishing.

This book is worth \$25 to you if you want to improve the appearance of your floors, woodwork and furniture.

Are you entirely satisfied with the appearance of your furniture, floors and woodwork? Do they harmonize? Would you like to know how to easily and inexpensively refinish them and keep them in perfect condition? Write us now for above book, "The Proper Treatment for Floors, Woodwork and Furniture." Tells all about wood-finishing in such a manner that any person can easily change the color of wood and finish in any shade, such as Weathered, Mission, Forest Green, Flemish, Mahogany, etc.

Johnson's Prepared Wax

"A Complete Finish and Polish for all Wood"

For Furniture, Woodwork and Floors

Thousands of thrifty housewives and successful business men are refinishing their homes the "Johnson" way. Try it—it's very interesting and fascinating. You will get perfect results at minimum cost. **Be sure to use.**

Johnson's Wood Dye for the artistic coloring of wood (all shades), ½-pint cans, 30c.; pint cans, 50c.

Johnson's Electric Solvo (for removing paint, varnish, shellac, etc.), pint cans, 40c.; ½-pint cans, 25c.

Johnson's Prepared Wax—a complete finish and polish for all wood—10c. and 25c. packages and large size cans. Sold by all dealers in paint.



Sent FREE Don't write a letter—it's unnecessary. Just mail us coupon and we will send you FREE prepaid our beautiful 6-color book illustrated above. Don't delay. Write today.

S. C. Johnson & Son, Racine, Wis.

"The Wood-Finishing Authorities"

Coupon
AH 2

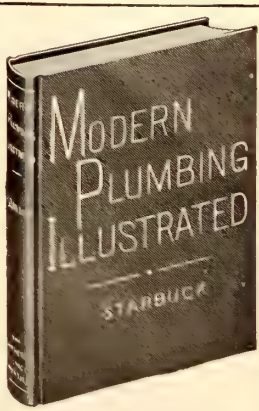
S. C. Johnson
& Son,
Racine, Wis.

Please send me
copy of your book "The
Proper Treatment for
Floors, Woodwork and Fur-
niture" as per your FREE offer

My Name is.....

My Address is.....

Modern Plumbing Illustrated



By R. M. STARBUCK

400 (10¼ x 7½) PAGES

55 FULL PAGES OF
ENGRAVINGS

PRICE, \$4.00

¶ A comprehensive and up-to-date work illustrating and describing the Drainage and Ventilation of Dwellings, Apartments and Public Buildings, etc. The very latest and most approved methods in all branches of Sanitary Installation are given.

¶ Many of the subjects treated in the text and illustrated follow in the next column.

MUNN & COMPANY, Publishers
SCIENTIFIC AMERICAN OFFICE, 363 BROADWAY, NEW YORK

SOME OF THE SUBJECTS TREATED
Connections, sizes and all working data for all Plumbing Fixtures and Groups of Fixtures
Traps—Venting
Connecting and Supporting of Soil Pipe
House Trap and Fresh-Air Inlet
Floor and Yard Drains, etc.
Rain Leaders
Sub-soil Drainage
Floor Connections
Roof Connections
Local Venting
Bath Room Connections [etc.
Automatic Flushing for Factories, School Houses,
Use of Flushing Valves
Modern Fixtures for Public Toilet Rooms
Durham System
Plumbing Construction without use of Lead
Automatic Sewage Lift—Sump Tank
Disposal of Sewage of Underground Floors of High Buildings
Country Plumbing
Cesspools
The Electrolysis of Underground Pipes
Septic Tanks and Sewage Siphons
Pneumatic Water Supply, Rams, etc.
Examples of Poor Practice
Roughing—Testing
Continuous Venting for all classes of Work
Circuit and Loop Venting
Use of Special Waste and Vent Fittings
Cellar Work
House Drain—House Sewer—Sewer Connections
Plumbing for Cottage House
Plumbing for Residence
Plumbing for Two-Flat House
Plumbing for Apartment Houses
Plumbing for Office Building
Plumbing for Public Toilet Rooms
Plumbing for Bath Establishment
Plumbing for Engine Houses
Plumbing for Stables
Plumbing for Factories [by Electricity
Plumbing for School Houses, etc.
Thawing of Underground Mains and Service Pipes

tion is delayed the seed may not actually be lost. Take, for instance, the Japanese hop, which will sometimes come up the same spring it is sown, but more frequently remains in the ground until the following spring.

Large hard-shelled seeds, like the Japanese morning glory, erianthus, canna and the like, will need to be soaked in hot water for twenty-four hours, and in the case of the erianthus and canna should have the shell filed or sand-papered down to the white before soaking and planting. Canna seeds so treated will sprout in from three to five days, while without this furthering treatment they would likely remain in the ground for as many weeks. It is a good plan to plant seeds of ornamental plants, as the canna, ricinus and the like, in small pots, planting two or three seeds to the pot and removing all but the best plants when they appear. As the pots fill with roots the plants may be shifted into other pots one or two sizes larger and grown on until time to plant out in the open ground. In this way they will be in the best of condition for planting out and will be further advanced than would be the case were they grown, untransplanted, in the flats, where they would need to be disturbed and checked in their growth when the planting time came.

When the plants are up and showing a well-developed seed leaf they should be removed to a sunny window where they will have as even a temperature as possible. There is a new shelf for the plant window now being manufactured especially suited to this especial business. It is self-adjusting, requiring neither screws, brackets nor nails to support it, and hence can not injure the finest woodwork. It is instantly adjusted or removed, and as it rests on the top of the bottom sash, where the heat is much higher than on the sill, it affords the bottom heat so desirable in starting seeds, cuttings or bulbs. It is, moreover, out of the way of the plants in the lower part of the window, and so utilizes space not otherwise employed. On this the little seed flats and pots may be placed and a sheet of white paper inserted between them and the glass to temper the glare of the sun, and if the proper degree of moisture is maintained, will be found to thrive and grow in a way to delight and surprise one.

As soon as the little plants have become of a size to handle they may be pricked out into larger flats, setting an inch apart each way and allowed to grow on until again crowded, when they may be again transplanted. This frequent transplanting is of great value, as it encourages the formation of abundant feeding roots, without which the plant can not thrive. Asters, balsams and the like are especially improved by this process; especially is this true of the balsam, which will not give large, double blossoms without it.

Little, if anything, is gained by too early planting in the open ground; some few plants there are which do not mind a touch of frost, such as the asters, pansies and the like, and may be shoved along if convenience requires it, out of the way of the more tender plants; but, as a general thing, it will be well to defer the planting of all but the most hardy plants until all danger of frost is past, which will not be before the twentieth of May in the more northern States, and the season of corn planting may, all over the country, be taken as a safe date to reckon by.

Seed planted in the open ground require even more care than those planted in house and hotbed, as they are subjected to sudden changes of weather from which they are protected when grown under shelter. The seed bed should be very carefully prepared, dug deep and made very fine on the surface. If the soil is at all stiff or clayey a top dressing of



Woodruff Leeming, Archt. N. Y.

The House Beautiful

Is much more beautiful when stained with the soft, harmoniously tones of

Cabot's Shingle Stains

Their colors have the same depth and richness that is found in nature, and houses stained with them melt harmoniously into the landscape. They cost 50% less than paint, wear as long and grow old gracefully—no cracking and peeling like paint—and being made of Creosote they preserve the wood.

Samples on wood and Catalogue sent free on request.

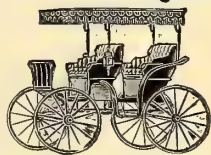
SAMUEL CABOT, Inc., Sole Manufacturers
131 Milk Street, Boston, Mass.

Agents at all Central Points.

Buy Direct From Our Factory

Saving all expenses and profits of the dealer, **Elkhart Buggies and Harness** have been sold direct from our factory to the user for 35 years.

We Are the Largest Manufacturers in the World



No. 237. One Horse cut-under Surrey with bike gear, auto seats and 1 1/4-in. cushion tires. Price complete, \$103. As good as sells for \$140 more.

Selling to the consumer exclusively. We ship for examination and approval, guaranteeing safe delivery. No cost to you if not satisfied as to style, quality and price. Over 200 styles of Vehicles and 65 styles of Harness.

Send for New Free Catalog.



No. 676. Top Buggy with padded wing dash and Stanhope seat. Price complete, \$57.50. As good as sells for \$25 more.

ELKHART CARRIAGE & HARNESS MFG. CO., ELKHART, INDIANA

JUST PUBLISHED

THIRD EDITION OF KIDDER'S Churches and Chapels

By F. E. KIDDER, Architect

This edition has been thoroughly revised by the author, and enlarged, many new designs being added, including several new designs for Catholic churches. There are 120 illustrations in the text and more than 50 full-page plates. The book contains a large number of plans and perspectives of churches of varying costs. Besides this there is much concise and practical information relating to planning and seating; details of Construction, Heating and Ventilation, Acoustics, etc., making it in its present form : : :

*The Best American Book on
Church Design and Construction*

One oblong quarto volume. Price, net, \$3.00

Munn & Co., 361 Broadway, New York City

Study Architecture



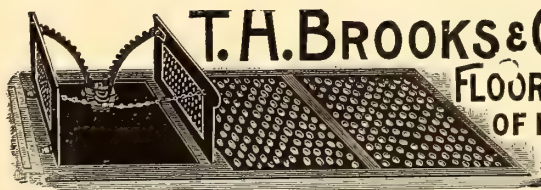
EASY LESSONS, or Stepping
Stone to
ARCHITECTURE.

By THOS. MITCHELL.

A simple text book telling in a series of plain and simple answers to questions all about the various orders as well as the general principles of construction. The book contains 92 pages, printed on heavy cream plate paper and illustrated by 150 engravings, amongst which are illustrations of various historic buildings. The book is 12mo. in size, and is attractively bound in cloth.

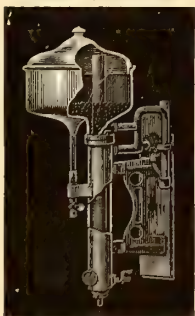
Price, 50c. post Paid.

MUNN & CO., 361 Broadway, New York City



T. H. BROOKS & CO. CLEVELAND, O.
FLOOR & SIDEWALK LIGHTS.
OF EVERY DESCRIPTION.
SEND FOR CATALOGUE.

Gas Operating



THE JEWELL STILLS

(Patented in the U. S. and Foreign Countries.)

PURE WATER H₂O
For Drinking and Technical Use

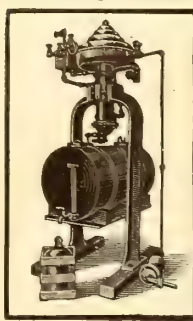
A Jewell Water Still installed in your home will furnish distilled water of the highest quality, cool, aerated and palatable, for a mere fraction of what you are paying for bottled water.

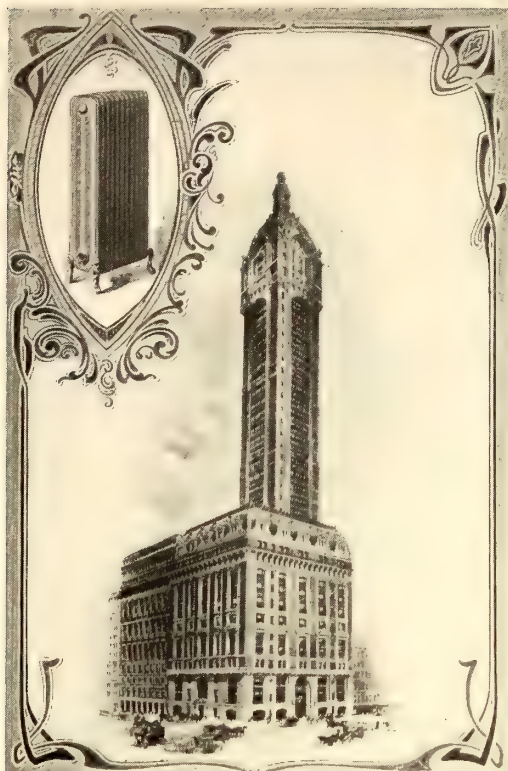
This Apparatus is finished in baked white porcelain enamel, inside and out—is automatic and will last as long as your stove. Costs no more than a common filter. Your architect has full details—see Sweet's Index, Nov. 1907.

We also manufacture large Distilling Apparatus for hotels, clubs, factories, etc., and water filtering and softening plants for all purposes.

JEWELL WATER IMPROVEMENT CO., 122 W. Jackson Boulevard, CHICAGO

Steam Operating.





Kinnear Pressed Radiators

Selected for

THE SINGER BUILDING, NEW YORK

Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

**On the Wall—Off the Floor
Out of the Way**

If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.

Write for Catalog "D" for any desired information.

**THE PRESSED RADIATOR CO.
PITTSBURGH, PA.**



Clovers

We are the largest growers of Clovers and Timothy seed in the world. We make a great specialty of

**Timothy Medium Red Clover
Mammoth Red Clover
Alfalfa Clover Alsike Clover
Blue and Red Top Grasses**

Salzer's 20th Century strain of above seed is positively the purest seed on earth.

SALZER'S Great Catalog

Contains a splendid array of pedigree seeds for the American Farmer. It's the only original seed book published—brim full of bristling seed facts. It is gladly mailed to you, also samples of clovers upon receipt of 10c to cover postage.

John A. Salzer Seed Co.
14 High St., LaCrosse, Wis.



leaf mold should be given, and right here the compost heap will be found of value, as it affords a very fine quality of leaf mold, which when applied to the top of the soil puts it in the best possible condition for sowing seed. Seed sown in the open ground should be sown deeper than in the house or hotbeds, from one-eighth to one-half inch, according to the size and nature of the seed. They should be pressed firmly into the soil and well watered, covered with a newspaper or similar protection, and watched that they do not dry out or the soil become baked or hard. Many failures to grow plants from seed occur right here. The seed may be good and germinate in due time, but if there is a hard crust of earth above it the plant can neither thrust its leaves through it nor the sun nor rain reach it to nourish it, consequently it perishes. Where coarse seeds are planted at some little depth it will be a good plan to stir the soil lightly occasionally with a light rake or trowel, taking care not to disturb the seed; this produces a dry dust mulch, very favorable to the germination and growth of the seed.

SOME QUESTIONS ANSWERED

By Eben E. Rexford

MRS. S. H. A. asks if a hemlock hedge can be clipped safely in November.

Yes. But it is better to make a systematic pruning in summer, while the annual growth is being made, and a sort of supplementary pruning, or clipping, after the completion of that growth. The first pruning prevents the production of many branches which would have to be sacrificed later, thus economizing the vital force of the plant to a considerable extent, and preventing its being wholly wasted, as it would be if branches were to be allowed to fully develop before, and then had to be cut away. Pruning while the hedge is making its yearly growth encourages the production of several branches to take the place of those cut away, thus causing a general thickening up. A second pruning is simply a sort of "finishing touch," to put the hedge in symmetrical shape after the work of the season has been completed.

Another correspondent (M. C.), wants some information about cosmos. She has planted it early in spring, for several years, and has succeeded in growing plants four to six feet tall. These would be loaded with buds at the coming of frost. Would we advise fall planting? No, because the plant is so extremely tender that its seeds would not survive the winter. The best way to secure early flowering plants is by starting them in a hotbed. If one does not have this convenience, the seed may be sown in pots, in the living-room, as early as March. Care must be taken, however, to prevent the seedlings from becoming weak and spindling before the time comes for putting them into the ground. This can not be done until all danger from frost is over. By watering moderately, airing well, and keeping the temperature below seventy degrees, it is possible to grow seedling plants healthily in the house. One can almost always procure young plants of the local florist, in spring. Quite recently a strain has been introduced which the seedmen claim will come into bloom in July, thus making it possible to grow the plant satisfactorily in our northern States. This variety is somewhat dwarf in habit, growing to a height of about four feet. The old, tall-growing sort is so beautiful, when well grown, that it is worth taking a good deal of trouble for. If one is without a hotbed, we advise arranging with some neighbor who has one to grow this plant from seed sown as early in the season as possible.



NEW BOOKS

THE STORY OF THE WHITE HOUSE. By Esther Singleton. The McClure Company, New York, 1907. 2 vols. Price, \$5.00.

It seems strange that so important a subject as the most famous of all American houses should have waited so many years for its history to be written. Miss Singleton has gathered into two abundantly illustrated volumes, entertaining and instructive matter from histories, memoirs, travels, biographies, diaries, letters, official documents and newspapers, and produced a work that is a distinct contribution to American history. She has kept strictly to the social life of the Presidents and their families while occupants of the Executive Mansion, and avoided all prejudice or political bias in the selection and treatment of new material.

The building was known as "The President's House" and the term "White House," which became popular about 1830, was made the official name only by President Roosevelt. The building of the President's House and the forms, etiquette and cere-

Van Dorn Iron Works Co.



**PRISON, HOUSE &
STABLE WORK**

**JOIST HANGERS
LAWN FURNITURE
FENCING, ETC.**

CLEVELAND, OHIO



Standing Seam ROOF IRONS

CLINCH right through the standing seam of metal roofs. No nails are needed unless desired. We make a similar one for slate roofs.

SEND FOR CIRCULAR

**BERGER BROS. CO.
PHILADELPHIA**

Superintendent Wanted

American preferred, for an

Estate of About 100 Acres near New York

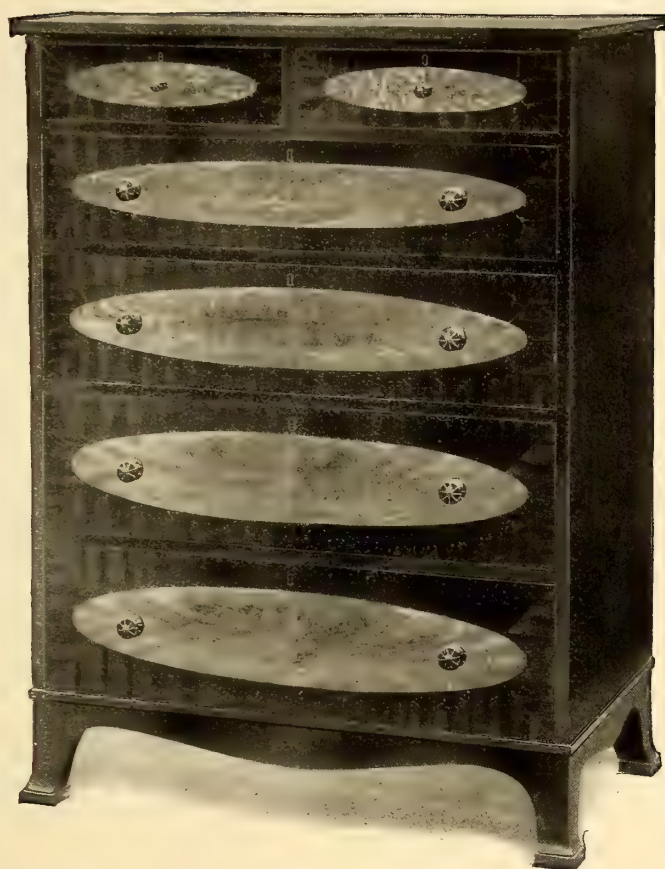
40 or 50 acres woods. In addition to being a competent superintendent, applicant must be a lover of nature and thoroughly familiar with the habits of wild flowers, trees and shrubs. No work under glass required. Address E. G. F., care American Homes and Gardens, Box 773, New York.

Our patterns or materials cost you only half the price asked by others

BUILD YOUR OWN BOAT

We are the largest builders of pleasure boats in the world. We sell you full size working patterns, knock-down frames and materials from bone-dry stock, at half the price asked by others. We use these patterns and stock every day in building our regular boats. You are not buying theories. Catalog free.

DETROIT BOAT CO. No. 83 Bellevue Ave., Detroit, Mich.



N all of its antique reproductions this firm duplicates the originals not only in all details of appearance but in the actual methods of construction, which ordinarily pass unobserved. The mellow wood coloring, the matching of grains, the delicate inlay, the intricate joinings, are so skillfully followed that age is the one remaining difference between antique and reproduction.

In addition to a large number of beautiful reproductions of antiques there may now be seen in the showrooms of this firm the largest collection in America of genuine old English furniture.

The illustration is of a Chiffonier belonging to a seven piece bedroom suite, consisting of twin beds, chiffonier, bureau, dressing table, cheval glass and night stand. Reproduction of antique Sheraton suite. A beautiful example of workmanship in fiddleback and San Domingo mahogany; ovals of satinwood; pulls of mahogany inlaid with satinwood.

THE A. J. CRAWFORD CO. "The Little Shop"

London

251-255 Fifth Avenue
1 East 31st Street

New York

Garden Furniture

Plan Your Garden for the Future

Settle your ideas of what you want to do or intend to do. Construct your plan and work with that ultimate end in view.

Where the garden scheme permits of formal treatment, the Terrace, Balustrading, Steps and Fountains should be planned at one time.

Most garden pieces are stationary. A Wall Fountain that would go well with your garden now may not be at all appropriate finally.

If at present you only need a Vase to break the monotony of the wall, or a Sun-dial Pedestal for some plot, or possibly a Table or a Bench for the tennis court, which afterwards would be used to help out the pergola yet to be built, purchase these pieces with the ultimate scheme always in mind.

The Erkins Studios have every facility to help you, or to collaborate with your architect in the planning of your garden, and in our studios we show the most complete collection of Garden Furniture. If you are interested in furnishing your garden, write us.

THE ERKINS STUDIOS
3 West Fifteenth Street. New York, N.Y.

ELLWANGER & BARRY

Have for upwards of 70 years been recognized as leaders in the production of HIGH GRADE

TREES

Shrubs, Roses and Hardy Plants

The fame of these great Nurseries has extended over the length and breadth of this country, as well as to all parts of the civilized world. They are prepared for the Spring season of 1908 with their usual large and exclusive collections at prices consistent with the high quality of the goods furnished.

They have no agents, but sell their products through the medium of a complete Illustrated Descriptive Catalogue which gives prices and contains full cultural directions.

Superb New Edition of this Catalogue is now ready and will be mailed free upon request.

Mount Hope Nurseries,
Rochester, N. Y.



**Do you live in the country?
Or in the suburbs?
Or anywhere away from a city water supply?
How is your house supplied with water?**

Every one must have water. Water is necessary for animal and man; and nature demands it too for irrigation.

The success of your home as a comfortable and sanitary abiding place, depends largely on your water supply.

Artificial heat is required only in winter—artificial light only at night.

Water is required during all seasons—day and night.

Impossible as it may seem, the subject of water supply had been almost entirely neglected until recent years, while great improvements had been made continuously in lighting and heating methods.

This water supply problem is now completely solved by

The Kewanee System of Water Supply

The Kewanee System insures every convenience, comfort and protection offered by the most up-to-date city water works system.

This means an abundant supply of water with ample pressure behind it, available at any hour of the day or night.

The Kewanee System will enable you to have that water delivered to the bathroom, kitchen, laundry, barn, garden, lawn—anywhere, under strong pressure.

The Kewanee System does away with the drudgery of carrying this water in buckets, a task which men shirk and women detest.

The Kewanee System obviates the old style elevated tank, which is expensive, unsightly and unsafe—which may leak, freeze or collapse.

And no leaky and inefficient attic tank need be used.

Use the water from your own well, cistern or other natural source of supply.

The plant may be placed in the cellar, located in a special pump house—or under ground if necessary—out of sight and thoroughly protected.

Kewanee Systems are easy to install, easy to operate and cost nothing for repairs.

The Kewanee System is not an experiment by any means.

Over 8000 Kewanee Systems in successful operation. Complete plants furnished to supply any requirements, from those of a cottage to a small town.

Kewanee Systems are now supplying country and city homes, clubs, hotels, schools, apartment buildings, public institutions and towns.

Our engineers can solve your water supply problem; and no charge will be made for preliminary prices and plans.

Every Kewanee System is fully guaranteed—we take all the risk and responsibility.

Let us show you what we can do for you.

Write for our complete 64-page illustrated catalog which explains everything.

Ask for catalog No. 36.

Kewanee Water Supply Company, Kewanee, Illinois.

No. 32 Broadway, New York City.

820 Marquette Building, Chicago.

404 Equitable Building, Baltimore, Md.



Philosophy of Protective Paint

A practical treatise on the subject of protective paint by a practical paint man of long experience. Write for free copy No. 106 B.

Joseph Dixon Crucible Co., Jersey City, N. J.

Details of Building Construction

By CLARENCE A. MARTIN

Assistant Professor, College of Architecture, Cornell University

Price, \$2.00

For Sale by

MUNN & COMPANY, 361 Broadway, New York

A collection of 33 plates of scale drawings with introductory text.

This book is 10 by 12½ in. in size, and substantially bound in cloth.

monies to be observed there, fill the early chapters, together with descriptions of receptions and entertainments in the days of Jefferson and Madison, when the charming "Dolly Madison" was the hostess. Many of these are from the delightful pen of her contemporary, Mrs. Seaton. The graphic letters of Mrs. Crowninshield of Salem, one of the "Cabinet ladies" take the reader into the court life of the Madisons and Monroes. New to everyone will be the description of the French furniture imported by President Monroe for the reception rooms after the mansion was burned by the British. From the original bills, Miss Singleton shows that the articles were of the richest that could be found and made in France. The "Oval Room," now the "Blue Room," as she says "glowed with rose and glittered with gold." The sofas, bergeres, tabourets, and chairs were carved, gilt, and covered with light crimson satin, with a design of laurel leaves. Rich curtains, mirrors, crystal and bronzes, lustres, candelabra, clocks, lamps, a carpet, specially made and bearing the United States arms, handsome vases, a splendid Erard piano, gilt eagles to hold the curtains, a "surtout" of gilded bronze for the dining table, a set of porcelain for thirty persons, a handsome dessert service, and silver plate, tureens and dishes, were also specially made in France for the Presidential mansion. The famous East Room was not finished, Miss Singleton tells us, until Jackson's day; and again from original documents and bills we learn how the house was decorated and appointed.

John Quincy Adams took the greatest interest in the gardens of the White House and tried many experiments. Some of the trees that he planted still adorn the grounds. Next to him, President Arthur seems to have been the greatest lover of flowers.

Dinners, levees, receptions, weddings, funerals, christenings, balls, and informal dances, as well as such important events as the signing of the Emancipation Proclamation, fill the historic house, in which every American has a patriotic and sentimental pride, with memories and associations. Of equal interest with the social side is the architectural story of the house, which appears in reproductions of old prints and photographs at intervals of every ten years, by which the student may gain an exact knowledge of both North and South Porticos at every period. It is interesting to note that since the removal of the conservatories, and the restoration of the East and West Terraces, the White House is to-day a close imitation of Hoban's original design. In addition to exteriors and interiors of the White House, the book is illustrated with portraits of the Presidents and their wives and distinguished visitors, including one of King Edward as a youth, the Grand Duke Alexis, Lafayette, etc., etc. Miss Singleton's inexhaustible work, in compiling the material for "The Story of the White House," which contains so much information of rare interest, makes it worthy of a place on the shelves of every library, both public and private, for it is in reality a text-book for all patriotic Americans.

WATER-LILIES AND HOW TO GROW THEM.
By Henry S. Conard and Henri Hus.
New York: Doubleday, Page & Co.
Pp. 13+228. Price, \$1.10.

This useful manual is intended as a help to convert unserviceable ponds and pools into effective water gardens. As a matter of fact, it is much more than that, but a book that must lead to a wider knowledge and appreciation of the beautiful water plants than are now general. Just why water flowers should

seem formidable objects of culture is by no means apparent. They constitute a goodly proportion of the floral kingdom, and water is sufficiently abundant to render their cultivation comparatively easy, the more especially since their cultivation involves no difficulty. The reason is, of course, that while every house stands on land and has more or less land around it, not every country place is supplied with running or still water. Hence, the water plants fail of that universal culture that is the case with earth plants.

This book, therefore, meets a positive need. It sums up, in a very compact and accessible form, all the knowledge that one needs to possess concerning the growth and culture of these plants. The authors tell their story in a sufficiently compact but entirely adequate way, and embellish their text with ample illustrations. They not only tell us how water gardens can be made, but give advice on pond construction, soils and planting out, wintering and propagating, seed saving and starting, raising new varieties, hardy water-lilies, tender day-blooming lilies, growing the giant Victorias, with notes of lotuses, water hyacinths, water gardens under glass, and surroundings and other special topics. The whole field is amply covered, and the lover of these beautiful plants will find in this volume a full summary of the latest knowledge on this fascinating topic.

CLEAN WATER AND HOW TO GET IT. By Allen Hazen. New York: John Wiley & Sons. Pp. 10+178. Price, \$1.50.

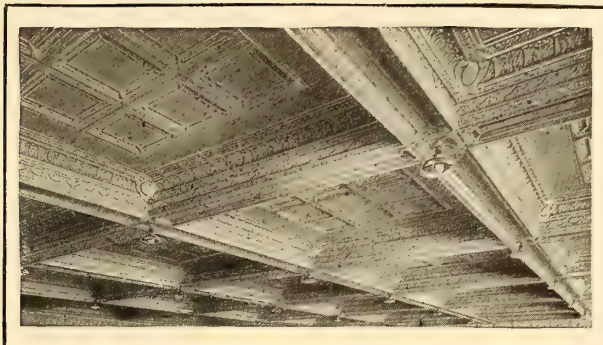
This book treats of the means now employed by American cities to secure clean water, and with the application of these means to new problems. It deals, therefore, with the larger problems of water supply, rather than with the individual questions raised by the country resident looking for clean water for his own residence. The problems it discusses, however, are of national, even of world-wide importance, and it is a book that should be read by every thoughtful citizen, even though it is more especially addressed to the engineer and technical student.

One of the most singular of modern civic problems has been the necessity of public campaigns for clean water in our cities. It is a problem that deserves to be bracketed with the pure food campaign. Why should there ever have been any doubt on either of these weighty questions, and why should there be any difficulty in obtaining both these reforms? Disgraceful as are the conditions that both these campaigns uncover, it is a fruitful sign of the times that there is now little need to argue for either of them. The pure food question has been advanced a considerable stage of late, and the importance of clean water is so generally recognized that the matter is reduced to a mere problem of ways and means. Mr. Hazen's book must materially advance knowledge on this subject. It is comparatively brief and treats its subject in a comprehensive and lucid manner. The author commends his book, and with great justice, to the attention of those who have had no experience with the problems of water supply, but who may be called upon to consider this subject. It deals with a vital question and should be carefully studied by every one who may, in any way, be concerned with this topic.

THE ART OF LANDSCAPE GARDENING. By Humphrey Repton. Edited by John Nolen, Boston: Houghton, Mifflin & Co. Pp. 23+252. Price, \$3.00 net; postage, 22c.

This volume is the first of a series of authoritative books to be republished at the suggestion and with the co-operation of the American

In that new building of yours
be it residence or business structure



the problem of effective ceiling and sidewall decorations can be satisfactorily solved by

BERGER'S "CLASSIK" STEEL CEILINGS

The most complete line of artistic steel ceilings in existence. Appropriate designs for all kinds of rooms, large or small. Clearly stamped. Properly fitting. Easily erected. Our erection diagram shows just where each piece of material belongs. Send sketch showing dimensions of rooms and get our free suggestions and exhibition drawings.

Ask for Catalog D-64

The Berger Mfg. Co., Canton, Ohio

New York Philadelphia Boston Chicago St. Louis Minneapolis San Francisco Atlanta

SPECIALTIES: STEEL CEILINGS, ROOFING, VAULT AND SIDEWALK LIGHTS, FIREPROOFING, STEEL FURNITURE, ETC.

FREE BOOK OF PLANS

FOR
Home Builders
With One Year's Subscription to
Keith's Magazine

This House in January Number. Our Plan No. 3 in January Number

Plans for your new home with all the information you need to make home building easy and satisfactory. Keith's Magazine is devoted to home building, decorating and furnishing. Each 64-page issue contains plans for seven practical, artistic house designs, drawn by the best architects in the country. Keith's Magazine is filled from cover to cover with helpful ideas and suggestions for home builders and home makers. It helps to make every dollar you put into your home count for beauty, utility and lasting satisfaction. Subscribe now and we will send you our handsome book, showing

42 COTTAGE AND BUNGALOW PLANS FREE

This book gives you your choice of 42 inexpensive, up-to-date, model designs, with accurate descriptions, illustrations and cost estimates at current prices. The book also tells how you can obtain Free Blue Print Plans. With Keith's Magazine and its free information service, together with our books of designs, your building simply cannot go wrong, because deals in facts. It can be relied upon absolutely as the recognized authority for home builders, and is the only publication of its kind in existence.

One year's subscription to Keith's, \$1.50 with illustrated book of 42 Cottages and Bungalows FREE. Book of designs for 74 Homes costing \$3000 to \$5000, and Keith's for 1 year, \$2.00. Book of Designs for 72 Homes costing \$5000 and up, and Keith's for 1 year, \$2.00. Book of 120 Beautiful Interiors and Keith's for 1 year, \$1.75. Single copies of Keith's at all news-stands, 15 cents.

MAX L. KEITH, Lumber Exchange 534, MINNEAPOLIS, MINN.

Society of Landscape Architects. Repton was born in 1752 and died in 1818, and the period covered by his life is in many respects the most important in the history of landscape gardening. In no other country and at no other time have the conditions been so favorable for realizing the best ideals of landscape gardening as with country gentlemen in England during the eighteenth century. And it is generally conceded that the world has not yet produced a designer in the informal or landscape style with the genius and skill of Repton. His work is one of the most notable achievements in his profession. He has to his credit the creation, transformation, or improvement of over two hundred important places. He himself was a country gentleman before he became a landscape gardener, and he knew nature at first hand. Yet notwithstanding the vast amount of beautiful landscape work he produced, his most notable contributions to his art are in his writings.

The present volume contains two of his best works: "Sketches and Hints on Landscape Gardening," published in 1795, and "The Theory and Practise of Landscape Gardening," published in 1803. It is issued in hand-

Building Construction and Superintendence

By F. E. KIDDER, C. E., Ph.D. Architect
Author of "The Architects' and Builders' Pocket Book."

Part I.—MASONS' WORK

(6th Edition)

421 Pages, 250 Illustrations

Part II.—CARPENTERS' WORK

(5th Edition)

544 Pages, 524 Illustrations

It has been the aim of the Author, in preparing these works, to furnish a series of books that shall be of practical value to all who have to do with building operations, and especially to architects, draughtsmen and builders.

Each volume is independent and they are sold separately.
The volumes are large 8vos. bound in cloth, price, \$4.00 each.

FOR SALE BY
MUNN & CO.
361 Broadway, New York

New Papers on Concrete Reinforced Concrete Concrete Building Blocks

Scientific American Supplement 1543 contains an article on Concrete, by Brysson Cunningham. The article clearly describes the proper composition and mixture of concrete and gives the results of elaborate tests.

Scientific American Supplement 1538 gives the proportion of gravel and sand to be used in concrete.

Scientific American Supplements 1567, 1568, 1569, 1570 and 1571 contain an elaborate discussion by Lieut. Henry J. Jones of the various systems of reinforcing concrete, concrete construction, and their applications. These articles constitute a splendid text book on the subject of reinforced concrete. Nothing better has been published.

Scientific American Supplement 997 contains an article by Spencer Newberry, in which practical notes on the proper preparation of concrete are given.

Scientific American Supplements 1568 and 1569 present a helpful account of the making of concrete blocks by Spencer Newberry.

Scientific American Supplement 1534 gives a critical review of the engineering value of reinforced concrete.

Scientific American Supplements 1547 and 1548 give a resumé in which the various systems of reinforced concrete construction are discussed and illustrated.

Scientific American Supplements 1564 and 1565 contain an article by Lewis A. Hicks, in which the merits and defects of reinforced concrete are analysed.

Scientific American Supplement 1551 contains the principles of reinforced concrete with some practical illustrations by Walter Loring Webb.

Scientific American Supplement 1573 contains an article by Louis H. Gibson on the principles of success in concrete block manufacture, illustrated.

Scientific American Supplement 1574 discusses steel for reinforced concrete.

Scientific American Supplements 1575, 1576 and 1577 contain a paper by Philip L. Wormley, Jr., on cement mortar and concrete, their preparation and use for farm purposes. The paper exhaustively discusses the making of mortar and concrete, depositing of concrete, facing concrete, wood forms, concrete sidewalks, details of construction of reinforced concrete posts, etc.

Scientific American Supplement 1583 gives valuable suggestions on the selection of Portland cement for concrete blocks.

Scientific American Supplement 1581 splendidly discusses concrete aggregates. A helpful paper.

Scientific American Supplements 1595 and 1596 present a thorough discussion of sand for mortar and concrete, by Sanford E. Thompson.

Scientific American Supplement 1586 contains a paper by William L. Larkin, on concrete mixing machinery in which the leading types of mixers are discussed.

Scientific American Supplement 1626 publishes a practical paper by Henry H. Quimby on concrete surfaces.

Scientific American Supplement 1624 tells how to select the proportions for concrete and gives helpful suggestions on the treatment of concrete surfaces.

Scientific American Supplement 1634 discusses forms for concrete construction.

Scientific American Supplement 1639 contains a paper by Richard K. Meade, on the prevention of freezing in concrete by calcium chloride.

In **Scientific American Supplement 1605** Mr. Sanford E. Thompson thoroughly discusses the proportioning of concrete.

Scientific American Supplement 1578 tells why some fail in the concrete block business.

Scientific American Supplement 1608 contains a discriminating paper by Ross F. Tucker on the progress and logical design of reinforced concrete.

EACH NUMBER of the SUPPLEMENT COSTS 10 CENTS. A SET of PAPERS CONTAINING ALL THE ARTICLES ABOVE MENTIONED WILL BE MAILED for \$3.40

Order from your Newsdealer or from

MUNN & CO., Publishers, 361 BROADWAY, New York City

CEMENT

Its Chemistry, Manufacture & Use

Scientific American Supplement 1372 contains an article by A. D. Elbers on tests and constitution of Portland cement.

Scientific American Supplement 1396 discusses the testing of cement.

Scientific American Supplement 1325 contains an article by Prof. William K. Hatt giving an historical sketch of slag cement.

Scientific American Supplements 955 and 1042 give good accounts of cement testing and composition, by the well-known authority, Spencer B. Newberry.

Scientific American Supplements 1510 and 1511 present a discussion by Clifford Richardson on the constitution of Portland cement from a physico-chemical standpoint.

Scientific American Supplement 1491 gives some fallacies of tests ordinarily applied to Portland cement.

Scientific American Supplements 1465 and 1466 publish an exhaustive illustrated account of the Edison Portland cement works, describing the machinery used.

Scientific American Supplement 1519 contains an essay by R. C. Carpenter on experiments with materials which retard the activity of Portland cement.

Scientific American Supplement 1561 presents an excellent review by Brysson Cunningham of mortars and cements.

Scientific American Supplement 1533 contains a resumé of the cement industry and gives some valuable formulae.

Scientific American Supplement 1575 discusses the manufacture of hydraulic cement. L. L. Stone is the author.

Scientific American Supplements 1587 and 1588 contain an able paper by Edwin C. Eckel on cement material and industry of the U. S.

Any one of these Supplements will be sent for 10 cents. The entire set costs \$1.60, and constitutes an invaluable text book on the subject. Order from your Newsdealer or from

MUNN & COMPANY, 361 Broadway, New York

some form, recalling in general typography the style of the original work, and is abundantly illustrated, mostly with Repton's own drawings, but supplemented in some instances with recent photographs, showing the result of a hundred years of growth in his work. Many of these illustrations are reproduced in Repton's own manner, with a pasted over sheet showing the scene as it actually existed, and again as he proposed to change it. These drawings are of extraordinary interest and value, and are veritable object lessons in landscape design.

The interest and value of this book is quite beyond the ordinary. It is not a description of places, but a treatise on the fundamental principles of the art of landscape gardening by the one universally recognized master of his craft. If places are illustrated it is to illustrate a principle and make the text clearer. The importance of this reprint is, therefore, very great, and the American Society of Landscape Architects deserve to be heartily congratulated on the inauguration of their publication scheme by this very successful volume. Mr. Nolen has confined his editing to a preface and some brief notes, but for the most part he gives us Repton's own text without modern commentary.

Just Published

Tenth Edition

MODERN PLUMBING STEAM AND HOT WATER HEATING

CONTAINING
THE MOST
MODERN
METHODS
OF PLUMB-
ING AS CON-
STRUCTED
AT THE
PRESENT
DATE

Soil and Waste Pipe Ventilation, Back Venting, The House Trap, The Fresh Air Inlet and Their Advantages. Siphonage of Traps, The Cause and How to Remedy the Same. How to Test Soil and Waste Pipes. Probable Questions of Plumbing Examining Board, and Answers to Same. Hydraulics of Plumbing, with Original Illustrations. Practical Drawings and all Important Features in the Construction of Modern Plumbing Work.

STEAM AND HOT WATER HEATING

How to correctly figure on any size or shape of building with steam or hot water. How to find the heating capacity of any shape or make of boiler for steam or hot water heating. The most practical time-saving tables ever compiled and published. A new table of how to quickly find the correct measurement of 45-degree angles, a most useful thing in Steam and Hot Water construction. This has never before appeared in print.

More practical illustrations than ever published in any one volume, which show the various systems of construction in the heating and ventilating of buildings by the steam or hot water systems.

By JAMES J. LAWLER

Over three hundred diagrams and illustrations, showing the various systems of construction in the heating and ventilating by steam or hot water systems. Six folding inserts showing Waste Pipe System of Plumbing, One-pipe System of Both Steam and Hot Water Heating, Overhead System, Fan System of Heating and Ventilation, and Steam and Hot Water Circuits.

400 Pages, Large Octavo Size, 10x7½ inches. Bound in Extra Cloth. Price, Postpaid, \$5.00.

MUNN & CO., 361 Broadway, NEW YORK

Sample and
Circular
Free.

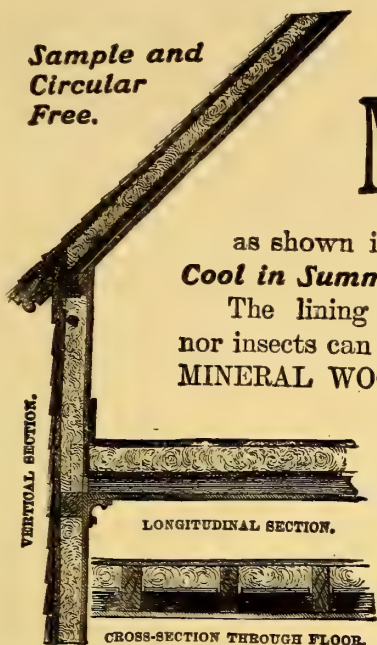
A House Lined with Mineral Wool

as shown in these sections, is *Warm in Winter,
Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice,
nor insects can make their way through or live in it.
MINERAL WOOL checks the spread of fire and keeps
out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.
140 Cedar St., NEW YORK CITY.



¶ If the only
purpose of a
lighting fixture
were to give
light, as well
take a few
electric bulbs
and string
them at inter-
vals about the
room!

¶ The mission
of a lighting
fixture is two-
fold—to illu-
minate and to decorate—the latter being by
no means of minor importance.

For the protection of our clients, our trade-mark will
be found on each and every piece of work made by us.

The Enos Company
MAKERS OF LIGHTING FIXTURES
5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
San Francisco, 1748 California Street
Toronto, 94 King Street West
Pittsburg, G. P. Norton, Penn at 4th St.
NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & Co., BOSTON



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER TILING

An Ideal Floor Covering for Court
Houses, Banking Institutions, Churches,
Hospitals, Libraries, Business Offices,
Restaurants, Vestibules, Elevators,
Kitchens, Laundries, Pantries, Bath-
rooms, Steamships and Floating Pro-
perty generally.

We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street

ASK FOR DWIGHT



SHEETS

DWIGHT MFG. CO., NEW YORK

KIMBALL PIPE ORGANS



For Residences as well as churches. With
the self-playing attachment
and "soloist" or solo device, they become instruments
for the amateur as well as the professional organist.

For further particulars, write *Pipe Organ Dept.*

W. W. KIMBALL CO.

New York Office, 150 Fifth Ave. Chicago Office, 253 Wabash Ave.

It's Better to Look for the Seal Than to Be Disappointed



True lovers of sweets are so appreciative of quality that they would rather go without than to be disappointed in confectionery.

The question is—how are you to know in advance—how can you recognize quality before you buy and before you try. There is one sure way—ask for Necco Sweets and look for the red seal on the box. Necco Sweets are absolutely uniform—as good this time as they were last—and you are sure of the next time.

As an example of the high quality of Necco Sweets try a box of

Lenox Chocolates

which are but one of 500 different varieties.

Necco Sweets are not only delicious, but wholesome and good—make the little ones happy and keep them healthy.

You will find any sort of confectionery you may want, from the simplest to the most elaborate, under the protecting seal of Necco Sweets.

*Necco Sweets are sold by all dealers who sell high grade goods. If your dealer does not have them, send us 25 cents for an attractive package of **Lenox Chocolates**; or, better still, order one of our special \$1 packages in a handsome art box. Either package sent postpaid.*

NEW ENGLAND CONFECTIONERY COMPANY
Summer and Melcher Streets, Boston, Mass.

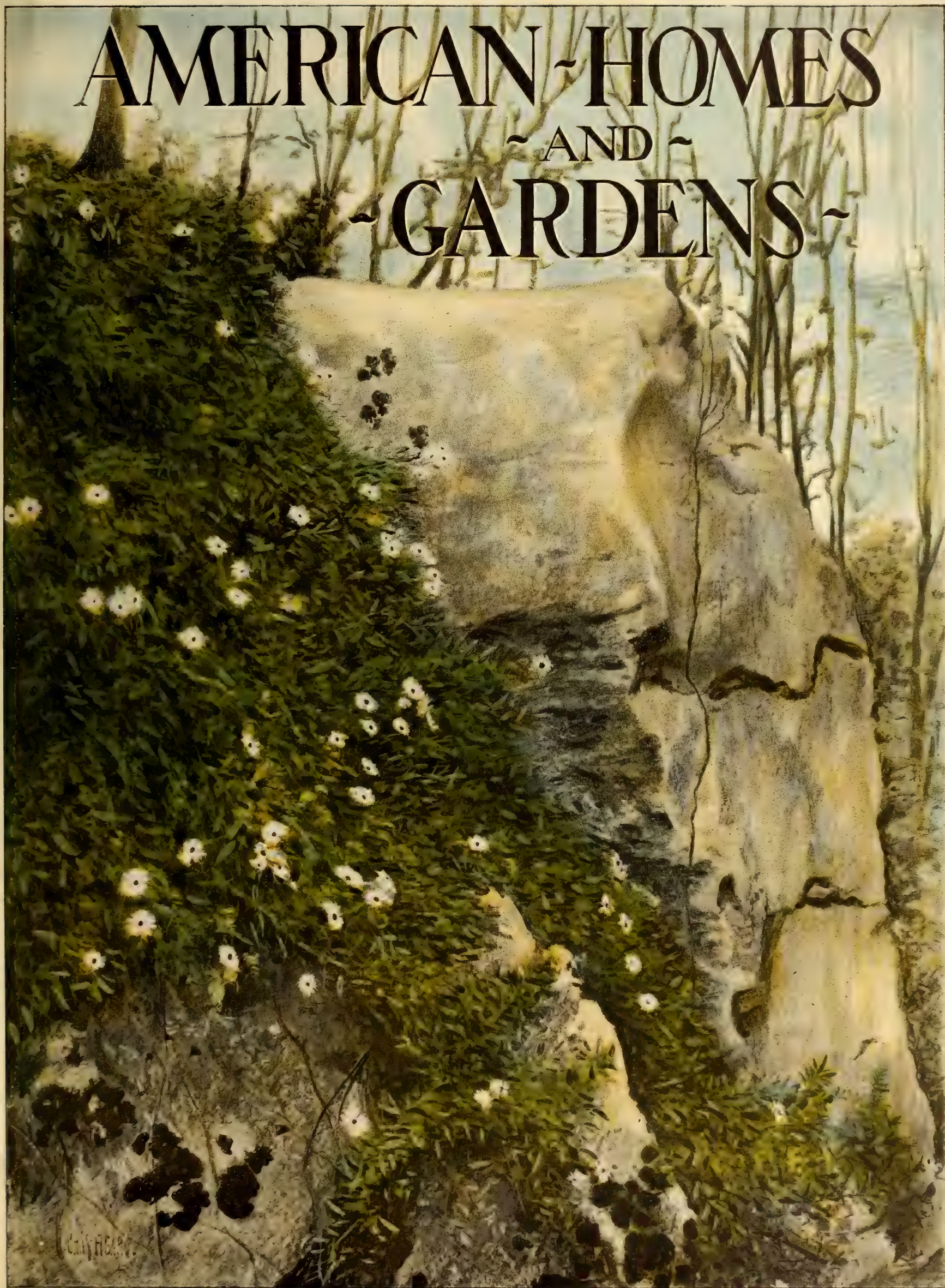
7100
A 512

Vol. V

MARCH, 1908

No. 3

AMERICAN HOMES ~ AND ~ ~ GARDENS ~



\$3.00 A YEAR

MUNN & COMPANY, Publishers

PRICE, 25 CENTS

The Seal Outside



Tells of The Goodness Inside

The first box of Necco Sweets delights you with its freshness, wholesomeness and goodness. The second box proves to you that the red seal of Necco Sweets means, always and everywhere, uniform excellence and perfect satisfaction. Let the first box be, for instance,

Lenox Chocolates

one of the favorite varieties of Necco Sweets.

Compare them with ordinary chocolates—this superiority will be found in every one of the 500 varieties of Necco Sweets, from the simplest confections to the most elaborate Bonbons.

The Necco Seal is your guarantee of good, wholesome confectionery, the kind you want for your children—the kind you want for your guests—the kind you want for yourself.

Necco Sweets are sold by all dealers who sell high grade goods. If your dealer does not have them, send us 25 cents for an attractive package of **LENOX CHOCOLATES**; or, better still, order one of our special \$1 packages in a handsome art box. Either package sent postpaid.

NEW ENGLAND CONFECTIONERY CO., Summer and Melcher Sts., Boston, Mass.

Japanese Gardening

is a fine art. The love of flowers is a national trait in the "Land of the Rising Sun." The Japanese has a garden, no matter how small his home grounds. Garden arts have been brought to such perfection in Japan that plots only ten feet square are made exquisitely beautiful. Where, too often, Americans see only tin-cans, ashes and garbage, in Japan the outlook is made charming to the eye. The garden magic of the Japanese is wrought by the simplest means. We make a specialty of landscape gardening after the Japanese forms,

APPLIED TO AMERICAN NEEDS

and have to our credit many of the fine places for which Baltimore is noted. It is now our purpose to give persons in other sections the benefit of our study and experience. Our new booklet, "Gardening Lessons from the Japanese," tells how you may profit by what you have learned, wherever you live.

"Gardening Lessons from the Japanese"
free on application. Write today for a copy

**AMERICAN & JAPANESE
NURSERY CO.**

3215 Old Frederick Road
BALTIMORE, MARYLAND

*A Tobey Hand-Carving
in Solid Mahogany*



Tobey Handmade Furniture

Elegant in line and finish, and the nearest approach to structural perfection—the highest known achievement of the cabinet-maker's art.

Made of beautifully grained, solid woods in patterns answering almost every requirement of the home. Special designs to order.

We invite you to visit our stores, or to correspond.

The Tobey Furniture Company

CHICAGO
Wabash Avenue and
Washington Street

NEW YORK
11 West Thirty-
Second Street

DINGEE Roses

The name "Dingee" expresses quality in roses. It is a name familiar to two generations of rose lovers. Each year adds to our skill in producing roses of unusual merit, and the "Dingee Roses" for this year surpass even those of other years. Our

New Guide to Rose Culture

for 1908 is larger, handsomer, more valuable than ever. 124 pages. A number of pages in full color illustration handsome enough to frame. Describes over 1000 varieties of roses, tells how to grow them and all other desirable flowers. Seeds a specialty. It is mailed free to all who write for it.

10 Famous Roses \$1.

Those who think more of quality than of numbers will buy the "Dingee Collection"—10 strong Rose plants, all different and labeled, including Thousand Beauties (New Wonder Rose), La France, Killarney, Helen Gould, The Coquets. Sent postpaid anywhere for \$1.00. Guaranteed to reach you safely, and to grow and bloom. The Greatest Collection ever offered. Orders booked for delivery when wanted. A dollar bill will bring them. Order now. **THE DINGEE & CONARD CO., WEST GROVE, PA.** Established 1850 70 Greenhouses



Frank B. Meade, Architect, Cleveland, O.

Artistic, Economical and Reliable

If you have had bad results with the kerosene-oil shingle-stains, don't condemn all stains.

Cabot's Shingle Stains

have stood the test for nearly twenty-five years in all parts of the world. Thousands of people have used them, and hundreds of unsolicited testimonials have been received showing that they look better, wear better and preserve the wood better than any other exterior colorings.

Samples of colors on wood with catalogue and color-chart showing 64 combinations, sent free.

SAMUEL CABOT, Inc., Sole Manufacturers
131 Milk Street, Boston, Mass.
Agents at all central points.

WOMEN'S HANDS ALWAYS KEPT WHITE AND SOFT

A million pairs of these women's work gloves sold every year. Used in sweeping, clothes-hanging, tending furnace, etc. Protects hands, Automobile Cuff protects wrist... **25c.** Five pairs prepaid, \$1.00.



Fremont Mitten & Glove Co., 1211 Wood St., Fremont, O.

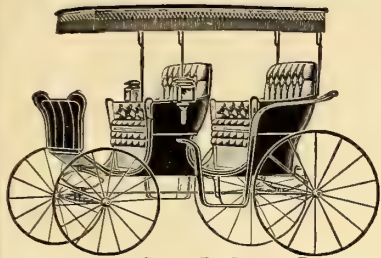
GROWN IN NEW JERSEY

under soil and climate advantages—and ready to start growth again, anywhere, as soon as planted Pomona Nurseries

TREES AND PLANTS

are the satisfactory kind. A complete assortment especially strong in Hardy Flowering Shrubs, Evergreens and Strawberry Plants. Landscape plans prepared and executed. Catalog free.

T. E. Steele, Dept. 33, Palmyra, N. J.



No. 233. Fine Canopy Top Surrey. Price complete, \$88. As good as sells for \$50 more.

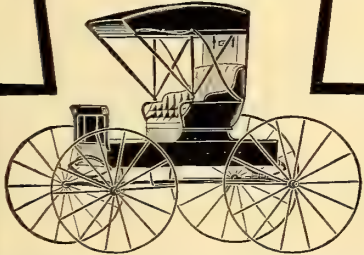
Elkhart Buggies and Harness

are sold direct from our factory to the user. In buying from us you save the dealer's expenses and profits. 35 Years Selling Direct is our record and we are today

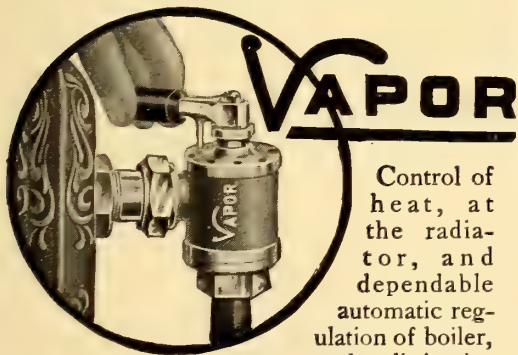
The Largest Manufacturers in the World

selling to the consumer exclusively. We ship for examination and approval, guaranteeing safe delivery. No cost to you if not satisfied as to style, quality and price. Over 200 styles of Vehicles and 65 styles of Harness. Send for new, free catalog.

Elkhart Carriage & Harness Mfg. Co.
Elkhart, Ind.



No. 685. Two-in-one Buggy with padded wing dash and fine auto seat. Top easily removed for open wagon. Price complete, \$53.50. As good as sells for \$25 more.



Control of heat, at the radiator, and dependable automatic regulation of boiler, are the distinctive

features of The Broomell

Vapor System of Heating

—an improvement on both steam and hot water.

Marvelous capacity to meet all weather changes and maintain an evenly comfortable temperature, whether the days are mild or bitter.

Just heat: no water, no pressure, no pounding, no air valves; no bother and worry. Almost perfection.

Book on heating, free

Vapor Heating Company

Broomell's-patent Vapor System

121 S. Broad Street, Philadelphia

2 H.P. Detroit Engine

Starts without cranking; no cams, valves, springs or sprockets. Only 3 moving parts. All bearings bab-bit. For your Row Boat, Sail Boat, Launch, 10,000 in use.

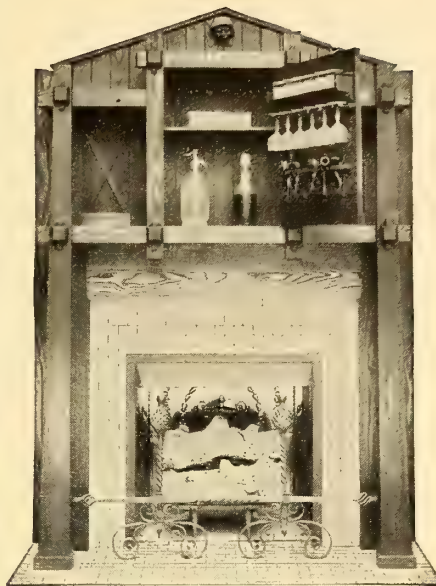
Send for testimonials

DETROIT ENGINE WORKS
1206 Jefferson Ave., Detroit, Mich

For \$29.50

3-5-7-10 H. P. Proportionate prices. Cylinders and pistons ground. Crank shaft drop forged steel. All sizes ready to ship

SEND FOR FREE CATALOG.



MISSION MANTEL FOR DEN

Artistic Mantels

OUR CATALOGUES contain 130 designs, including Mission, Colonial, White, Mahogany & Oak. Everything, from the very cheapest to the best.

Fireplace Hardware and Tiling of every description.

Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.

Unity Building
Chicago, Ill.

306 Main Street
Jacksonville, Fla.

Factory, Knoxville, Tenn.



Beautiful Columns

You can bring to your new home the beauty, art, grace and dignity of the columns of ancient Athens and Rome by using Koll's Patent Lock Joint Columns.

These columns and capitals are masterpieces of architecture—perfect in their classic proportions.

Their mechanical construction is faultless. The lock joint makes it impossible for the staves to come apart. They are made of extra thick stock, perfectly seasoned, and are weather-proof, very strong and very durable.

For interior uses Koll's Patent Lock Joint Columns are made of every variety of hard woods. We make a specialty of columns for pergolas and all garden uses.

Write to-day for our illustrated catalog A-19.

HENRY SANDERS COMPANY

805-1005 Elston Avenue, Chicago

Eastern Office: 1123 Broadway, New York

516 Pages, 107 Engravings

NOW READY

Price, Four Dollars

Industrial Alcohol

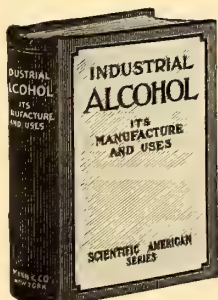
ITS MANUFACTURE AND USES

A Practical Treatise based on Dr. Max Maercker's "Introduction to Distillation" as revised by Drs. Delbrück and Lange

COMPRISING

Raw Materials, Malting, Mashing and Yeast Preparation, Fermentation, Distillation, Rectification and Purification of Alcohol, Alcoholometry, The Value and Significance of a Tax-Free Alcohol, Methods of Denaturing, Its Utilization for Light, Heat and Power Production, A Statistical Review, and the United States Law

By JOHN K. BRACHVOGEL, M.E.



THE value and significance of a tax-free alcohol have been so widely discussed in the press and periodical literature of the entire country, that it is unnecessary to emphasize the great importance of the subject, especially to our agricultural and industrial interests. For years we have been far behind the nations of Europe in this regard, and in consequence our literature has been sadly lacking in authoritative works covering this phase of industrial activity. This book was designed with the especial purpose of filling this want, and it is the latest and most comprehensive work of its kind which has been published in this country.

Few in number are those to whom this book would not prove of interest and value. The farmer, the manufacturer, the power-producer, the householder, will all find that denatured alcohol is of such importance to them, that its use and introduction will effect savings and economies which were hitherto impossible of accomplishment.

FOR SALE AT ALL BOOKSTORES

BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont

BARGAIN Magazine Subscriptions

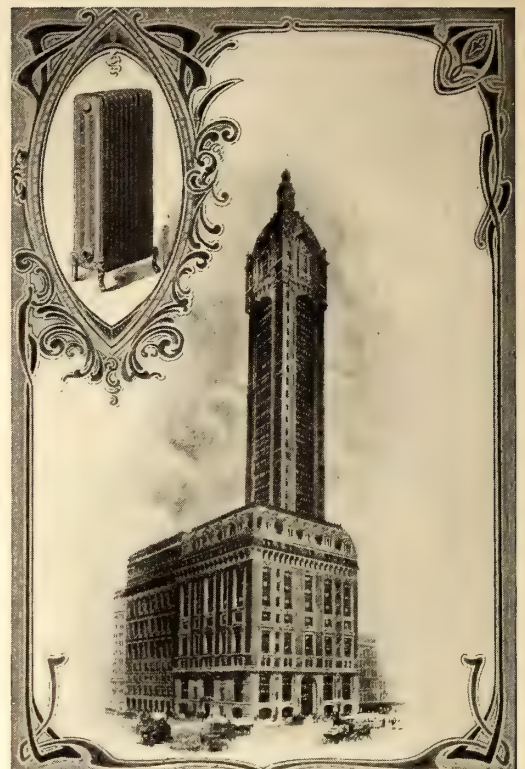
METROPOLITAN	\$1.50	Our Price for both
McCLURE'S	1.50	
Regular Price	\$3.00	
		\$1.65
METROPOLITAN	\$1.50	Our Price for both
WOMAN'S HOME COMPANION	1.00	
Regular Price	\$2.50	
		\$1.65
METROPOLITAN	\$1.50	Our Price for three
PEARSON'S	1.50	
DESIGNER	.50	
Regular Price	\$3.50	
		\$2.15
METROPOLITAN	\$1.50	Our Price for three
DESIGNER	.50	
ETUDE	1.50	
Regular Price	\$3.50	
		\$2.35

On account of our special arrangement with the publishers of the various magazines, we are in a position to quote prices to you far below those which would ordinarily be given to you, so, if you do not find in the above clubbing offers the combination which you desire, write to us exactly what you wish and we will quote you the lowest possible price for such a combination.

Metropolitan Magazine Agency
7 West 29th St., New York City

METROPOLITAN MAG. AGCY.
Enclosed please find \$..... for which send me the following combination:
Metropolitan,

Name
Address



Kinnear Pressed Radiators

Selected for

THE SINGER BUILDING, NEW YORK

Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

**On the Wall—Off the Floor
Out of the Way**

If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.

Write for Catalog "D" for any desired information.

**THE PRESSED RADIATOR CO.
PITTSBURGH, PA.**

PREVENTS DRAFTS, DUST AND WINDOW RATTLING.



**IVES' PATENT
Window Stop Adjuster.**

HEAVY BED

PATENTED.

The only Stop Adjuster made from one piece of metal with solid ribs and heavy bed that will not cup, turn or bend in tightening the screw. Manufactured only by The H. B. IVES CO., New Haven, Conn., U. S. A. (Fifty-page Catalogue Mailed Free.)

LIVE GAME

The celebrated Hungarian and English Partridges and Pheasants, the large Hungarian Hares, all kinds of Deer, Quail, etc., for stocking purposes.

Fancy Pheasants, Ornamental Waterfowl and Live Wild Animals of every description.

Write or Price List

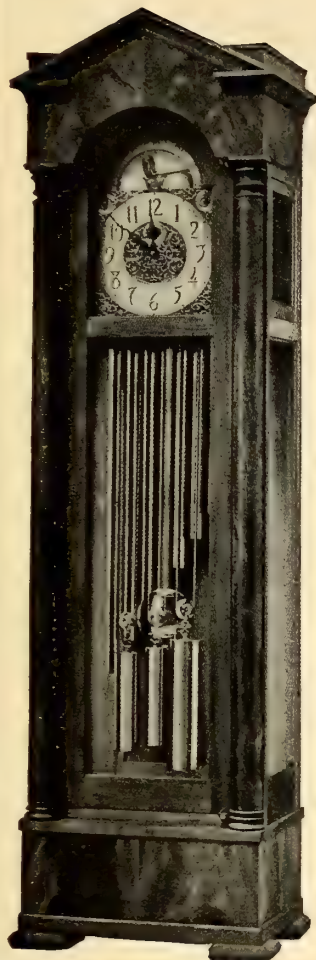
WENZ & MACKENSEN, Dept. N., YARDLEY, PA.



Army Auction Bargains

Tents - \$1.90 up Old Pistols - .50 up
Rifles - 1.95 " Officers' Swords, new \$1.75
ARMY SADDLES 3.00 " Cavalry Sabres " 1.50
Bridles - 1.00 " UNIFORMS " 1.95
Leggins, pr. .15 " 7 Shot Carbine " .35
1907 MILITARY ENCYCLOPEDIA CATALOGUE, 260 large pages, containing thousands of beautiful illustrations—with wholesale and retail prices of 15 acres GOVT. AUCTION SALE GOODS, mailed for 15 cents (stamp).

FRANCIS BANNERMAN, 501 Broadway, NEW YORK



HALL CLOCKS

That are beautiful in design, finest in construction, richest in tone of chimes and superior time-keepers are some of the reasons that have made our business grow so rapidly.

Waltham Clocks

have a standard of value, whether it is a Hall Clock, "Banjo," Marble Clock, or Regulator.

Nothing Better at Any Price

If your local jeweler does not sell our line send direct for our new illustrated catalogue

Waltham Clock Company
WALTHAM, MASS.



This Beautiful Residence was built of Concrete Blocks made on

The Hercules Machine

If you are going to build any kind of a structure, from an ordinary stable to a handsome residence, you ought to sit down right now and send for our catalog.

It will tell you a great many things about concrete construction that are worth knowing.

It will tell you about the Hercules Concrete Block Machine—and show you many illustrations of residences, apartment houses, churches, business blocks and manufacturing plants built of blocks made on the wonderful Hercules.

Concrete is cheaper than wood or brick; it will last longer, and when the blocks are made on the Hercules great architectural beauty can be attained.

Send for catalog to-day, it's free to you.

Century Cement Machine Co.

180 W. Main St., ROCHESTER, N. Y.

BOUND VOLUMES OF American Homes and Gardens

480 Pages :: 1,050 Illustrations :: Price, \$5.00

American Homes and Gardens covers a wide scope; it deals with house building from the design and construction of modest cottages on tiny lots to the building of mansions on large estates. All degrees of gardening, from laying out a landscape to the planting of a window-box, are dealt with. Practical questions of water supply, of sanitation, or of the arrangement of the kitchen receive equal treatment with draping of windows or the arrangement of old china.

American Homes and Gardens is beautifully printed. The year's volume contains more than a thousand engravings, as full of details and finish as actual photographs. They depict some of the old and historic mansions of America, and the most beautiful of gardens or of natural scenery. The following list of a few of the principal practical articles which appeared in *American Homes and Gardens* during 1907 will show the wide choice of subject:



Historic Mansions of the James River—Small American Homes—Inexpensive Log Bungalows—The Iris Garden—House-Boating in America—A Boy's Summer Camp—The Choice of a Dog—Ventilation—The Water Garden—Curtains and Draperies—The Wild Garden—Concerning Driveways—Heating the House—The Modern Bedroom—Touring in an Automobile—Flowers for House and Table Decoration—What is a Fireproof House—Interior Woodwork—White Lilac Culture—How to arrange Window Curtains—Street Entrances—Collection of Old Blue Staffordshire Ware—Novel Uses of Electricity—The Question of the Fire Place—Orchid Culture—Hand-wrought Iron work—Kitchen Furniture—Water Supply.

A limited number of volumes for 1907 are available, 480 pages, 1,050 illustrations. Price, \$5.00. Volume for 1906, \$5.00. Volume for 1905, \$3.50.

MUNN & CO., Publishers, 361 Broadway, New York

We Give Particular Attention To Special Designs

and are fully equipped to execute the most intricate and delicate work ever attempted in sheet metal.

Mullins Art Architectural Sheet Metal Work

is far in advance in architectural design and artistic execution and has won an enviable reputation for excellence.

Estimates, Designs, etc., submitted to architects, builders and contractors on request.

The W. H. Mullins Co.

202 Franklin Street,
Salem, Ohio.

(Everything in sheet metal.)



❧ Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

❧ The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

❧ If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO

JUST PUBLISHED THE NEW AGRICULTURE

By
T. BYARD COLLINS

8vo. Cloth. 376 Pages
100 Illustrations
Price, \$2.00, Postpaid



HIS new and valuable work sets forth the changes which have taken place in American agricultural methods which are transforming farm life, formerly so hard, into the most independent, peaceful and agreeable existence. Farm life to-day offers more inducements than at any previous period in the world's history, and it is calling millions from the desk. The present work is one of the most practical treatises on the subject ever issued. It contains 376 pages and 100 illustrations.

In brief, the Contents are as follows

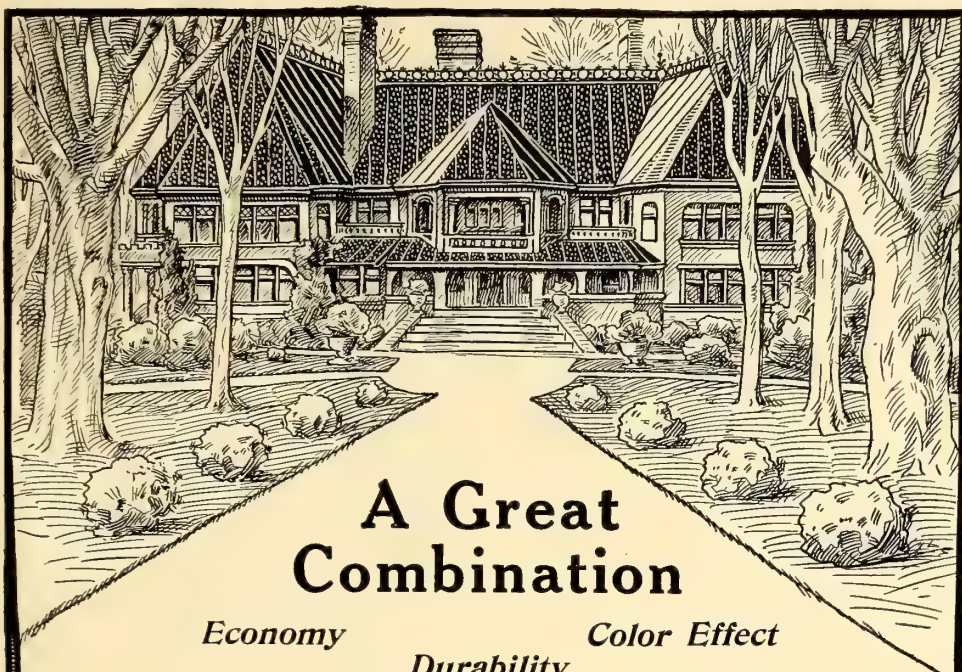
- CHAPTER I. This chapter contains a general statement of the advantages of farm life.
CHAPTER II. Deals with the vast systems of irrigation which are transforming the great West, and also hints at an application of water by artificial means in sections of the country where irrigation has not hitherto been found necessary.
CHAPTER III. Gives the principles and importance of fertilization and the possibility of inoculating the soil by means of nitrogen-gathering bacteria.
CHAPTER IV. Deals with the popular awakening to the importance of canals and good roads, and their relation to economy and social well-being.
CHAPTER V. Tells of some new interests which promise a profit.
CHAPTER VI. Gives a description of some new human creations in the plant world.
CHAPTER VII. Deals with new varieties of grain, root and fruit, and the principles upon which these modifications are effected and the possibilities which they indicate.
CHAPTER VIII. Describes improper methods in agricultural practice.
CHAPTER IX. Devoted to new machinery by which the drudgery of life on the farm is being eliminated, making the farm a factory and the farmer the manager of it.
CHAPTER X. Shows the relation of a body of specialists to the American farmer, who can have the most expert advice upon every phase of his work without any expense whatever to himself.



MUNN & CO., Publishers



361 Broadway, NEW YORK



A Great Combination

Economy

Durability

Color Effect

All these qualities are combined in

RUBEROID RED ROOFING

Trade Mark Reg. U. S. Pat. Off.

ECONOMY—Because it is moderate in price, requires no skilled labor to lay, and costs little or nothing to keep in perfect condition.

COLOR EFFECT—Its richness of color lends an air of elegance and refinement to any building.

DURABILITY—Because it outlasts any other roofing made. Will not melt, rot or corrode like tar, shingles or metal roofs.

Fire Resisting and Weather-Proof

Made also in BROWN and GREEN

Write for Samples and Prices

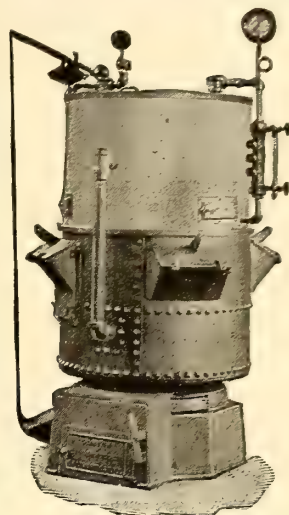
THE STANDARD PAINT COMPANY

100 William St., New York

Chicago St. Louis Kansas City Boston Philadelphia New Orleans

GORTON

SIDE FEED BOILERS SIDE FEED

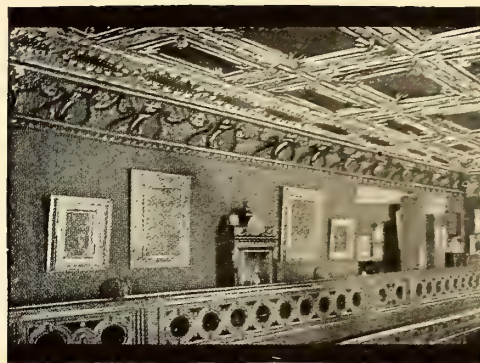


For Steam
and
Hot Water
Heating

Insure a
Warm
Building
Day
and Night in
Coldest
Weather

Send for
Catalog

GORTON & LIDGERWOOD CO.
96 LIBERTY STREET, NEW YORK
Old Colony Bldg., Chicago 77 Oliver St., Boston



THE NEW CEILING AND SIDE WALL ON THAT ROOM

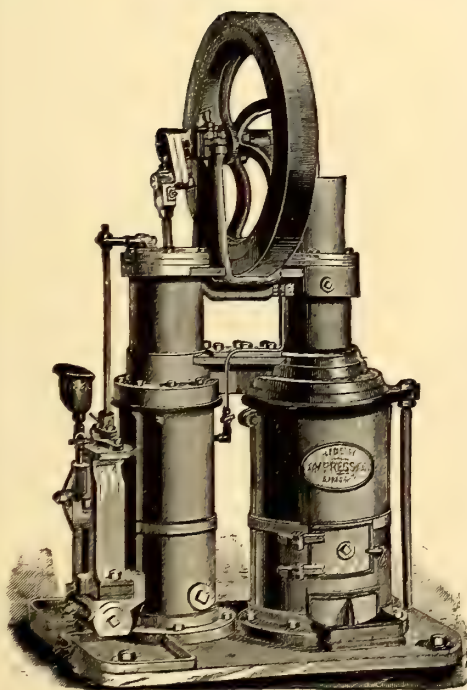
What shall it be? **Steel**, of course—because it is the most **modern, sanitary** and **inexpensive**, practically **lasts forever**.



Write to-day, giving dimensions and particulars. We will go into the matter with you thoroughly.

"When it has the **ELLER** trade-mark, it's the best in steel."

ELLER MFG. CO.
CANTON, OHIO



Improved Rider Hot Air Pumping Engine

AND

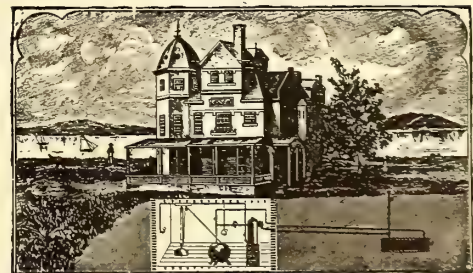
Improved Ericsson Hot Air Pumping Engine

PRICES GREATLY
REDUCED

Send for Catalog "E" to nearest office

Rider-Ericsson Engine Co.

35 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



Our remarkable recent inventions enable us to offer the public an intensely brilliant

Smokeless Gas

at much less cost than city gas, better, safer and cheaper than electricity, and costing but one-fourth as much as acetylene.

**Most Durable and Least Expensive
Apparatus to Maintain**

in effective perpetual operation. Gives services of lighting, cooking and heating. Fullest satisfaction guaranteed, and easy terms. The very apparatus for suburban homes, institutions, etc. We construct special apparatus also for fuel gas for manufacturing, producing gas equivalent to city gas at 50 cents per 1000 cubic feet, and made to respond to very large demands; also for lighting towns, etc.

C. M. Kemp Mfg. Co., Baltimore, Md.

Cottage Designs

THESE books offer to architects, builders, homeseekers and investors by far the most complete collection of plans ever brought out, while the price is so low as to place them within the reach of all who have an interest in the building of homes. The designs are compiled with a view to representing all grades of cost, from the simplest types of cottages, as illustrated in the first series, to the comparatively elaborate structures reaching to \$10,000 or more, in cost, treated in the fourth series, so that examples are given covering nearly every requirement, with respect to cost, in inexpensive homes.

No. 1. Cottage Designs with Constructive Details

A series of twenty-five designs of cottages, most of which have been erected, ranging in cost from \$600 to \$1,500; together with details of interior and exterior finish, all drawn to convenient scale, and accompanied by brief specifications. Illustrated with 53 full-page plates of floor plans, elevations and details.

No. 2. Low Cost Houses with Constructive Details

Embracing upward of twenty-five selected designs of cottages originally costing from \$750 to \$2,500, accompanied with elevations, floor plans and details of construction, all drawn to scale, together with brief descriptions and, in many instances, full specifications and detailed estimates of cost. Illustrated by 61 full-page plates of floor plans, elevations and details.

No. 3. Modern Dwellings with Constructive Details

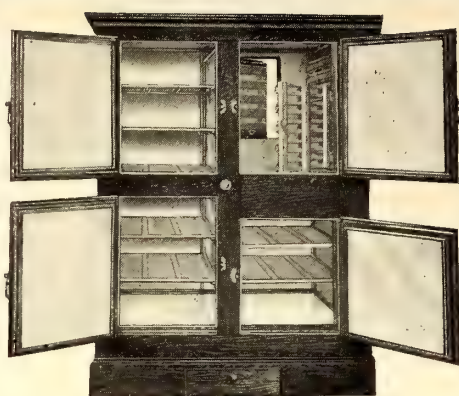
A selection of twenty designs of artistic suburban dwellings erected in various parts of the country, at costs ranging from \$2,000 to \$5,000; embracing floor plans, elevations and constructive details, showing interior and exterior finish, and drawn to scale, together with extracts from the specifications. Illustrated by means of half-tone reproductions, from photographs of the completed structures, and 61 full-page plates, of floor plans, elevations and details.

No. 4. Suburban Homes with Constructive Details

Comprising twenty selected designs of attractive suburban homes, ranging in cost from about \$3,000 upward; embracing floor plans, elevations and constructive details, showing interior and exterior finish, all drawn to scale, together with extracts from the specifications. Illustrated by means of half-tone reproductions from photographs of the completed structures, and 75 full-page plates of plans, elevations and details.

One Dollar Each, Postpaid
(SOLD SEPARATELY)

MUNN & CO.
Publishers of Scientific American
361 Broadway, New York



A Guarantee of Lasting Satisfaction

means more to you than a few days trial, because you cannot discover the faults of a refrigerator until you have used it several months. For over 25 years every McCray Refrigerator has been sold under a positive guarantee of lasting satisfaction.

The confidence of the public in the McCray guarantee is best evidenced by the fact that McCray Refrigerators are endorsed by the leading physicians, hospitals, sanitariums, hotels, clubs, etc., and are used in thousands of the finest residences. The U. S. Government also uses McCray Refrigerators in the Capitol, Congressional Library and other public buildings, on its battle ships and in its commissary department.

McCray Refrigerators

Have Stood All Tests

and have won an enviable reputation for superiority. They are made in regular sizes for immediate shipment, and Built To Order for all purposes.

McCray Refrigerators are lined with White Opal Glass, Porcelain Tile or White-Wood. No zinc is ever used as zinc corrodes and forms oxides that poison milk and other food.

The McCray Patent System of Refrigeration is beyond question the most efficient system of refrigeration ever invented, as it gives a perfect circulation of pure, cold absolutely dry air, and requires only one half as much ice as other refrigerators. There is never the slightest tainted or stale smell about a McCray Refrigerator.

Send Us This Coupon

and let us send you free our 40 page illustrated catalog that explains why McCray Refrigerators are superior to other refrigerators and different from ordinary ice boxes. Send us coupon now.

McCray Refrigerator Company,
687 Mill Street,
Kendallville, Ind.

Branches in all
principal
cities.

McCray Refrigerator Company,
687 Mill Street,
Kendallville, Indiana.

Gentlemen:—Please send me your free Catalog of McCray Refrigerators.

Name.....
Street.....
City..... State.....

BOOKS

relating to Architecture, Decoration, Furniture, Rugs, Ceramics, etc., will be recommended and supplied by our well-equipped Book Department.



MUNN & COMPANY
Publishers of Scientific American
361 Broadway, New York



Money and Recreation in Squabs

Practical Squab Book Free
Contains illustrations and valuable information never published before. The result of years of practical breeding. Sent to you on receipt of 10c to cover mailing.

Melrose Squab Co.
44-24 Harwood Pl.
Buffalo, N. Y.



NEW BOOKS

THE GARDENS OF ENGLAND IN THE SOUTH-EASTERN AND WESTERN COUNTIES. Edited by Charles Holme. Quarto, paper bound. Illustrated. New York: 1907. Price, \$2.50; by mail, \$2.75.

It is seldom that one has the opportunity to glance through a more attractive work than "The Gardens of England," edited by Charles Holme. Gardening in England reached a development and maintained a mature beauty far in advance of that of any other country. France, it is true, was the seat of a school in which the artistic sense was highly developed, yet the more elaborate, more mechanical, if the term may be used, gardens of France do not compare with the statelier ones still found in England. In England there was a blending of many different styles; Germany contributed something; while Italy contributed the most, through the Renaissance, yet it was for men like Repton, with their unerring good taste, to choose and combine the best that all countries could offer into a lasting and harmonious whole. The photographic portion of this work, through which are mingled a number of reproductions of water colors, is preceded by a charmingly written "History of Garden Making." The photographs themselves are their own excuse. To describe them would give but an insufficient idea of their excellence and charm.

AMERICAN BIRDS STUDIED AND PHOTOGRAPHED FROM LIFE. By William Lovell Finley. New York: Charles Scribner's Sons. Pp. 16+256. Price, \$1.50 net.

This agreeable book aims to present studies of representative bird families from the hummingbird to the eagle. It thus gives a general survey of the subject of American birds without the overloading of detail that would have resulted in an effort to treat the whole subject in a comprehensive manner. On the contrary, this book is likely to be much more useful in stimulating an interest in bird life than a complete treatise would be, for the latter could, in similar space, have been little more than a formal summary. Here we have chapters of real bird life, which represent the fruit of many months' study of each one described, illustrated with ample photographs. The latter, as seems to be quite usual in the modern bird book, include many photographs of young birds which the ordinary observer rarely sees. Interesting as these are to the photographer, difficult as they are to make, and interesting as they actually are, they do not have the value to the general reader that photographs of adult birds possess. Mr. Finley's book is brimful of bird lore, and will be eagerly welcomed by the bird lover.

THE HOUSE BEAUTIFUL AND USEFUL. By J. H. Elder-Duncan. New York: John Lane Co. Pp. 224. Price, \$3.50.

This very beautiful, interesting and suggestive volume has been prepared with the chief purpose of explaining the necessary relationship between household beauty and cost. As the author rightly points out, there have been many books on household decoration, but not many in which the cost element is considered. He tells you, practically, what everything will cost, and, in most cases, where it can be had. The latter information is not especially available for American readers, since the book is of

(Continued on page ix)

Good Furniture at Moderate Prices

What to Buy and Where to Find It

IT HAS been truly said that it is an art to furnish a house properly at a moderate price. There is no safer guide in buying than a reliable trademark. It is a guarantee of quality. Furniture makers of high grade would be unwilling to place their names on an inferior piece of goods, just as silversmiths would be unwilling to affix "Sterling" to spurious silver. The principle is the same in both cases.

Such a shop-mark as that of the Berkey and Gay Furniture Company is an indication of highest workmanship. Their name carries weight, whether the furniture be simple or elaborate. They have but one system; the same methods, the same machinery, the same careful inspection pertain to their furniture-making in all its branches. One piece of furniture has to be as good as another, so far as material and construction go. Whether a piece be plain or ornamental, it stands for good work and lasting value.

How is it possible, it may be asked, for this firm to make good furniture at a slight advance over the price asked for inferior work? Be-



Model from Berkey & Gay Furniture Co.
Grand Rapids, Mich.

cause they have reduced furniture-making to a science. Because they have the best equipped furniture plant in the country, and because their name is a guarantee of excellence.

The purchaser of Berkey and Gay furniture can rest assured that he is getting the best possible return for his money, and before buying for his home, no matter how modest, it would be well to take this fact into consideration.

Every piece of furniture that comes from the Berkey and Gay factory represents time, skilled labor, the best material, and the highest type of equipment. This is an age of specialization, and each department has its expert. A customer buying Berkey and Gay furniture can purchase for a lifetime, for it is made to last.

Anything worth buying is worthy of care; buy the best that you can afford, and take care of it. Then your great-grandchildren will treasure your Berkey and Gay furniture as heirlooms.

The Berkey and Gay Furniture Company makes many costly pieces. Carving, inlay, and a great deal of handiwork necessarily render furniture expensive. But the point we would emphasize is this—that they do make simple furniture also, and at a remarkably low figure, considering the quality. Such furniture is a great boon to people of limited means, for it is both beautiful and economical.

Berkey & Gay Furniture Company's brochure, entitled "Furniture of Character," gives an idea of their beautiful furniture. It will be mailed to those who are interested if they will send 15 cents in stamps to partly defray the cost, to Dept. M, to this Company at their Grand Rapids address.



The Door Beautiful

is only beautiful as it is useful. A perfect, substantial and artistic door, not only enhances the attractiveness of the home, but adds materially to the permanent or rental value.

Morgan Doors

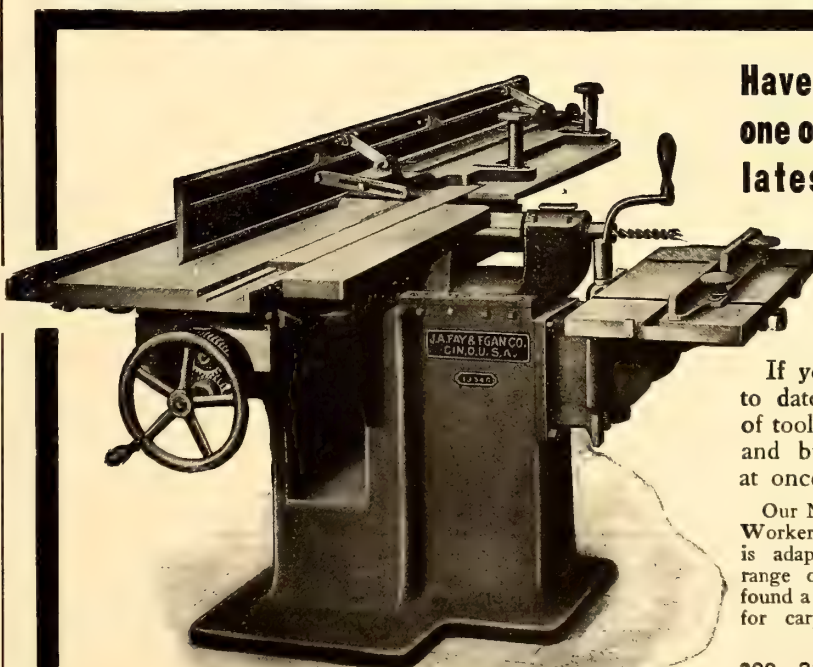
are singly and collectively perfect doors in design, material and workmanship. They are made as thoroughly beautiful and useful as doors can be made, and become a real part of the building.

The cost of Morgan Doors is a trifle more than the ordinary kind, but they will outlast the building itself—are absolutely guaranteed not to warp, crack or shrink, and are made in any style of architecture—Colonial, Empire, Chateau, Mission, etc. with the most exquisite grain and finish. The name "Morgan" is stamped on the top of every genuine Morgan door. It is the maker's guarantee of satisfaction.

Write today for our illustrated book "The Door Beautiful," which shows you the variety of design and more of the detailed beauty of Morgan Doors, and why you should use Morgan Doors if you are going to build or remodel.

Morgan Company, Dept. A, Oshkosh, Wisconsin

Distributed by Morgan Sash & Door Co., Chicago, Ill. Morgan Co., Oshkosh, Wis. Morgan Co., Baltimore, Md.



Have you received one of Fay & Egan's latest Catalogs?

The Builders' edition of our Catalog of wood-working machinery is free.

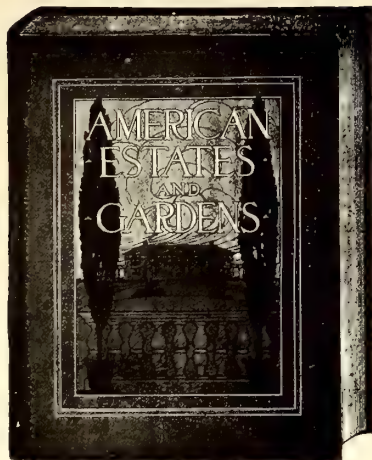
If you want to keep up to date on the best line of tools for the contractor and builder, write for it at once.

Our No. 62 Universal Wood Worker, illustrated herewith, is adapted for the heaviest range of work, and will be found a most labor-saving tool for carpenters and builders.

Write

209 - 229 W. Front Street
J. A. FAY & EGAN CO.
CINCINNATI, OHIO

\$13 Value



For \$7.50

4to, 11x13½ inches
Illuminated Cover
275 Illustrations
340 Pages

Price
Ten
Dollars

American Estates and Gardens

By BARR FERREE

Editor of American Homes and Gardens Corresponding Member of the
American Institute of Architects and of the Royal Institute of British Architects



AMERICAN ESTATES AND GARDENS is a sumptuously illustrated volume in which, for the first time, the subject of the more notable great estates, houses, and gardens in America receives adequate treatment. It is a volume of 350 pages, enriched with 275 illustrations, of which eight are in duotone.

An effort has been made to select as great a variety as possible of the styles of architecture which have been introduced into this country as being specially adapted to the peculiar conditions of American country life.

Although the exteriors of some of the houses shown in this work may be familiar to a certain number of readers, few have had the privilege of a visit to their interiors, and, for that reason, special attention has been given to reproductions of many of the sumptuous halls and rooms of people of wealth, and no better way can be obtained of learning how the favored few live.

The illustrations are in nearly all cases made from original photographs and are beautifully printed on double coated paper. The book is attractively bound. This book will prove one of the most valuable books for the home, and will fill the wants of those who desire to purchase a luxurious book on our American houses.

MUNN & CO.
SCIENTIFIC AMERICAN OFFICE
361 BROADWAY NEW YORK

MESSRS. MUNN & CO.

Date

Enclosed find \$7.50, for which please send me *American Estates and Gardens* and (renew) (enter) my subscription for *American Homes and Gardens* for one year, in accordance with the terms of your special offer.

Name..... P. O.....

P. O. Box or Street..... State.....

Building Construction and Superintendence

By F. E. KIDDER, C. E., Ph.D. Architect
Author of "The Architects' and Builders' Pocket Book."

Part I.—MASONS' WORK
(6th Edition)

421 Pages, 250 Illustrations

Part II.—CARPENTERS' WORK
(5th Edition)

544 Pages, 524 Illustrations

It has been the aim of the Author, in preparing these works, to furnish a series of books that shall be of practical value to all who have to do with building operations, and especially to architects, draughtsmen and builders. Each volume is independent and they are sold separately.

The volumes are large 8vos. bound in cloth, price, \$4.00 each.

FOR SALE BY

MUNN & CO.

361 Broadway, New York

Made
their mark
Dixon's
Pencils

Write for
illustrated
booklet W free.

JOSEPH DIXON CRUCIBLE CO.,
Jersey City, N. J.

F. WEBER & CO.

1125 CHESTNUT STREET, PHILADELPHIA, PA.

ST. LOUIS, MO.

BALTIMORE, MD.



DRAFTSMEN'S and ENGINEERS' SUPPLIES

NEW: "FABRIANO" HAND-MADE DRAWING PAPER

Quality SUPERIOR to any other Hand-made Paper in the market.
Sizes equal to Whatman's, PRICES MUCH LOWER.

Descriptive Circular and Sample Book furnished on Application

Build with Concrete Blocks



Make them yourself and save half the cost. Experience unnecessary. A

Pettyjohn Machine

and equipment for only

\$33.25

Every machine guaranteed. Sent on trial. Sand, water and cement only materials required. Buildings handsome and durable. Big money making blocks to sell. Beautiful booklet FREE.

THE PETTYJOHN CO., 617 N. Sixth St., Terre Haute, Ind.



No Question About Temperatures if You Use

**BRISTOL'S
RECORDING THERMOMETERS**

For Indoor or Outdoor Temperatures

May be located within house. Records on a weekly chart outside temperature
Send for Catalog B

THE BRISTOL CO. Waterbury, Conn.
Chicago, 753 Monadnock Bldg. New York, 114 Liberty St.

NEW BOOK₃

(Continued from page vii)

English origin, and the prices and suppliers are necessarily English.

But it is not a catalogue of prices and values. Mr. Elder-Duncan has long demonstrated his fitness to discuss the topics treated in this volume. His text is comprised within seven chapters, dealing with a short summary of a century of applied art; general notes on decoration; constructible and surface decoration; old furniture; modern furniture; carpets and floor coverings; and hints to purchasers. The book is a veritable mine of valuable information and suggestion to the household decorator, the personal point of view of the author being invariably wise, the suggestions practical, the hints useful. It would be the easiest thing in the world to fit up a beautiful home in a thoroughly beautiful manner with no other guide than this volume, and than this there can be no higher praise. The illustrations, which are very abundant, are, for the most part, of singular beauty and interest. They are not all of equal merit, but the average of excellence is very high, and it is quite obvious that the author is well equipped for his task as a guide to modern household art. He has produced an original work of great merit that is a distinctly valuable contribution to the literature of the home.

JUST PUBLISHED

AMERICAN RENAISSANCE

A Review of Domestic Architecture
By Joy Wheeler Dow, Architect

ILLUSTRATED by NINETY-SIX HALF-TONE PLATES



EASTOVER (Miniature). THE GARDEN FRONT
From "American Renaissance"

This book is a carefully prepared history of American Domestic Architecture from Colonial days, illustrated in the most elaborate manner and worthy a place in every architectural library, and should be read by every one who desires to familiarize himself with Colonial architecture and its effect on the architecture of to-day.

CONTENTS.—Chapter I., Ethics; II., Art and Commercialism; III., The Ancient Regime—Andrew Jackson; IV., Humble Beginnings of a National School; V., The Grand Epoch; VI., Early Nineteenth Century Work; VII., The Transitional Period; VIII., Reign of Terror—Its Negative Value; IX., Fashion in Architecture; X., Adaptation; XI., Concerning Style; XII., Conclusion.

HANDSOMELY BOUND IN CLOTH, GILT TOP

Price, \$4.00 net

MUNN & CO., PUBLISHERS, NEW YORK

American
Homes and Gardens
and
Scientific American

To one address \$5 per year
Regularly \$6

CARPENTERS

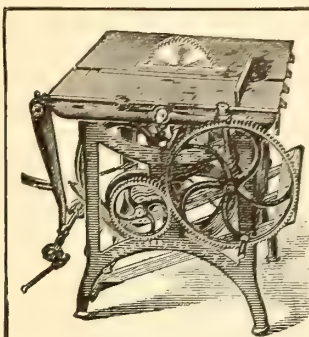
in these days of close competition

**Need the Best
Possible Equipment**

and this they can have in

**BARNES'
Hand and Foot Power
Machinery**

W.F. & JOHN BARNES CO.
567 Ruby Street ROCKFORD, ILL.



Send
for
our
New
Cata-
logue

**Our New
Foot and Hand Power
Circular Saw No. 4**

THE strongest, most powerful, and in every way the best machine of its kind ever made. For ripping, cross-cutting, boring and grooving.



ALCOHOL

**Its Manufacture
Its Denaturization
Its Industrial Use**

The Cost of Manufacturing Denaturized Alcohol in Germany and German Methods of Denaturization

are discussed by Consul-General Frank H. Mason in Scientific American Supplement 1550.

The Use, Cost and Efficiency of Alcohol as a Fuel for Gas Engines

are ably explained by H. Diederichs in Scientific American Supplement 1596. Many clear diagrams accompany the text. The article considers the fuel value and physical properties of alcohol, and gives details of the alcohol engine wherever they may be different from those of a gasoline or crude oil motor.

The Production of Industrial Alcohol and Its Use in Explosive Motors

are treated at length in Scientific American Supplement 1581, valuable statistics being given of the cost of manufacturing alcohol from farm products and using it in engines.

French Methods of Denaturization

constitute the subject of a good article published in Scientific American Supplement 1599.

How Industrial Alcohol is Made and Used

is told very fully and clearly in No. 3, Vol. 95, of the Scientific American.

The Most Complete Treatise on the Modern Manufacture of Alcohol

explaining thoroughly the chemical principles which underlie the process, without too many wearisome technical phrases, and describing and illustrating all the apparatus required in an alcohol plant is published in Scientific American Supplements 1603, 1604 and 1605. The article is by L. Baudry de Saunier, the well-known French authority.

In Supplements 1607, 1608 and 1609 we publish a digest of the rules and regulations under which the United States Internal Revenue will permit the manufacture and denaturization of tax-free alcohol.

ANY single number of the Scientific American or Supplement will be sent for 10 cents by mail. The entire set of papers above listed will be mailed on receipt of \$1.10. Order from your newsdealer or from

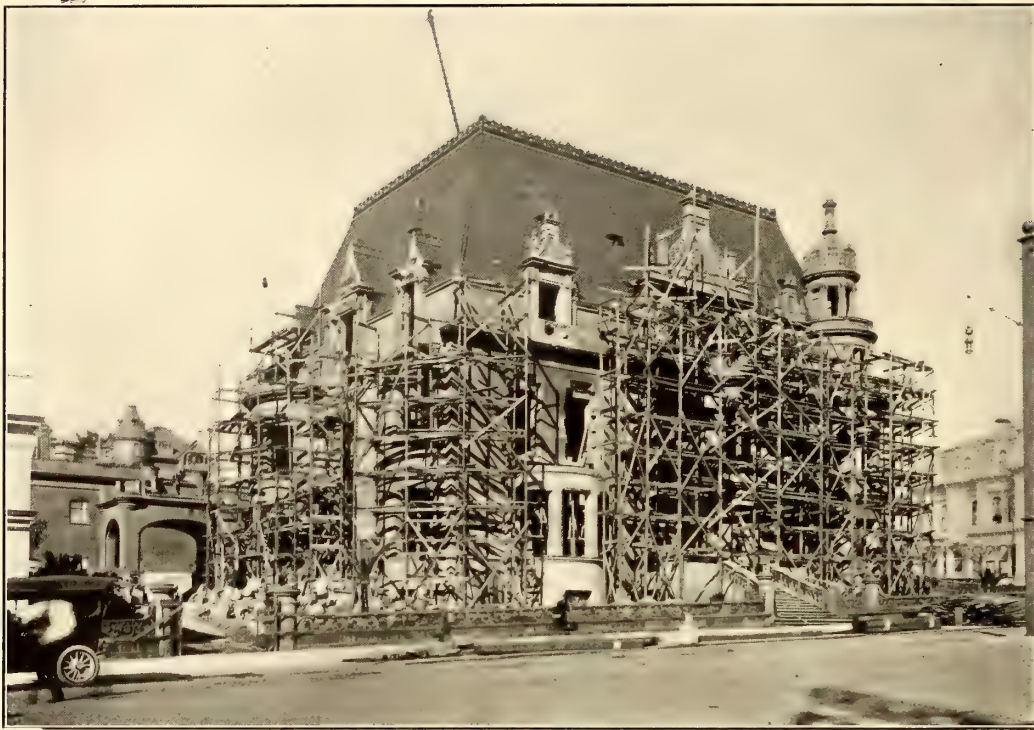
MUNN & CO., Publishers

361 Broadway, NEW YORK

FLOORS



ROOFS



SPRECKLES RESIDENCE, SAN FRANCISCO, CAL.

Reid Brothers,
Architects.Clinton Fireproofing Co. of California,
Contractors for Fireproofing.

The above illustration shows the magnificent residence of Mr. Spreckles, San Francisco, in course of construction

THE CLINTON FIREPROOFING SYSTEM

used throughout for floors and roofs. The continuous bond of **Clinton Electrically Welded Wire** is the **one** best reinforcing for concrete

NO LAPS

NO WEAK POINTS

NO WASTE

Clinton Wire Cloth Co.,

Clinton, Mass.

Ceilings

FIREPROOFING DEPARTMENT
ALBERT OLIVER
1 MADISON AVE., NEW YORKWASHINGTON: ROSSLYN SUPPLY CO., COLORADO BUILDING
SYRACUSE, N. Y.: PARAGON PLASTER CO.
ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
SAN FRANCISCO: L. A. NORRIS, 835 MONADNOCK BUILDING
SEATTLE: L. A. NORRIS, 909 ALASKA BUILDING

Partitions

A FEW YARD FRUITS

By E. P. Powell

OUR suburban yards are not so pinched that we can not grow a larger part of our fruits. It will be a mistake, however, if the planter does not keep himself very well posted as to new sorts, and as to the adaptability of each sort in the way of growth, hardiness and fertility without being pollinized from outside. A large number of new sorts are offered in every class every year. I only propose to suggest a small group for a yard of half an acre, more or less.

Among the newer pears you may set down Bartlett-hybrid as being a better grower than the old Bartlett, with equally good quality and larger fruit. The Lincoln, sometimes called the Illinois Lincoln, is another that you may count upon to a certainty as a strong, vigorous grower and immense bearer. The fruit averages larger than Bartlett, a red-cheeked yellow fruit, with a high flavor and small core. It ripens just after Bartlett, and will make a good variety for succession, placing Tyson before the two. This is an entirely different pear from the Lincoln coreless, which is a worthless affair. A later pear of fine quality is the Snyder. The fruit is medium size, of excellent quality and a bright yellow color. It comes to bearing early, and ripens after Lincoln and before Seckel. I should add to this list Fame, only that I am not quite sure of the tree. It is a strong grower, but has not proved as hardy as some. I think it will be best grown as a dwarf. The quality is very fine. The Rossney is a delicious pear, ripening in September. It is of very large size, and the tree is vigorous. I think that these varieties are all worthy of planting in the suburbs of our cities, as well as generally in our pear orchards.

I have tried to find a quince better than the old Orange or Apple quince. I am growing in Florida Mr. Burbank's Pineapple with success, and it seems to be all right here in New York. The Van Deman is a remarkably strong grower; but its chief advantage is bearing when very small. The quality of this quince is extra good, and it keeps well. The Pourgeat is a strong grower and an immense cropper. I shall plant this hereafter with a good deal of confidence, being sure of its good quality, and almost sure of its entire hardiness. I wonder that more people who own small fruit gardens do not grow the quince. It is not only fit for preserves, but is one of the most delicious baked fruits I have ever tasted.

Everyone must find out for himself whether the sweet cherries will thrive with him or not, but I am growing with entire success the Dykeman. This is a large black cherry, and the latest of the sweet cherries. Of the older sorts Governor Wood has proved absolutely hardy in central New York, and the fruit buds seldom fail—perhaps one year out of five. However, I would recommend for a suburban yard very free planting of the old May Duke. This, like all the Dukes, is half way between the sweet and the sour. The tree grows quite upright, and although the fruit buds are not entirely hardy, I generally get a good supply. Two of the sour cherries which should be planted everywhere, and very freely, are the Suda Hardy and the Montmorency. From Oregon we have recently received two cherries that ought to be planted everywhere, the Bing and the Lambert. I think the Lambert is the largest, and perhaps the best. It is heart-shaped and of a dark purple red—almost black. It is not only of immense size for a cherry, but the tree is an enormous bearer. So far as I have tested these trees, they are equally adapted to Florida and New York State.

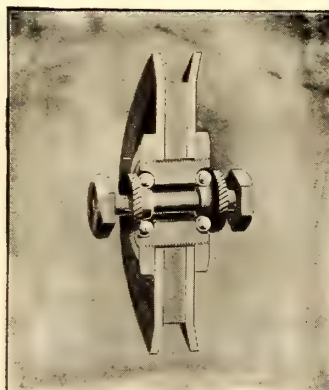
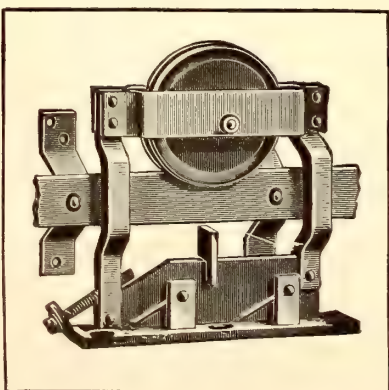
Of the newer plums there is a fine list. I

(Continued on page xx)

"LANE'S BALL-BEARING"

is the

Best
House-
Door
Hanger
Made



Other Styles for Less Money

Sold by Hardware Trade

Send for Catalog

Lane Brothers Company, 434-466 Prospect Street, Poughkeepsie, N.Y.



AMERICAN HOMES AND GARDENS



Price, 25 Cents. \$3.00 a Year

CONTENTS FOR MARCH, 1908

	PAGE
"OVERLOCH"—THE FOUNTAIN OF THE FORMAL GARDEN	82
MONTHLY COMMENT	84
"OVERLOCH," THE COUNTRY HOME OF JOHN A. BURNHAM, ESQ., WENHAM, MASSACHU- SETTS	By Barr Ferree 85
THE DISPOSAL OF BRIC-A-BRAC	By Nellie Smithers 90
RESIDENCE OF VAN WYCK ROSSITER, ESQ., NYACK, NEW YORK.....	By Walter Williams 91
FENCES IN TOWNS AND VILLAGES.....	By Ada March 93
ILLUMINATION AT MOUNT VERNON.....	By Paul Beckwith 94
THE SUMMER HOME OF SPENCER HALL, ESQ., WATER WITCH, NEW JERSEY. By Charles Chauncey	97
PLANNING A COUNTRY HOME.....	By E. P. Powell 100
THE HOUSE ROOF AND ITS GARDEN:	
I. A Neglected Opportunity	By Esther Matson 101
II. A Successful House-top Garden	By Adelia Belle Beard 102
THE HISTORIC WENTWORTH HOUSE	By Mary H. Northend 106
THREE PENNSYLVANIA HOUSES	By Francis Durando Nichols 110
THE PLANT AND THE SEASON	By S. Leonard Bastin 116
CORRESPONDENCE:	
PROBLEMS IN HOME FURNISHING.....	By Alice M. Kellogg 120
GARDEN WORK ABOUT THE HOME.....	By Charles Downing Lay 120

New Books

Garden Notes

A Few Yard Fruits

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada, \$3.50 a year

Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



“Overloch”—The Fountain of the Formal Garden

AMERICAN HOMES AND GARDENS



Volume V

March, 1908

Number 3



"Overloch"—The Entrance Front: the House Is Built of Light Gray Stucco, with White Trim and Pea-green Shutters

Monthly Comment



HERE is no help for it. Definite hours for domestic service is now announced as the real solution of the problem of domestic servants. Fixed hours for domestic service, cries the latest reformer in this very difficult field, and all your troubles will disappear. This means, of course, relays of servants; else how other are the affairs of daily life to be ministered to? That this will add immeasurably to the cost of living is a mere detail: the main thing is to free the servants, elevate them to a position of personal freedom, give dignity to their work, and ennoble their calling. It is a delightful proposal, and the only really comfortable idea in it is the unavoidable conclusion that it must be at least several years before this happy state of affairs is brought about. Meanwhile we may be able to get along on the old system and do the best we can with inferior material.

It is barely possible that the last phrase discloses one of the chief difficulties in the whole question. Domestic service is not viewed with favor by any self-respecting native American, and many imported ones take the same position. And why should they do otherwise? Is not this the land of the free and the brave? Are not all men equal, and is not personal service, domestic service, more or less degrading? This would seem to be the basic fact in the case, leaving nothing more to be said. There is, however, still another element in the problem, and that is that when domestic service is undertaken it is chiefly engaged in by persons of inferior accomplishments, many of whom know no other way to earn a livelihood, and are actually independent of individual ways of supporting themselves. Hence to enter domestic service means to enter a calling in which, in a sense, only an inferior sort of people are engaged. The young man or woman looking around for work naturally avoids a calling that is not well thought of, and in which a great many undesirable people are permanently associated.

MEANWHILE the poor employer of such labor has no show at all. Domestics of all classes, we are told, are kept in a "state of absolute servitude." And it is to free these people from this horrid condition that the whole modern campaign is conducted. If President Lincoln did not stop to count the terrific cost of freeing the negro slaves of America, why should any independent householder hesitate at the cost of freeing his own domestics from an abominated condition quite as bad? The argument would seem to be that this frightful person has lorded it so long over his domestic dependents that he might easily stand the cost of modern systems, with their definite hours, their regular comings and goings, their change daily, their systematized, unionized labor. No doubt that is it; unionize the domestic servants, make them familiar with their mighty power, give them their "rights," and the whole vast problem will work itself out in the most approved manner. Meanwhile, if you have anything to say on this subject, send your photograph to the paper, and help along the noble cause as best you can.

THERE is one real element of terror in the modern servant question that has not received the attention it deserves, and that is the composition and publication of biographical studies by servants real and imaginary. An imaginary servant is a person who engages in a life of domestic servitude with the purpose of writing an account of his adventures while so occupied, and showing up the true evils of the household of

which he becomes a part. Real servants include all other kinds. The imaginary writing servant is of all domestic servitors the most atrocious and contemptible. His life is a lie, because he purports to be what he is not. He is a spy and a sneak, because he is all the time prying into matters with which he is not concerned. His very conclusions and fulminations are false and misleading, because it is impossible for him, with his supposedly superior mental equipment, to put himself in the place of the man or woman who engages in domestic work because it happens to be his occupation at the time. No matter what he does, he is always himself, always able to withdraw from his position at any time without any difficulty of after support, and always is able to say the most unpleasant things about those who, after all, may have had only friendly feelings toward him. Yet these atrocious scribblers are more or less in vogue. Publishing houses have been known to put forth their wares upon a foolish world, and magazine editors have encouraged their doings by paying fat prices for their stuff. So far from doing any good, the presence of these people in your household, or their possible presence, is quite justifiable cause for arbitrary treatment by employers.

It could hardly be expected that so important a matter as the home could, in these days of paternal lawmaking and constant appeal to authority, remain without the scope of law-betterment. It is, however, a bit startling to find that the Legislature of Massachusetts should have been petitioned to enact a law providing for an investigation of the home and the establishment of a State department to regulate and elevate home life. As a preliminary step in the accomplishment of this purpose a commission has solemnly been proposed to consist of a wife and mother, who must be a non-sectarian and "humanitarian"—whatever that may be—a physician, a trained nurse, and a representative of the police! Could anything be more perfect? It is true the mere man is omitted, the father, and perhaps the money-earner; but surely a small boy and a very young girl should have been included, while a butler, a housemaid or two, and, above all, a cook, could, if we are to believe the servant-prophets, give valuable aid. Why the real estate agent is omitted it is hard to see, and a plumber would seem to have been an imperative necessity. With all these valuable authorities omitted it is easy to foretell the speedy collapse of this extraordinary enterprise.

THERE was once a city of vast and generous size. More than a million people found homes and lodgment within its borders. And on every Monday morning the women folk of this great community, without an exception, fell upon the stores and warehouses, and spent as much of the money earned by their husbands in the previous week as they could cajole out of them or extract from their wallets in the peace of night. On that day, at least, the streets of the city presented a gay appearance, with these countless women busily and happily intent on their errands of joy. The stores were crowded, and bargains of the most alluring sort were displayed on all hands. If they were not real bargains, they were labeled so, and thus were just as good. Very remarkable indeed was this outpouring of a city's entire woman population. But the city no longer exists as an independent community; not because the women folk spent all the money, arduous as their labors were in that direction, but because it was swallowed up and engulfed in another, larger community. The name of this once-city is Brooklyn.

“Overloch”

The Country Home of John A. Burnham, Esq., Wenham, Massachusetts

By Barr Ferree

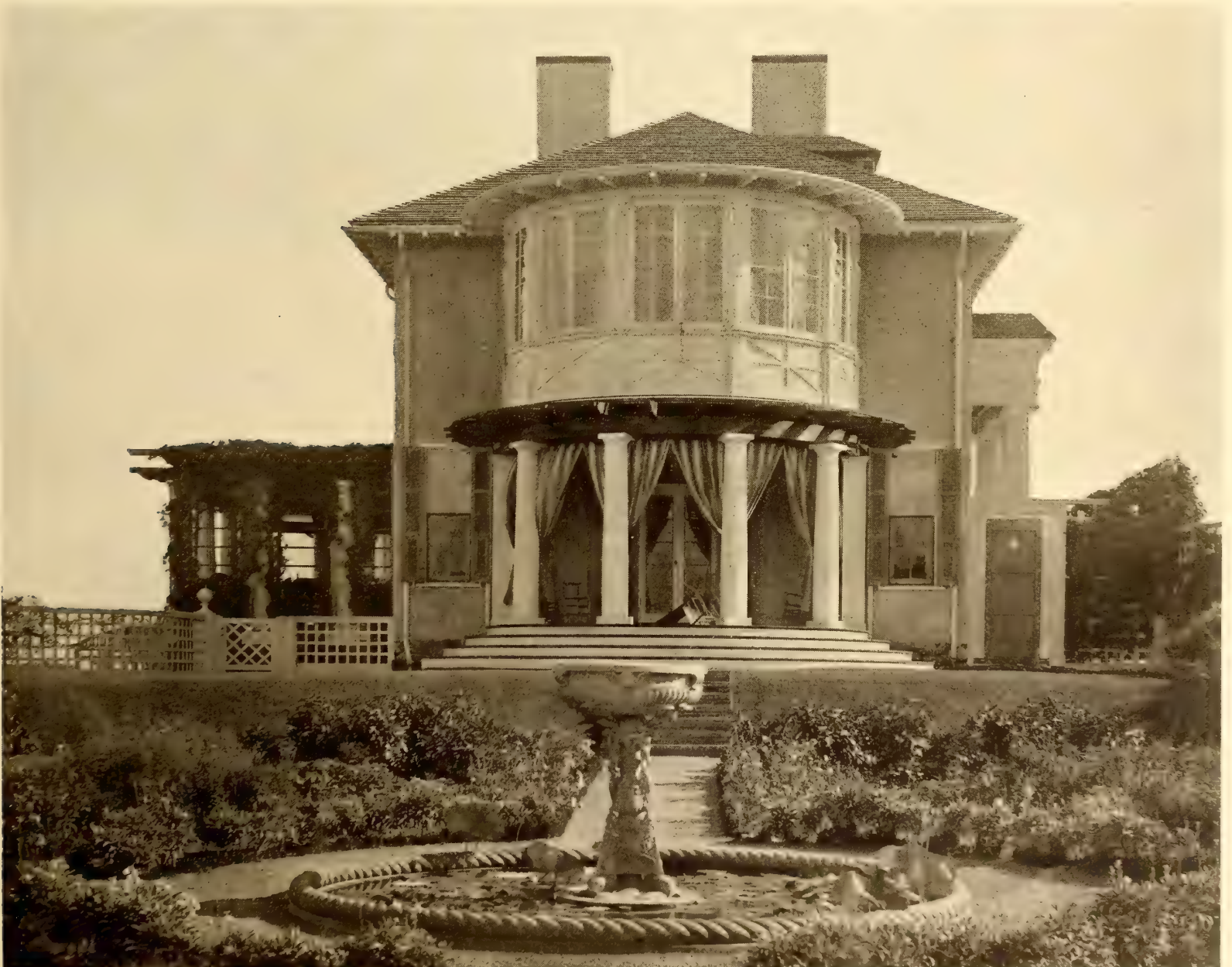


HERE are few more delightful localities than the hills of Wenham. If Mr. Burnham has not chosen the most beautiful hill site of this beautiful region for his home, he has at least been fortunate enough to have selected one so beautiful that one may well doubt if it has its equal. The road winds in gentle ascents until the summit is reached. All along there have been delightful side-looks into pleasant woods and across broad waters of Wenham Lake. The latter disappears from view presently, but, when the summit has been reached, lies far below one, in full view of the house, to which, quite naturally, it gives its name.

The road leads into an open forecourt; at the entrance and the opposite end is a high latticed trellis, the one beyond shielding the kitchen entrance; to the left is the house; to the right a privet hedge, beyond which, at some distance, is the stable, itself a picturesque structure, with its own foreyard

and a square tower. In the center is an oval plot of grass, with a bed of shrubbery.

The house, being located on a lofty hill—so lofty, indeed, as to seem to have no rival—is a natural landmark in the landscape for many miles around. It needs, therefore, no great height to emphasize it, and hence its architects, Messrs. Winslow, Wetherill and Bigelow, of Boston, have designed it as a long, low structure, two stories in height, with a low, sloping roof, whose simple dormers proclaim the fact that it is ample enough to house a third story. It is designed in the simplest possible manner, being a plain rectangular building of light gray stucco, the wood trim being throughout painted white, and the shutters pea green. The roof is shingled and left to weather finish. The ornamental and decorative features are limited to the porches. At the center of the entrance front is a portico, two stories in height, with a pediment above the eaves supported on four Doric columns, a portico quite Greek in feeling and admirably



A Semicircular Porch, Surmounted by a Great Bay Window, Is the Feature of the North Front

adapted to its purpose of emphasizing the main doorway and of giving character and beauty to the house. The house is projected forward the space of a single window to give it greater projection. The doorway is hospitable in size and round arched.

The extension for the portico gives the hall the shape of a very flat T. There is a shallow vestibule, paneled in wood painted white, and separated from the hall by a curtain of claret-colored velvet. The vestibule does not consume all the space of the arm of the T of the hall, which has, therefore, an extension on the entrance side. It is a very charming room, with a wainscot of wood painted with white enamel and reaching to the ceiling. Above the base wainscot are panels filled with green and white tapestry paper, the pattern consisting of groups of cattle and other rural scenes. A more delightful combination than these green and white panels and the white frames and borders would be difficult to imagine. The ceiling is white, and the hardwood floor is covered with Oriental rugs. The window curtains are of claret-colored velvet, with bands of gold braid, and the furniture is chiefly covered with the same rich material. It is lighted by lamps in pairs, attached to the walls. The fireplace is at the left end; it has a carved stone facing and a paneled overmantel, on which is hung a large old mirror in a gilt frame. At the right end are the stairs, with a low platform that leads to the dining-room, while the stairs to the second

mottled green and white marble, applied to a broad but shallow chimney breast, paneled to the ceiling, with a built-in mirror over the shelf. On each side are low bookcases of whitewood built in. Much of the furniture in the room is old, and is chiefly covered with sage green.

There are two small rooms on each side of the hall opening on to the entrance front. That on the right is the music-room. It is paneled in white, with let-in panels of pink watered-silk paper. The cornice is similar in type to that of the drawing-room, and the ceiling is white. The window curtains are of pink over white sash curtains. The furniture has pink coverings.

The den is on the left of the hall, and is treated in blue



The Terrace and Sun Room on the Lake Front

story ascend on the right. The room is directly lighted only on the side facing the entrance, where the great windows open on to the inner porches.

In the extreme left-hand corner a door leads to the drawing-room, which occupies the whole of the further end of the house, and is lighted by windows on three sides. It has a low paneled wainscot of wood painted white, a narrow cornice of the same material, then a deep cove and a narrow band on the edges of the otherwise perfectly plain white ceiling. The walls have a latticed paper of pale pink and yellow roses, a paper much more delightful on the walls than when reproduced in a photograph. There is a large light-colored rug on the floor. The window curtains are of sage green velvet with borders of silver bands. The mantel is of



The Open Porch Above the Lake

and gold. It has a low wainscot of wood, painted blue, above which the walls are treated in gold, with a blue cornice and white ceiling. The mantel is of wood, painted blue, with facings of red brick. The furniture is covered with blue material; there is a blue and white rug on the hardwood floor, and the window curtains are blue, with white sash curtains. The color scheme of this room is so very unusual as to be absolutely novel, and yet, while possessed of some elements of difficulty, it has been worked out with complete success and in a very charming way.

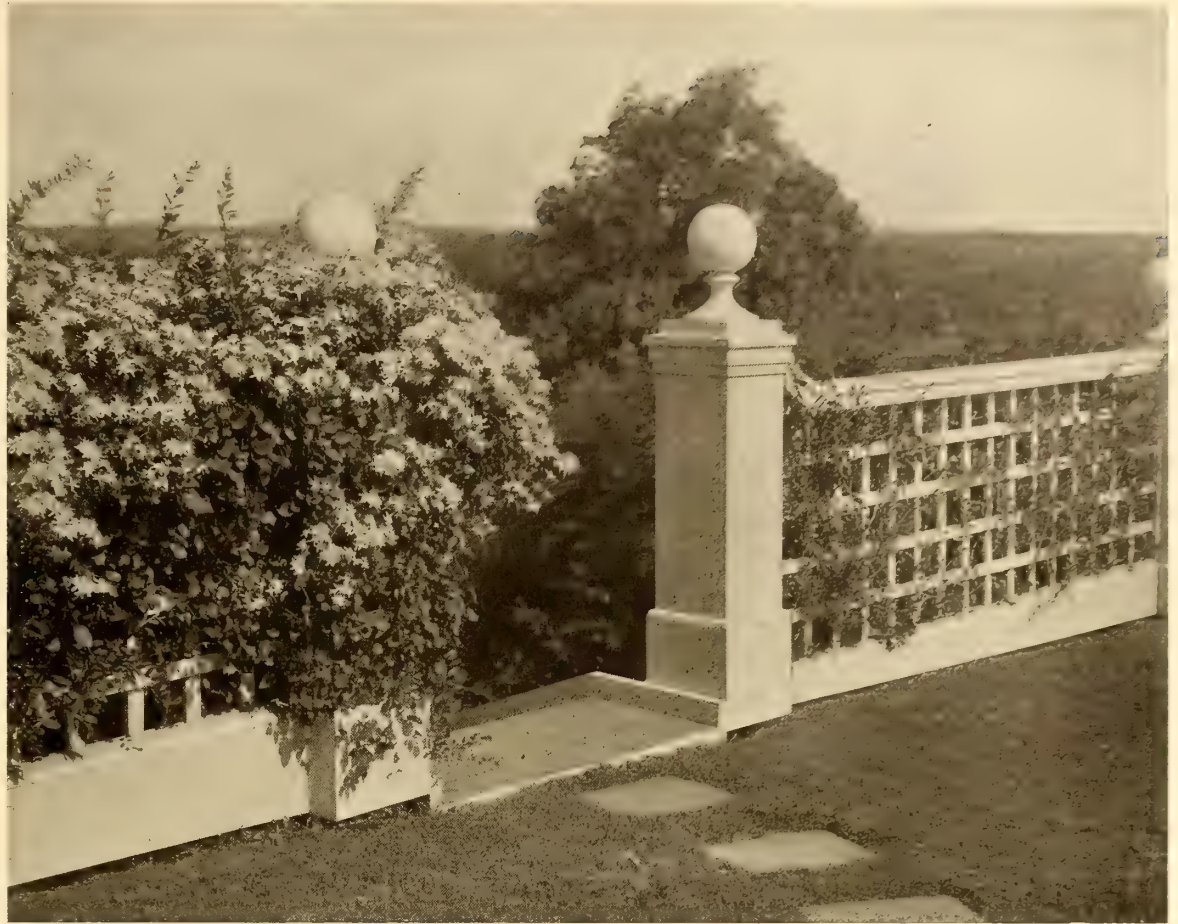
A short flight of steps leads to the platform just without the dining-room door. Like the drawing-room, this reaches from front to front, but as the service rooms and kitchen are beyond, it is necessarily lighted only on the two ends. This, however, owing to the situation of the house, gives it sunlight practically the whole day long, and, being treated in light colors, it is an extremely brilliant and beautiful room.

The woodwork is painted white, and includes a high paneled wainscot. Above it is a broad frieze with paper having a vertical design of water-lilies in pale blue and yellow. The mantel is of wood painted white, with a paneled overmantel; the facings of the fireplace are red brick. On the longer sides of the room pilasters built against the wainscot rise to the ceiling and support the simple beams carried

across it. Those on each side of the mantel have small decorated relief ornaments near their summits. The ceiling is white. The mantel decorations are chiefly blue and white pottery. The rug is drab, with a red zig-zag border. The window curtains are yellow, with white sash curtains. The furniture is old and is covered with yellow leather. The cheeriness of the room is, therefore, obtained by a skilful color selection as well as by its inherent charms of proportion and situation. It is a room thoroughly delightful in every way, and not the least of its merits is that its charm is obtained by the simplest means and in the most direct manner.

Like all good country houses, the external approaches and adjuncts of "Overloch" are quite as important as the rooms within. On the inner side almost the entire front is occupied by a group of porches, three in number. The center one is the shallowest of the three, and is barely more than a passage on the inner side of an open terrace arranged between the two end porches. The latter are projected forward, and form rectangular spaces of generous proportions. Looking out, the one on the

right is inclosed within glass, and constitutes a sun room; the one on the left is open, and forms a true porch. All the porches are supported on Doric columns, with solid bases and channeled plinths, the corner piers being square. The beams and rafters of the roofs are stained a dark color and project well forward. The terrace between the end porches extends



Gate in the Terrace Enclosure



The Entrance Is Beneath a Greek Portico in the Center of the Main Building; the Graceful Planting here Adds Much to the Effectiveness of this Front



The Hall Is White, with Green and White Panels; the Curtains and Furniture Are Claret Damask

still further out, and has steps on either side to the lawn below. This is a vast grassed terrace, with latticed fences on each end and open in the front. From every point here, both from the porches and from the lawn, wonderful views can be had over the adjacent countryside. Wenham Lake is far down below, embedded in a circlet of trees, and as far as the eye can reach are wooded hills and open valleys, with here and there a barely discernible house in the far distance.

A third porch is applied to the side wall of the drawing-room, that is to say, on the end of the house nearest one as it is approached. It is semicircular in form, with semicircular steps, on the topmost of which are Doric columns, similar in design to those used elsewhere. The eaves project broadly, as on the



The Drawing-room Has a White Wainscot and Laticed-rose Paper

porches above the lake. Its roof supports a great semicircular window, of wood, painted white, the piers between the windows being decorated with gables. The roof is flat, with broadly projecting eaves.

The steps of the porch lead directly into the formal garden. This is a large space, inclosed on the entrance side within a trellis almost completely overhung with vines. A hedge is before it on the furthest end, while a lower hedge grows on the third side, where the overlook is across the hills. In the center is a circular pool, with a vase-like fountain, and at the far end is a semicircular pergola and seat. The intervening area is laid out in great beds of flowers and shrubs, edged with low-growing box.

Mr. Burnham's estate



The Den Has a Blue Wainscot and Gold Colored Walls; the Fireplace Has Facings of Red Brick



The Dining-room Walls Are Paneled in White with a Light Colored Frieze; the Furniture and Curtains Are Yellow



The Formal Garden Is a Spacious Enclosed Space Below the Drawing-room Porch

is a large one, comprising two hundred and thirty acres. It consists of charming rolling country, much of which is left in its natural state of grass and woods. The farm buildings

are on the hillside at some distance below the house, and in no way connected with it. Everywhere there is a quiet and serenity that seems wholly natural to this elevated situation.

The Disposal of Bric-a-brac

By Nellie Smithers



BEFORE any question concerning the disposal of bric-a-brac can be considered, it is just as well to take stock of what one has. The less the better, in many cases; indeed I may go further and say in most cases. For of course there is bric-a-brac and bric-a-brac. In reality there are only two kinds: good and bad. This actually sums up the whole situation, and perhaps reduces the problem of disposition to reasonable limits. For surely one has only room in one's house for the good bric-a-brac, and the bad is forthwith to be thrown out and cast away.

I tried this once. I gathered together all the bric-a-brac I had accumulated during a gift period of several years. I placed them in a row and looked them over. They did not look so interesting then as when scattered about my various rooms. Piece by piece each one was considered and its merits carefully weighed. And the more they were weighed the less I liked them. But they indisposably and indisputably belonged to me. I fetched a great sigh and put them all back where I had had them. There was really no help for it. I simply could not offend the friends who had given me these tokens of their regard.

The trouble with much modern bric-a-brac is that it has

no real merit, no artistic merit, that is. Another fundamental misfortune is that few people can appreciate the art value of such things. Showy pieces, somehow, are considered more available for presentation than real objects of art that, while thoroughly artistic, are actually quite modest in appearance. And when one has these things given one, they become as much part of oneself as unsaleable real estate.

Bric-a-brac of a good kind has a real value in the house; it will enliven and adorn many a dull corner, and give character and interest to rooms that otherwise may be quite mediocre. But the ornaments must be good, the pictures of the best, to yield such desirable results. And to get such results one must, in nine cases out of ten, select one's own bric-a-brac, and that one rarely does. Such articles are most apt to be expression of some friend's good will and regard, and such tokens have a peculiar holiness that forbids their destruction.

Seriously I have no solution to offer other than to suggest the utmost care in the making of gifts of this kind. There are hosts of beautiful objects to be had which, being good in themselves, are always available as household ornaments. These are the things to buy and the things to give. Novelty, eccentricity, price, display—all are elements to be discarded in the purchase of ornamental objects.

Residence of Van Wyck Rossiter, Esq., Nyack, New York

By Walter Williams

THERE is a distinctive quality of beauty in the country around Nyack, N. Y., that is irresistibly attractive. The Highlands above the Hudson constitute one of the most lovely nature-spots in America; and the high elevation of the land and the broad, splendid surface of the river form a setting for suburban dwellings that has few rivals in the vicinity of New York. The land, for many miles around, has long since been discontinued for farming purposes, and has been pre-empted, for the most part, for the houses and gardens of the individual owner. The district is, in fact, so highly accessible, that it has long been a favorite place of residence for busy New Yorkers; many of the houses are not new; not a few of them are genuinely old; and a number possess true individuality and interest.

Although not far from New York, this region possesses many of the characteristics of New York suburbs, notwithstanding the fact that Nyack is a city of considerable size. These characteristics are quite common to all of the surrounding metropolitan territory except on Long Island. And these distinguishing aspects are perhaps best described as representing a state of partial advancement. That is to say, while the



The Entrance Hall Extends Up Two Stories and Is Trimmed with Quartered Oak

land has been rescued from the farm, it has not yet been completely transformed into a completed garden spot. The old houses are found with the new; the large estate, the considerable property, lies side by side with the smaller place. And especially the new house stands side by side with

the old. The latter are frequently of singular interest, even if they possess no real structural or other beauty of their own. One is attracted to them from their sheer simplicity and quaintness, the more striking and the more marked because of the close proximity of more modern dwellings. Territory such as this, similar to it in the house building, exists for miles around New York; Long Island, as has been said, being the chief, and perhaps the only exception. The western end of Long Island, as is well known, is actually a part of New York City. Once the metropolitan boundary has been passed, there is a belt of newness, chiefly of houses of comparatively small size; and then a wonderful development of large estates that is more and more becoming characteristic of all this region.

Mr. Rossiter's picture-



The Dining-room Has White Enamel Trim, and Wall Coverings of Dull Green



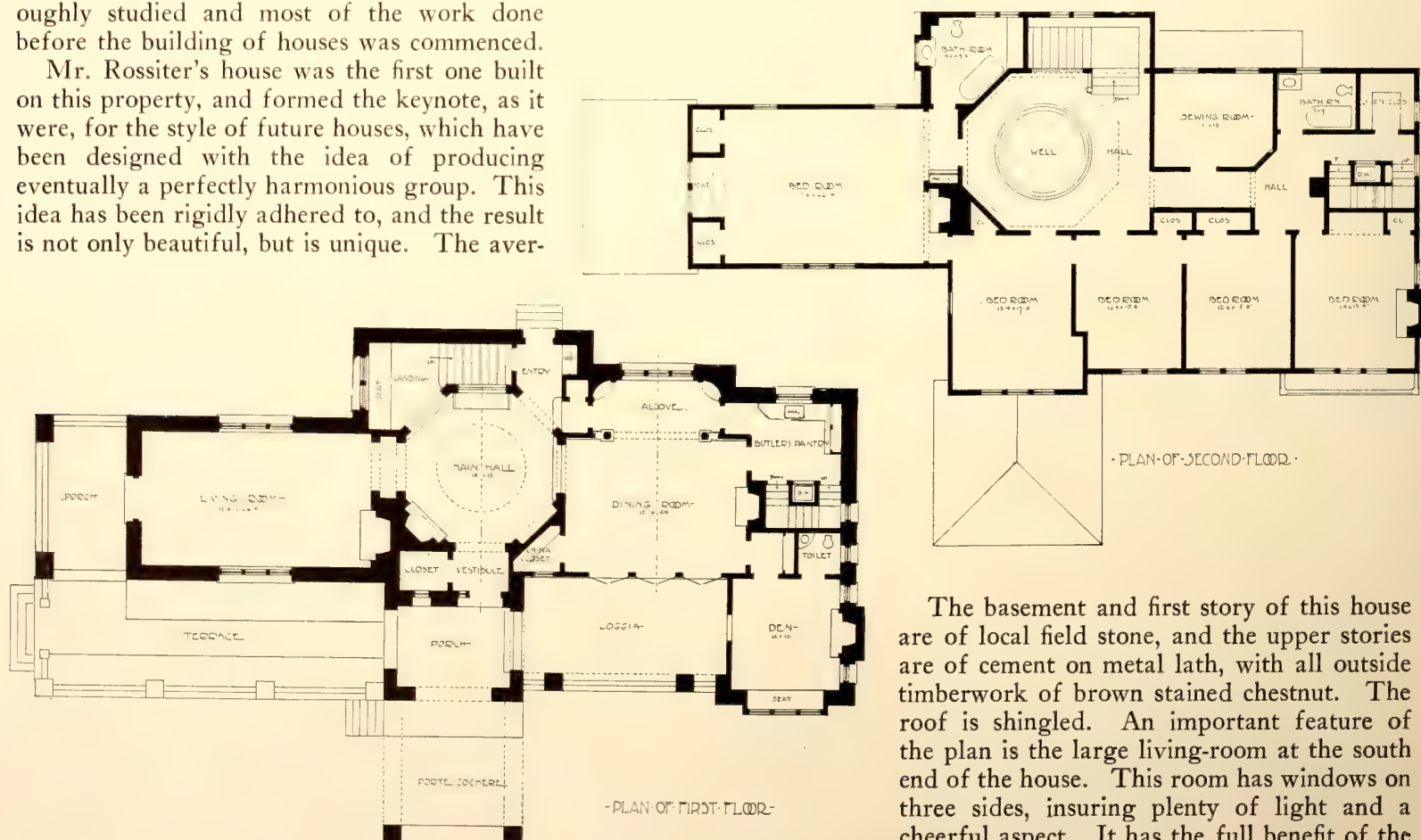
The English Half-timber Style Was Chosen for the House

esque country home is located in the beautiful residence park of the Braeburn Association at Nyack, N. Y. The natural beauties of the place have been enhanced by the clever disposition of roads and shrubbery, so arranged as to take advantage of the natural contour of the ground and to afford the best sites for residences. The landscape work was done by Charles W. Leavitt, Jr., and great credit is due him for the good taste and restraint with which his work has been accomplished. The landscape setting was thoroughly studied and most of the work done before the building of houses was commenced.

Mr. Rossiter's house was the first one built on this property, and formed the keynote, as it were, for the style of future houses, which have been designed with the idea of producing eventually a perfectly harmonious group. This idea has been rigidly adhered to, and the result is not only beautiful, but is unique. The aver-

age country colony contains cottages of every conceivable style and shape, having no relation to each other, and inevitably producing discord.

The English half-timbered style has been selected for this house and for others which have been built here. It is a thoroughly artistic and picturesque style, and lends itself particularly well to a house which is planned in a rambling, drawn-out fashion, the logical method where there is plenty of room.



The basement and first story of this house are of local field stone, and the upper stories are of cement on metal lath, with all outside timberwork of brown stained chestnut. The roof is shingled. An important feature of the plan is the large living-room at the south end of the house. This room has windows on three sides, insuring plenty of light and a cheerful aspect. It has the full benefit of the

sun as well as the prevailing breezes in summer. As the view of the Hudson is magnificent from this house, it will be noticed that from all the principal rooms the full benefit of this may be derived.

The entrance-hall is quite out of the ordinary, as it is octagonal in shape, and extends two full stories in height, with a round, railed opening at the second story. The trim is quartered oak with dull Flemish finish, the stairs being finished to harmonize. The dining-room is raised two steps above the hall, and is shut off by folding doors with clear leaded glass panels. This room is trimmed in whitewood with white enamel finish, the walls being tinted a dull green. The kitchen and laundry are in the basement, and a door from the kitchen leads into a little yard inclosed with stone walls. The bedrooms are all finished in white enamel with mahogany doors, the hardware being natural brass with glass knobs. The plumbing and heating work is of the most



The Fireplace in the Living-room Has Facings of Mottled Green Tile and a High Mantel Shelf

modern and approved type, and the house is in every way practical and comfortable as well as artistic. It was designed by Mr. Hobart A. Walker, architect, of New York.

Fences in Towns and Villages

By Ada March



HE fence is the successor to the wall; the wall, originally, was a means of defense; the fence is therefore the modern survival of the old protective wall, used as a means of defense, and itself a protection against the intruder. Modern civilization has done away with walls as protections; they are thoroughly unadapted to modern conditions; they have no present utility; they have no present value, and express a civilization different from our own.

Just as the utility of the wall has disappeared, the usefulness of the fence has greatly diminished. Fences are no longer of value as boundary lines, since these are fixed by maps, which are more precious to the owner than many fences. They are sometimes helpful in keeping out the small boy; they may act as lines of demarcation between the property of unpleasant neighbors; they have at least service in keeping out stray dogs, horses and other animals; and they have been known to keep ferocious cows within the limits of their particular pastures. The sum total of their excellences is, therefore, decidedly limited, and the question naturally arises, Why have a fence at all?

Why, indeed, if it does not serve some purpose? In the towns its value has almost completely disappeared; in the country it is still useful, especially if one has a large place the boundaries of which can not readily be kept under surveillance. The practical question which confronts most property owners is, therefore, not what kind of a fence, but whether any fence at all.

In itself the fence has little beauty. If of wood its painted pickets are not necessarily ugly, though few ordinary wooden fences have any beauty. The metal fence is rarely ornamental unless deliberately made so, when it becomes too costly an adornment for any but the most expensive places. But if the fence alone has no beauty, it can be readily transformed by applying vines and plants to it, and the whole border becomes one of real and penetrating charm.

Thus treated, the fence loses any inherent disadvantages it may have, and becomes a distinct gain. It is no longer a fence, but a trellis for wistaria and roses, for trumpet vines and clematis and jessamine. Such fences are to be gladly welcomed, and distinguish any place that they surround.

The privet hedge has frequently supplanted the fence as a boundary border, and with great good reason. A well-grown, well-trimmed hedge is a source of constant delight. It is as thoroughly effective as a border as any ordinary fence, and it is much more decorative. The hedge, fortunately, needs no commendation, for its value and beauty are well recognized.

No inclosure at all is often sufficient as a protector, at least toward the street. When a locality is invaded by loose animals the fence, of course, has a utility that nothing else can give. But the fenceless garden never misses the fence, the well-kept border, the carefully cut grass being all that is needed. Houses so surrounded acquire the effect of being in and of a park, an effect of very decided esthetic value, and one more helpful to most houses than any kind of a fence or inclosure is apt to be.

Illumination at Mount Vernon

By Paul Beckwith



HERE was no need to sit in darkness in the mansions of our Colonial forefathers. They were well supplied with lamps of various patterns and of various metals, and in them was used the purest sperm oil. Washington's mansion at Mount Vernon was no exception. From bills, invoices and numerous items in the expense account of General Washington, in his own handwriting, are found numerous references to the purchase of lamps and brackets.

The most interesting is the old brass candlestick used by General Washington in his various camps and headquarters throughout the War of the Revolution. It was in the Executive Mansion at Philadelphia; then in the library at Mount Vernon. General Washington had it in his equipment at his last headquarters, the Berrien House, Rocky Hill, N. J., when he wrote his "Farewell to the Various Branches of the Army," November 2, 1783. This old brass candlestick stood on his table at Mount Vernon when writing his "Farewell Address to the People of the United States." September 19, 1796.

The candlestick is twenty-one inches high, terminating in a smooth brass ring. It is furnished with a reflector eleven and one-half inches in width and five inches high. On either

side is fastened a candle socket, four inches long, adjusted and held by screws at the desired height. There are two brass knobs, attached by set screws to the main stem, upon which the snuffers hung, revolving separately. The reflector, of polished brass, is fastened to the standard by thin brass bars, running the whole length at right angles with upper end of standard, adjustable by a set screw.

There were many glass candelabra in use in the Executive Mansion and at Mount Vernon upon the dining table, which,



Washington's Candlestick and Reflector



Lamps and Candlesticks

with double and single silver lamps on the mantels and others with reflectors attached to the walls, brilliantly illuminated the room.

The candelabra were made of white glass twenty inches in height. The triangular tapering stem, arising from a base of black marble, six inches in diameter, terminated in a cup-shaped vase, three inches deep with scalloped edges; about one-third distance of stem from base is introduced a metal section to hold the parts together. From this point four graceful arms extend; two of these bear large handsome set sockets for candles, and two terminate in small ornaments. Large oblong well-cut pear-shaped pieces of glass, joined with small metal links, form four festoons; there are also drops of glass from every available point, producing a dazzling effect.



Iron Hall Lantern

There was a great deal of silver at Mount Vernon in constant use, and much of silverplated ware, among which were many single and double bracket lamps to be attached to the wall. The single bracket lamps were attached to wooden escutcheons, by which they were fastened to the wall. The lamps were eighteen inches high, terminating in an octagonal-shaped urn for oil. Near top of oil tank is a silver frosted decorated band. On the panels are festoons of flowers. The chimneys were of blue glass. A vertical piece of brass with teeth held the wick in place, which was worked up and down with a thumb screw on the side.

The silverplated double lamps are fifteen inches high and twelve inches in width, having two tanks for oil and a wall of open-worked silver as a protection for the white glass chimneys. The standard to which the oil tanks and wicks are attached starts from a heavy substantial base of white glass, one-third of the height, then metal, and terminating in a ring by which the lamp is lifted. The wick is regulated by a screw at the side. The oil tanks are gracefully shaped urns, with light tracings relieving the plain surface. In general form the single and double lamps were alike.

Of candlesticks in silver plate there were many. One set is especially notable, of an exceedingly graceful form. They are eleven inches high, with a base of five and a quarter inches in diameter, showing several lines of beading. The stem at base is about three-quarters of an inch in diameter, increasing in size and ending with a large socket for the candle with a rich scalloped effect of leaves, on the stem are eighteen vertical lines, alternately plain and chased in a dainty pattern. There were two pairs of plated bedroom candlesticks, which Washington mentions in his accounts: "May 30th, 1796, paid Rowland Parry for 2 pair octagonal plated

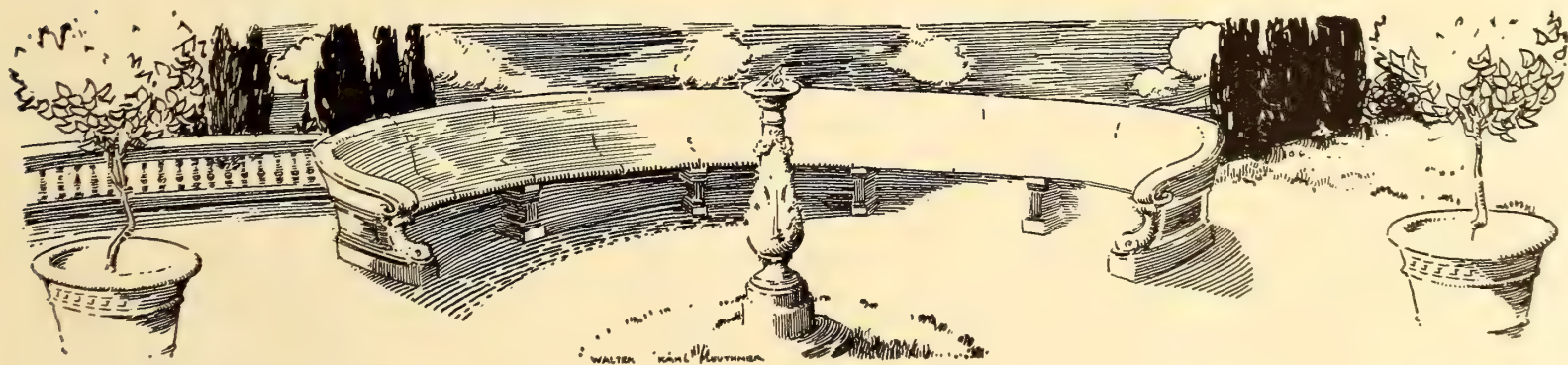


Glass Candelabra

candlesticks \$25.00." They were used at Mount Vernon. They had eight-sided base cups, six and a quarter inches in diameter, the stem and socket seven inches high.

The bedroom candlesticks stood on the side table of the main hall, and the dignified host touched the candle with a taper, and wishing his guest pleasant dreams, handed him the light. Imagination may well run riot in recalling distinguished visitors who received this veritable time-scarred candlestick from the hospitable hand of Washington.

Last but not least was the iron hall lamp suspended in the main hall at Mount Vernon. It is twenty-four inches high, of four panels terminating in four bars entering a ball, from which it was hung to the ceiling, each panel containing a pane of white glass ten inches wide. The base is of iron and was intended to inclose a candle.



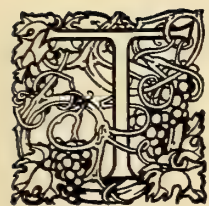


The Elaborate Detailing of the Entrance Is the Chief Ornamental Feature of the Exterior

The Summer Home of Spencer Hall, Esq., Water Witch, N. J.

Built in the Mission Style of Architecture

By Charles Chauncey



THE visitor to California who exclaims over the Spanish Missions and views with delight the numerous successful country homes built in the Mission style by the people of that State, usually takes it for granted that the Mission style is impossible for the rest of the United States. But, fortunately, this is not the case, for the reason that in the southern and western States, there are many fine examples of this particular style of architecture with its usual construction. The great hotels of Florida—for instance the Ponce-de-Leon at St. Augustine—testify to the possibilities of this style of architecture as well as many of the fine residences and buildings of the northern States.

The Mission style is essentially an adaptation of Spanish and Moorish architecture, adapted to the climatic conditions of California, and while it is primarily a warm climate style, it can be, and is to a large extent, modified to meet eastern and northern requirements.

Mr. Spencer Hall accepted this style of architecture as the

prototype for his house, designed by Mr. L. A. Ford, architect, of New York. Mr. Hall had made a special study of this class of work, and while he has modeled his design, he did not accept the form of construction nor the materials of which it was to be built until he very carefully examined the principles of building for this class of house, which he found in the vicinity of Philadelphia. After careful consideration he became acquainted with the possibilities of this form of construction, and engaged the men on the spot and even went so far as to have them bring carloads of sand, lime and cement from Pennsylvania to Water Witch with which to build his house.

The house was built of the usual frame construction. The exterior studs were covered with two thicknesses of good building paper, and then with matched sheathing. On this sheathing were placed furring strips, upon which ordinary wooden lath were nailed. And this method not only allowed of an air space, but also formed a key for the mortar. This wooden lath was given a scratch coat to form a key, and then a good, thick brown coat, finishing with a stucco finish of



The Mission Type Has Been Chosen for the Style of Architecture



Gray Plaster Walls and Brown Stained Trim Give a Pleasing Contrast to the Exterior



Loggias Break the Lines of the House and Form Interesting

cement composition. It is imperative that the best grade of cement be used. The ornamental work about the front entrance tower is very finely executed, and was applied after the rough work had been finished. The roof is pitched sufficiently to shed water, and is covered with a Spanish red tile. One step from the grade permits one to ascend the terrace which surrounds the tower, and on which is

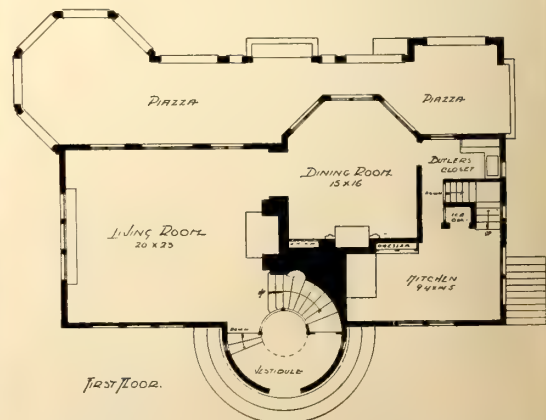
placed a seat extending from the front door in either direction, terminating at the main wall of the house. Two more steps permit one to enter the vestibule, from which a short flight of three steps lands one in the living-room. The stairs to the second story form a niche in the vestibule, which is decorated with a pedestal of Grecian form that lends itself to the classic character which was earnestly sought.

The interior arrangement of the rooms on the first floor gives opportunity for generous entertainment, and at the same time it affords privacy and isolation to the individual members of the family. The first floor is furnished entirely in an apple-green tone with

trim painted a lighter shade, though still maintaining the color scheme. The open fireplace, built of brick with the facings and hearth of similar brick, is finished with an ornamental wooden shelf. A broad settle is placed at one side of the room in front



An Apple-green Tone with Trim Painted a Lighter Shade Is the Color Scheme of the Living-room



of the cluster of windows lighted by small panes. A picture window, with French windows on either side and opening on to the porch, overlooks the great lower New York Bay. The ceiling beams in this room add dignity to its general effect.

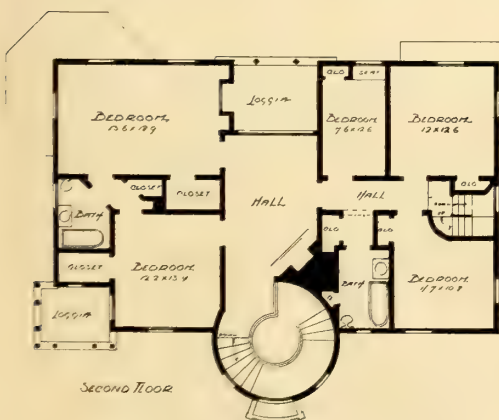


Places from Which to View the Bay and Surrounding Country

The dining-room is treated with paneled walls of plaster and a molded cornice. The whole is finished with an ivory-white treatment. The fireplace has a Franklin stove built in and resting on a tiled hearth, and has facings of similar tile and a mantel of Colonial style. French windows occupying one side of the room open on to the piazza. A door opens into the butler's pantry, which is fitted with sink, dressers and cupboards; and another door forms an easy access to the piazza, which in summer is used for dining uses. A third door opens into the kitchen, which is fitted with all the modern improvements. A combination ice-box is built in with access from both the kitchen and the butler's pantry.

The second story contains the owner's suite, consisting of two sleeping-rooms, large closets and bathroom. Access is obtained to each of the loggias from each of the bedrooms. There are three other bedrooms and a bathroom on this floor. The bathrooms are fitted with tiled floors and wainscoting, and porcelain fixtures and exposed nickelplated plumbing. The upper hall contains an open fireplace with grate, tile trimmings and mantel.

The house is supplied with all the facilities



ties for making it an up-to-date house in every respect, and it has a fine cellar, formed by the receding hill at the rear, and it contains a heating apparatus, fuel-room, workshop, laundry and wine cellar. The planting around the house is adequate.



A Pedestal of Grecian Form Lends Itself to Classic Effect in the Hall



The Living-room Fireplace Is Built of Brick



Gray Plaster Walls and Brown Stained Trim Give a Pleasing Contrast to the Exterior



Loggias Break the Lines of the House and Form Interesting Places from Which to View the Bay and Surrounding Country

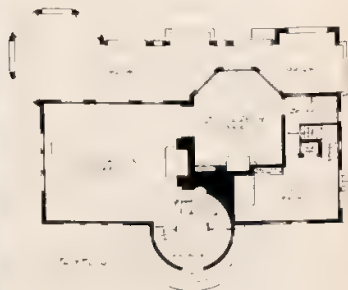
placed a seat extending from the front door in either direction, terminating at the main wall of the house. Two more steps permit one to enter the vestibule, from which a short flight of three steps lands one in the living-room. The stairs to the second story form a niche in the vestibule, which is decorated with a pedestal of Grecian form that lends itself to the classic character which was earnestly sought.

The interior arrangement of the rooms on the first floor gives opportunity for generous entertainment, and at the same time it affords privacy and isolation to the individual members of the family. The first floor is furnished entirely in an apple-green tone with

trim painted a lighter shade, though still maintaining the color scheme. The open fireplace, built of brick with the facings and hearth of similar brick, is finished with an ornamental wooden shelf. A broad settle is placed at one side of the room in front



An Apple-green Tone with Trim Painted a Lighter Shade Is the Color Scheme of the Living-room

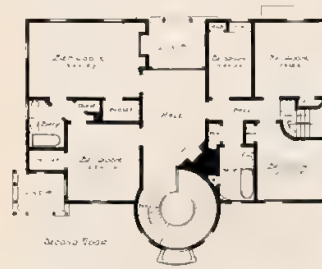


of the cluster of windows lighted by small panes. A picture window, with French windows on either side and opening on to the porch, overlooks the great lower New York Bay. The ceiling beams in this room add dignity to its general effect.

The dining-room is treated with paneled walls of plaster and a molded cornice. The whole is finished with an ivory-white treatment. The fireplace has a Franklin stove built in and resting on a tiled hearth, and has facings of similar tile and a mantel of Colonial style. French windows occupying one side of the room open on to the piazza. A door opens into the butler's pantry, which is fitted with sink, dressers and cupboards; and another door forms an easy access to the piazza, which in summer is used for dining uses. A third door opens into the kitchen, which is fitted with all the modern improvements. A combination ice-box is built in with access from both the kitchen and the butler's pantry.

The second story contains the owner's suite, consisting of two sleeping-rooms, large closets and bathroom. Access is obtained to each of the loggias from each of the bedrooms. There are three other bedrooms and a bathroom on this floor. The bathrooms are fitted with tiled floors and wainscoting, and porcelain fixtures and exposed nickelplated plumbing. The upper hall contains an open fireplace with grate, tile trimmings and mantel.

The house is supplied with all the facilities



for making it an up-to-date house in every respect, and it has a fine cellar, formed by the receding hill at the rear, and it contains a heating apparatus, fuel-room, workshop, laundry and wine cellar. The planting around the house is adequate.



A Pedestal of Grecian Form Lends Itself to Classic Effect in the Hall



The Living-room Fireplace Is Built of Brick

Planning a Country Home

By E. P. Powell



ONE of the chief difficulties with the new country home builders is that of understanding and using, to its best advantage, a bit of landed property. The problem varies with every locality, and according to the size of property, as well as its surroundings. We can lay down a few general rules, such as building your house well back from the street, securing excellent drainage, taking advantage of bluffs and knolls; but when we are through with these general rules the city born and bred person finds himself in a puzzle, with walks and drives and out-buildings and gardens and orchards—all of which he wants, but does not know just where to place them. How can one make the best use of a single acre, or of five, or of ten? Ten acres will, if brought to the highest tilth, support a large family. From nine acres I have, for many years, taken all of my small fruits, large fruits, vegetables, eggs, and milk. Besides home-used articles, my surplus sold has crept up to an average of over \$1,200 a year. I take it that every one who moves into the country wishes not only to secure more pleasant surroundings, but to increase his comforts and to make his place pay its own way.

Perhaps we may classify the true aim of a country home builder as, first of all, to create a beautiful home. He is not to plant for market in the first place, but in the second place; and when his products increase he will sell the surplus, but still keep home life and home comfort as the central thought. He will feel his way slowly along in the way of planting, and will grow such things as the market asks for, and in just that ratio.

Now what I wish to do in this short article is to suggest the best method of laying out one or two acres, with this distinct understanding, that home is to come first and market second; and then that the place must ultimately be made to cover its own expenses, and something over. To do this the owner must grow his own vegetables, his own apples and pears, his cherries and plums, his currants and berries, his flowers in abundance, and then must have his lawn for pleasure, and, if possible, a shrubbery. The first plot, which I annex, is intended for a single acre, or possibly for two acres—not to exceed this; and I think it will be found complete for almost any location. It is specially suited to a business man who takes the trolley at night for his country sleeping place, and who finds it possible to take an occasional day off for his country home improvement.

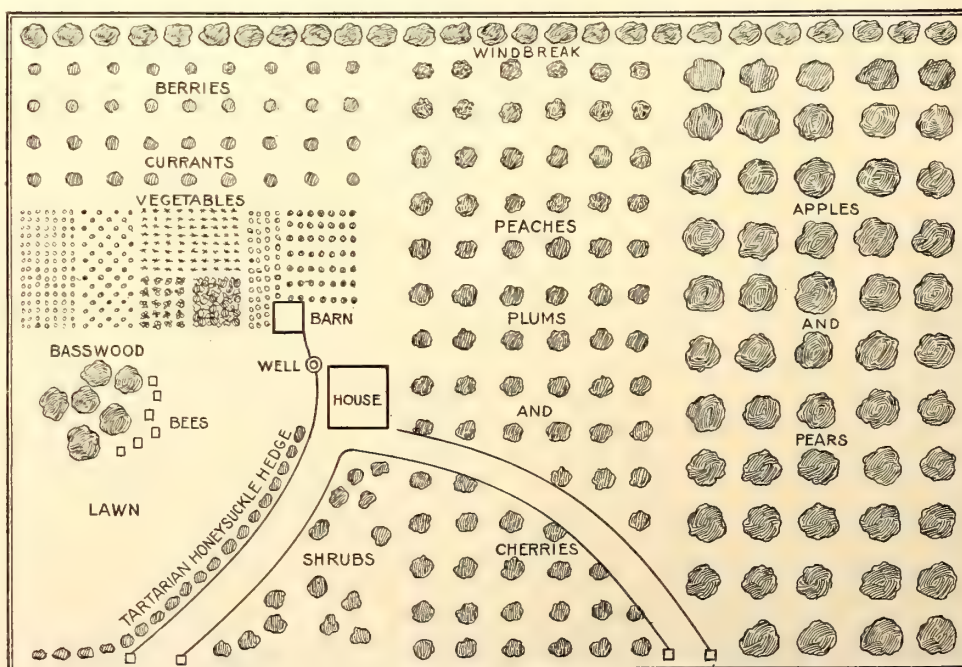
The first point to note is that, while the house is to be easy of access, it must be easy to

reach every part of the property without too much walking. There must not be too much given up to shrubbery and lawn, yet there must be enough not to lose the esthetic. I have set down about one-half of the land to apples, pears, plums, peaches and cherries—that is, to orchard fruits. Of these the first to give pecuniary returns will be peaches, plums and cherries. If the pears are headed low they will begin to give fruit by the third year, and apples headed low will give fairly good crops by the fourth year. Turning to the currants and berries, you will begin to get good returns by the third year, and considerably more by the fourth. Always set out good, stocky two-year-old currants. As for the red raspberries, be sure that they are cut down to the ground when planted, or you will lose not only the second year's crop, but the third also, in all probability. The vegetable garden, with asparagus and pie plant, should be always near the barn, getting the liquid manure, as well as any thing else needed. Notes for the shrubbery I have given in a previous article in *AMERICAN HOMES AND GARDENS*.

In the small lawn, which is all that can be provided, I would plant a group of basswoods, and in the rear of these would have a half dozen or more stands of bees. The basswood is the best honey maker in the United States. A home, laid out as I have suggested, would feed a dozen swarms abundantly. While the apples and pears are growing, and before they come to a full occupancy of the soil, the ground may be made to yield an annual crop of alfalfa for the cow and horse. Turn it under each spring, and start a new crop for the next winter's covering. This system is called growing cover-crops. Ample room has been assigned to flowers. I would confine these at the outset to such as are most easily grown—like phloxes, hardy roses, tulips, and nasturtiums. I would border my drives with bush honeysuckle, or possibly hemlock. We have then only to provide for a windbreak. I assure you that this is the most important point of the whole—unless a good grove or forest is growing adjacent. Perhaps the most easily secured windbreak would be a row of evergreens; but more advantageous would be a close-grown

row of mountain ash; because the bees can make honey from the flowers, and birds can use the fruit. Between such trees set Tartarian honeysuckle. I have now answered a reader of the *AMERICAN HOMES AND GARDENS* to the best of my ability, and later will report a plan for those who intend to occupy five or ten acres or more.

A driven well is marked on the chart; it can never fail.



How to Utilize the Grounds About a Country Home

The House Roof and Its Garden

I.—A Neglected Opportunity

By Esther Matson



WHEN we build our houses we forget that our climate gives us the utmost variety of weather for our money, so to speak. We know, if we stop to think of it, that it is now bluff and bleak, now boiling and blistering, but how do we accommodate ourselves to these extremes?

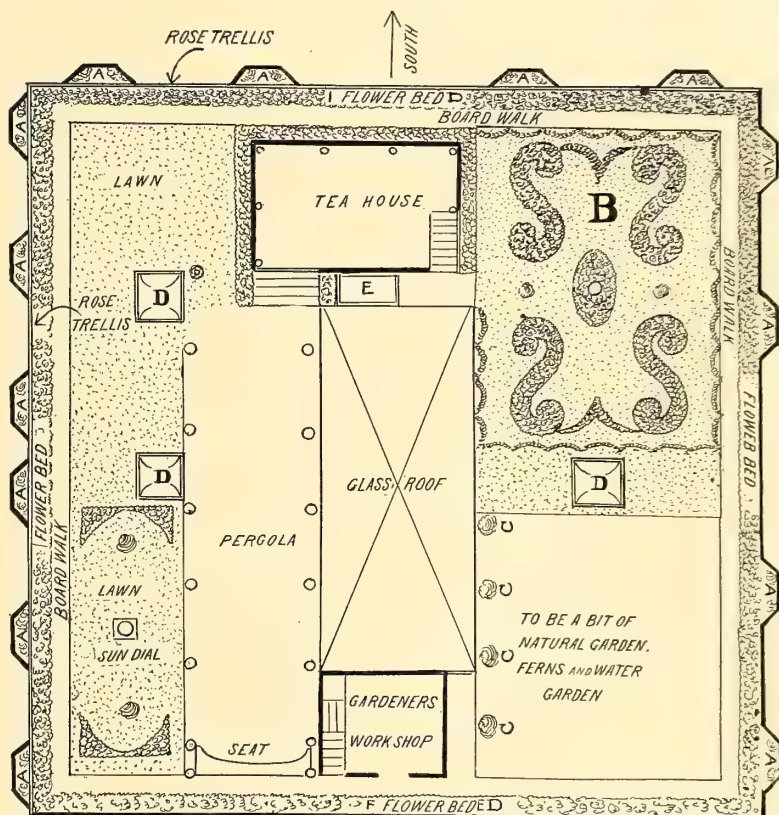
We know, for instance, that we must put a roof over our house just as a man realizes that he must wear a hat, but this roof over our heads seems to us a mere necessity, a thing of tin or shingle or tile as the case may be and of corresponding expense. We do not take into consideration the immense practical and esthetic value that might be obtained from it. We do not conceive how easily, how inexpensively withal, a loggia could be arranged on any of our roofs, where in hot days we could get a longed-for breath of air, and where of a cold day we could take a sun bath.

In Germany, instead of wretched tin cornices—features, by the way, acknowledged by all architects to be wholly false and useless—they build beautiful peaks of red or blue tile. They mass these steep roofs in a fashion absolutely bewitching, and they push out low dormers and quaint blinking window eyelets that lend just the needed human touch to make them satisfying.

In that country roofing is an art; with us it is a commerce. It is high time we waked up to something different.

In Italy, on the other hand, they build flat roofs, roofs that are not in the least self-assertive, but which are furnished with delightful pillared loggie, spacious rooms where air and comfort are compatible. This Italian way, considering our climate and our manner of houses, is the one we should study and learn lessons from.

A Venetian painting, which Ruskin has declared one of the most valuable in all the world, is Carpaccio's representation



A.—Beds on Bay Windows Filled with Trees and Large Shrubs
B.—Italian Garden and Carpet Work
C.—Large Shrubs and Trees. D.—Light Well. E.—Elevator



The House-top Garden Walk

of three or four Venetian women sitting sunning their hair on the roof. Executed with minutest realism the picture introduces us into the actual every-day life of the people who lived in the Queen City of the Adriatic several hundred years ago. It is as though we are suddenly brought through the long dull passageways of an Italian home, up the dark stairs and out on to the dazzling roof piazza, there to be presented to those sumptuous golden haired dames. It is as if they invited us to join in their idle gossip and even begged us to twitch that pet spaniel's tail for the mild excitement of a squeak on such a drowsy day.

Now just the sort of thing Carpaccio painted in a way, hundreds of living Italians and southerners of other lands are doing to-day. (With the possible exception, let me add, of the dye the Venetian maidens used to encourage that glorious golden tint.) And what I wish might be emphasized here, is the fact that abroad it is not alone the very rich man who avails himself of his roof privileges.

I am looking forward to a time in the near future that will be different. We anticipate the day coming when our house tops "shall cry aloud" to be appreciated, when possibly

the possession of a hanging garden may not sound like an Arabian Night's dream and when indeed the name Roof Garden will no longer carry associations merely of music-hall and vaudeville but will imply a place of pleasure for home-loving, quiet people alive at last to the joys of sunshine and the out-of-doors.

II.—A Successful House-top Garden

By Adelia Belle Beard

In Seattle, the city of enthusiasm and progress, there is a house-top garden, a garden on a roof. A real garden with flowers and plants growing in earth beds and a lawn of soft grass in the midst of which stands the hall mark of the garden lover—a sun dial. It is just such a garden as one might have on the ground, only prettier in a way, and decidedly more novel, for the very difficulties to be overcome in planning a garden of this kind result in schemes of arrangement one would otherwise never think of. This house-top garden, although on the roof of the "Lincoln," one of Seattle's best hotels, is like the grounds of a private residence. There is nothing stiff, nothing stereotyped, for it was not

planned by a professional for a public roof garden, but by a woman who conceived and carried out the idea because of her great love for flowers. Her home was to be a large hotel without grounds or verandas; with no place where one could sit out in the fresh air to read or sew, and her idea was to make a garden that could be enjoyed without one's realizing that it was on a house-top.

With the help of her two gardeners, Mrs. Blackwell, part owner and manager of the "Lincoln," created this country garden in the midst of a hustling city far above the rush and noise of the busy streets. Up where the air is purest and the sunshine brightest, in this veritable hanging garden her flowers blossom and her fruit ripens.

Yes, fruit, for there are trees in the garden, the tallest of which are the mountain ash and the birch. These are twelve feet high, and one very small apple tree bears enormously large apples. There are six or eight maple trees, six holly, four hawthorn, a few evergreens, two laburnums and several Arabia trees.

Then there are large shrubs like the lilac, and roses, quantities of roses, three hundred or more bushes. Many of them are of the kind that can be grown only in hothouses in the vicinity of New York. There are a thousand pansy plants in a bed a hundred feet long, there are sixty dahlias, a



A General View of a House-top Garden, Showing

number of rhododendrons, two hundred carnations, fifteen hundred Dutch bulbs and numberless annuals that grow and blossom in profusion.

The vines that add softness and grace, and give the flowing lines needed to complete the picture are jasmine, Virginia creeper, grape, three varieties of clematis, wistaria, ivy, and climbing roses. Many of the rose vines run over the rose trellis which fences in the roof on two sides.

But to begin at the beginning, the "Lincoln" was built and Mrs. Blackwell took charge, then a few years ago she commenced to make her garden. It was not all done at once, and is not yet entirely finished, for, like the garden on the ground, Mrs. Blackwell enlarges her garden from time to time and adds new beauties every year. There is still some room for further expansion, for the garden space is a hundred and twenty feet square.

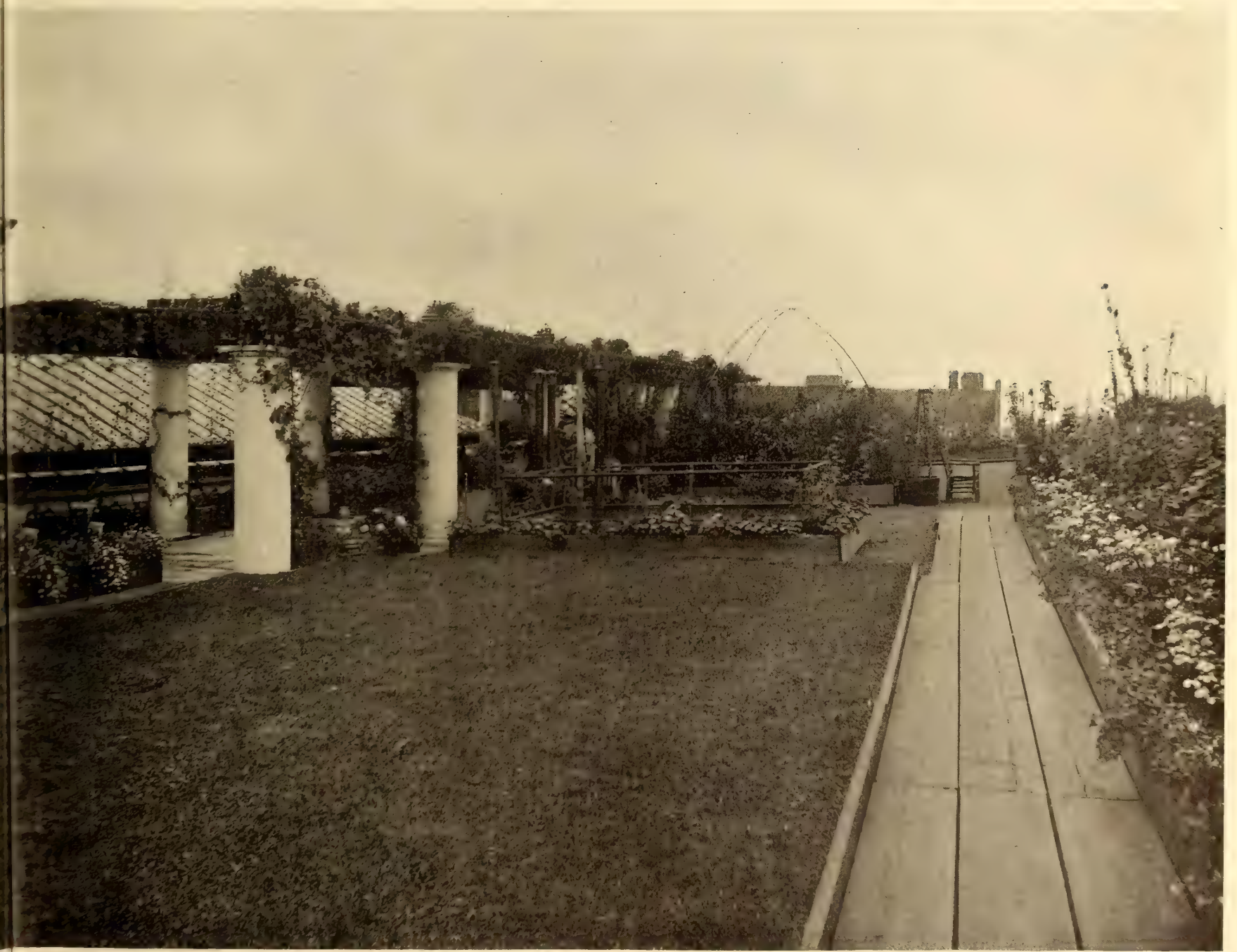
The roof is covered with concrete and slopes slightly from the center on all sides, and the first step was to test its strength by architect, building inspector, and fire marshal. After that cedar boards were laid for the flower beds and lawn with a little space left beneath for drainage. This was effected by placing two inch pieces of wood beneath the boards at regular intervals, the opening at the sides being hidden by strips of wood. The boards in place, the work of carrying the soil

began. It was sifted to remove stones of any size and carried to the roof in sacks holding about a hundred pounds each.

The flower beds were made four feet wide, the soil being eighteen inches deep at the back and sloping down to eight inches in front, and the beds were kept from spreading out of bounds by narrow boards placed on edge which box in the front. The boards are painted a dull green and, being covered with vines and overhanging flowers, are not noticeable. For the lawn, which was started with sod, the soil is three inches deep, and there was not the slightest difficulty in making it grow. There are a number of bay windows in the building which reach to the roof, and the tops of these were covered to the depth of eighteen inches or more with soil, and in these beds are planted trees and large shrubs. The effect of trees growing outside and beyond the rose trellis is one of the remarkable features of the garden.

All the first summer the owner of the garden worked with her two gardeners and everything planted sprang into instant growth. It may have been because of the looseness of the soil, the quantity of sunshine or the loving care they were given, but whatever the cause the result was a wilderness of the most beautiful flowers and plants where formerly there had been but the arid roof, unadorned and uninviting.

Nothing has failed to grow in this garden of the sun, but



the Possibilities of Garden Work on the Roof

the possession of a hanging garden may not sound like an Arabian Night's dream and when indeed the name Roof Garden will no longer carry associations merely of music-hall and vaudeville but will imply a place of pleasure for home-loving, quiet people alive at last to the joys of sunshine and the out-of-doors.

II.—A Successful House-top Garden

By Adelia Belle Beard

In Seattle, the city of enthusiasm and progress, there is a house-top garden, a garden on a roof. A real garden with flowers and plants growing in earth beds and a lawn of soft grass in the midst of which stands the hall mark of the garden lover—a sun dial. It is just such a garden as one might have on the ground, only prettier in a way, and decidedly more novel, for the very difficulties to be overcome in planning a garden of this kind result in schemes of arrangement one would otherwise never think of. This house-top garden, although on the roof of the "Lincoln," one of Seattle's best hotels, is like the grounds of a private residence. There is nothing stiff, nothing stereotyped, for it was not

planned by a professional for a public roof garden, but by a woman who conceived and carried out the idea because of her great love for flowers. Her home was to be a large hotel without grounds or verandas; with no place where one could sit out in the fresh air to read or sew, and her idea was to make a garden that could be enjoyed without one's realizing that it was on a house-top.

With the help of her two gardeners, Mrs. Blackwell, part owner and manager of the "Lincoln," created this country garden in the midst of a hustling city far above the rush and noise of the busy streets. Up where the air is purest and the sunshine brightest, in this veritable hanging garden her flowers blossom and her fruit ripens.

Yes, fruit, for there are trees in the garden, the tallest of which are the mountain ash and the birch. These are twelve feet high, and one very small apple tree bears enormously large apples. There are six or eight maple trees, six holly, four hawthorn, a few evergreens, two laburnums and several Arabia trees.

Then there are large shrubs like the lilac, and roses, quantities of roses, three hundred or more bushes. Many of them are of the kind that can be grown only in hothouses in the vicinity of New York. There are a thousand pansy plants in a bed a hundred feet long, there are sixty dahlias, a

number of rhododendrons, two hundred carnations, fifteen hundred Dutch bulbs and numberless annuals that grow and blossom in profusion.

The vines that add softness and grace, and give the flowing lines needed to complete the picture are jasmine, Virginia creeper, grape, three varieties of clematis, wistaria, ivy, and climbing roses. Many of the rose vines run over the rose trellis which fences in the roof on two sides.

But to begin at the beginning, the "Lincoln" was built and Mrs. Blackwell took charge, then a few years ago she commenced to make her garden. It was not all done at once, and is not yet entirely finished, for, like the garden on the ground, Mrs. Blackwell enlarges her garden from time to time and adds new beauties every year. There is still some room for further expansion, for the garden space is a hundred and twenty feet square.

The roof is covered with concrete and slopes slightly from the center on all sides, and the first step was to test its strength by architect, building inspector, and fire marshal. After that cedar boards were laid for the flower beds and lawn with a little space left beneath for drainage. This was effected by placing two inch pieces of wood beneath the boards at regular intervals, the opening at the sides being hidden by strips of wood. The boards in place, the work of carrying the soil

began. It was sifted to remove stones of any size and carried to the roof in sacks holding about a hundred pounds each.

The flower beds were made four feet wide, the soil being eighteen inches deep at the back and sloping down to eight inches in front, and the beds were kept from spreading out of bounds by narrow boards placed on edge which box in the front. The boards are painted a dull green and, being covered with vines and overhanging flowers, are not noticeable. For the lawn, which was started with sod, the soil is three inches deep, and there was not the slightest difficulty in making it grow. There are a number of bay windows in the building which reach to the roof, and the tops of these were covered to the depth of eighteen inches or more with soil, and in these beds are planted trees and large shrubs. The effect of trees growing outside and beyond the rose trellis is one of the remarkable features of the garden.

All the first summer the owner of the garden worked with her two gardeners and everything planted sprang into instant growth. It may have been because of the looseness of the soil, the quantity of sunshine or the loving care they were given, but whatever the cause the result was a wilderness of the most beautiful flowers and plants where formerly there had been but the arid roof, unadorned and uninviting.

Nothing has failed to grow in this garden of the sun, but



A General View of a House-top Garden, Showing the Possibilities of Garden Work on the Roof



The Pergola and Lawn of a House-top Garden



A Corner of the Well-designed Roof Garden of a New York Hotel

it has been noticed that it is about two weeks later than the gardens of the earth, probably because those lower down are protected from the cold winds of spring by the houses, fences, and trees, while the house-top garden takes the weather as it comes, hot or cold, fair or stormy.

The summers are long in Seattle, and all the season the garden is filled with flowers, even in winter some are still blooming. First come the early bulbs, primroses, mountain snow, forget-me-nots, and lilacs; then the wealth of roses, daisies, heliotrope, pinks, and sweet peas; later the fall flowers, all blooming in their season just as they do in an ordinary garden. The care and cultivation of the garden is the same also. In the fall all annuals are taken away and spring brings the spading up of flower beds and enriching of the soil with cow manure. The lawn is mowed once a week, and watered with a sprinkler like any carefully tended lawn, and the grass grows and thrives as well on the house-top as on the ground.

Some of the trees and large shrubs are in tubs, some planted in beds, all of the lilacs are in beds. One can plant as large a shrub in the house-top garden as in a ground garden, and the cost of large plants varies with their size and locality. Seattle is so new and is growing so rapidly the demand for plants is very great, and the prices are consequently higher than in older and more settled communities. The price of lilac bushes in Seattle ranges from one dollar and a half to five dollars. Ten dollars was paid for a jasmine, and five dollars each for English holly.

The house-top is not exempt from weeds, but they are not as plentiful as on the ground; the greatest trouble has been with slugs. Toads have been introduced as exterminators, but they disappear and leave their duty unperformed.

The pergola and tea house add immensely to the attractiveness of the garden. To sit at one's ease surrounded by flowers, and between the swaying vines that drape the pillars of tea house and pergola, to look out upon the beautiful scenery for which Seattle is noted is one of the treats the garden affords. Of course the view from the top of this seven-



A Roof Garden of a New York Residence. A Glass Roof and Steam Heat Renders It Comfortable Even in Winter

story building in a city where skyscrapers are not, is very fine, and from parts of the garden the waters of Puget Sound appear to reach to the edge of the roof.

Occupying an almost central position in the garden is the glass roof covering the court below. Its top is almost hidden with vines. The sides extend four feet over the floor of the house roof, and the space underneath the four-foot glass extension is filled with growing ferns planted in boxes. This gives the glass roof the appearance of a conservatory in the midst of the garden.

The ten foot square light wells, of which there are three, are prettily concealed by bamboo poles bent over from each corner and covered with Virginia creepers and with sweet pea hedges around the sides.



The Historic Wentworth House

By Mary H. Northend

Photographs by the Author



FEW old houses in our country possess more historic interest than does the old Wentworth Mansion, at Little Harbor, two miles from the business center of Portsmouth, N. H. It is now the property of Mr. J. Templeman Coolidge, Jr., of Boston, Mass. He has preserved all that was distinctly Colonial in both interior and exterior, and occupies the place as a summer residence. Great praise is due to the perfect taste with which he has restored the garden to its distinctly old-fashioned effects, and has observed all the memorable traditions with regard to the buildings themselves.

Nobody knows the age of the oldest portion of this house. It is supposed to have been a farmhouse of ordinary dimensions, when bought by Governor Benning Wentworth, in 1750. At his death the estate was left to his widow; and by her, to her daughter by her second husband. When this daughter left this country to live in Europe, the Little Harbor estate was sold to Mr. Charles Cushing, and by his grandson to the present owner. It has always been in the possession of persons of great hospitality, and has been identified with all the leading events of the country.

Visitors to Portsmouth find at Little Harbor much to interest them, even if they are ignorant of the historic events connected with this old mansion; but since these events seem to form its appropriate atmosphere, we will consider each part of the house in turn with regard to its well-known traditions.

From the high road we enter the curving avenue, to seek an unseen house, quite hidden behind hills and trees. The

trees are stately, and the length of the avenue gives us ample opportunity to enjoy them before another turn in the avenue brings us face to face with the object of our search.

The house might be termed an architectural freak, for it is of no particular style or period, yet the whole effect is wonderfully attractive. Governor Wentworth, in building to please himself, has pleased the eye of posterity as well. This is no huddled heap of unhappy afterthoughts, but a stately pile, with wings so joined to the main building that the whole occupies three sides of a hollow square, with the open end facing the water. The entire structure has contained fifty-five rooms, but changes of interior have diminished the number to thirty-two at present. The main part is two stories in height, and connection between rooms is made by winding staircases and unexpected passages, most stimulating to the imagination.

The main entrance is now at one side, but the original entrance, fronting the avenue, as it did in the governor's day, is flanked by two statues of youths in Colonial costume, the one representing an angler and the other a hunter armed with Rip Van Winkle fowling piece. Both extend mute welcome to the coming guest, for hospitality has always been the watchword of the Wentworth Mansion.

The porch, which we have now reached, is the same used by Governor Wentworth, the same which was pressed by the feet of Washington, when, during his Portsmouth visit in 1789, he entered this house on his return from a fishing trip down the river, and was royally entertained by the former housemaid, then for many years the mistress of the mansion.



The Historic Wentworth House Is Now the Summer Home of Mr. J. Templeman Coolidge, Jr.



The Present Living-room Was Governor Wentworth's Parlor and Still Contains Many of His Personal Relics



The Dining-room Fireplace Is Big Enough to Contain the English Yule-log

The massive door is three inches thick, with enormous lock and strap hinges, which extend eighteen inches in either direction. The narrow vestibule gives upon an inner hallway. This, too, is narrow, severely plain, and strictly Colonial in its type. The staircase, with its hand-carved balustrades, is still the same that graced Colonial fetes, with the same paneling upon the walls, and the same quaint bull's eye glass in the door opposite the entrance.

On the left the hallway leads to the present dining-room, with its old-time fireplace, large enough to contain the English Yule-log. The room is spacious and fitted with furnishings of a Colonial type. Over the mantel hang an old powder horn and flintlock, while at one side are such relics as tin-kitchen, a jack to turn the spit, and a flip-beater. There is a cabinet of old china, a simple table, and antique chairs. A very large pantry, adjoining, contains the ovens at one time used for making rum.

To the right of the hallway is the present living-room, decorated with relics of the old governor, and having in one corner the very chair in which he sat. This is historic ground, as well as poetic, for this was the governor's parlor, and here took place the scene described by Longfellow.

for many years, public affairs of the utmost importance. This high-studded room, finished in the richest style of the last century, has heard many a heated debate in those stormy times that antedated the Revolution. The mantel over this immense fireplace is a miracle of carving, hewn out by the patient fingers of a skilled workman, who wrought upon it with knife and chisel for one whole year before it was completed. Sofa and antique chairs of the governor's day occupy their accustomed nooks. We look to see their old-time occupants, in periwigs and silver buckles, start to life once more and people the shadows in the dim grandeur of this fine old chamber. In one corner stands a rack, now filled with sixteen flintlock muskets, some with bayonets attached.



Many Public Affairs of Consequence Were Discussed in the Council-chamber



Statues of Youths in Colonial Costumes Flank the Entrance

It was the governor's sixtieth birthday, and he had invited friends to come and be merry. Among the guests was the Rev. Arthur Brown. Through the door at the west came Martha Hilton, housemaid, aged twenty, and stood before this very fireplace, while the governor stepped to her side, and the Episcopal clergyman, under strong compulsion, performed the marriage ceremony.

Passing from this room, a narrow landing and a short flight of stairs connect with the hallway below, where was the original entrance. On each side of the wall, over the door, and on the opposite side, are stacks of arms, thirteen in number. These are the muskets of the governor's guard, so long dismissed, and yonder is the council-chamber, opening off this same hall. In this spacious apartment were discussed,

The present owner, during his restoration of this ancient room, discovered fine woodwork, hidden by plaster, in the corner of the room under the stand of arms. Just what was concealed here has not been fully explored, but one thinks naturally of secret closets and hidden passageways in an old house of this kind.

We turn to the billiard-room, opening off one side. Here is no billiard-table, but a spinning-wheel and the dainty old-fashioned English spinet upon which little Martha Wentworth learned to play. We wonder if this was not the apartment which witnessed the scene of the wedding-ring, a few days after Martha Hilton's marriage. Wishing to impress her importance

upon her former workfellows, she dropped her ring, and called a servant to pick it up. The maid became all at once so shortsighted that she could not see the ring until Martha stooped and put her finger on it!

On one side of the billiard-room several doors lead to smaller chambers, which under the governor's sway were used as card-rooms, where many a close rubber was played by grave and reverend dignitaries of the land.

Now we step across a small entry and out at another door. We find ourselves facing the harbor at the spot where the governor's wharf used to be; while on the neighboring island he had houses to shelter his slaves. It is an interesting fact that the little one-story house which now stands upon the island opposite was moved over on scows, at the opening of

the nineteenth century. It previously occupied the fourth side of the hollow square, facing the water, and making the arrangement of the buildings rectangular. A secret passage is said to have connected with the wharf, and boats were always in waiting, so that the unpopular head of government might escape at any moment, if his life seemed in danger. A visit to the huge, rambling cellar, where the builder of the mansion kept stalls for thirty horses, and a second look at the gun-racks, in hall and council-chamber, will go far to convince us that the great man, whose personality is stamped so deeply upon this interesting pile, led an uneasy life. Though he left no descendants, he was more fortunate than many in being able to leave so lasting a memorial of



A Spinning Wheel and Old English Spinet Are Now the Chief Articles of Furniture in the Billiard-room

his earthly achievements in this house, which embodies many of his ideals. Always a house of deep interest it is a significant fact that it is as much so to-day as in the past.

his earthly achievements in this house, which embodies many of his ideals. Always a house of deep interest it is a significant fact that it is as much so to-day as in the past.



The Narrow Hallway Is Severely Plain and Strictly Colonial in Type



Muskets of the Governor's Guard Above a Hall Door

Three Pennsylvania Houses

By Francis Durando Nichols



R. D. KNICKERBACKER BOYD, of Philadelphia, Pa., was the architect of the three interesting houses illustrated herewith.

The first is a house built at St. David's, Pa., and for its design the architect chose simple lines; with a main building to contain the living quarters of the house, and an extension placed at one side to contain the service departments.

The house, from the rock-faced underpinning to the peak, was intended to be plastered on the exterior to imitate an old farmhouse, and was designed accordingly. It was subsequently decided, for various reasons, to change the material to shingle, losing somewhat of the character intended, but still retaining its simple dignity of outline and proportion. The columns to the piazza, however, are constructed of plaster and help carry out the effect originally proposed, and with its floor laid with red brick, in herring-bone fashion, creates a cool and pleasant spot in summer. The shingle work is left in its natural state, and the trimmings are painted ivory-white. The roof is shingled.

One of the principal features of the plan is the hall, with a hooded entrance porch, at one end provided with a vestibule; while at the opposite end are windows and doors which extend from the floor to the ceiling, through which the living-piazza is reached.

The hall is treated with an ivory-white painted trim, and the walls are covered with a very narrow striped gray wall covering, finished with a massive picture molding at the intersection of the wall and ceiling. The stairs, of Colonial style, are of yellow pine, with balustrade of white painted balusters and rail of mahogany.

The living-room is trimmed with chestnut. Its great length is lessened in its effect by the pilasters and massive beams. The wall is covered with a large figured paper, in two tones of brown and mustard-yellow, to the height of five feet, and is then finished with a plate rack; the wall space above and the ceilings are tinted a soft brown. The fireplace is built of ordinary red brick. These bricks are wire-cut on their beds, which in this case are exposed for their rough effect by laying the bricks endwise. It has a simple mantelshelf, supported at the level of the plate rack.

The library is treated with white painted trim and rose colored walls. The dining-room is also treated with white

painted trim and a two-tone mustard-yellow wall covering; the great height of the room being broken by a plate rack.

The service end of the house is placed in an extension. It contains a butler's pantry, fitted with sink, dresser and cupboards, and from which access to the kitchen is made by another door. The kitchen being clear of the body of the house permits the windows being placed on opposite walls, thus giving that important feature—an abundance of cross draught. A large kitchen closet contains the refrigerator, with an outside entrance thereto. The stairs to the basement are arranged with an entrance from the butler's pantry, so that the owner of the house can pass to the cellar without going into the kitchen. The stairs over the cellar stairs



A Panoramic View of the Surrounding Country Is Obtained from the Living Piazza

form a private way, and ascend to the second story of the extension, which contains the servants' bedroom and bathroom.

The front stairs of the main house have a broad landing over the vestibule, provided with a seat, above which is a cluster of three windows. From the landing the second story hall is reached. This floor contains four bedrooms and two bathrooms; the latter tiled and furnished with porcelain fixtures and exposed nickelplated plumbing. The third floor contains the guest rooms, with an attached bath, besides a large play-room and a storage loft.

Mr. Boyd made a distinct departure when he designed the second house in this series, which has been built at Wayne.

The house has an individual character that is at once delightful to the eye and is very happily a result of circum-



cumstances, for it was planned and designed through the artistic influence of the requirements of the family which were to live in it.

The exterior is rough plaster, from underpinning to peak. The underpinning is built of rock-faced small brown stones, taken from the cellar, and laid up with white mortar joints in splashed widths. The only relief intended in the hard gray surfaces of the exterior walls is the casement and small lighted windows, the most of which are painted white. Some of the windows have blinds, and these, together with the trimmings, are stained a soft brown color. At the present time there is only a small porch built in under the overhang of the second floor; but it is planned to extend the porch at the end of the house in the form of a pergola, which will ultimately connect with the garden designed for the side of the estate. The roof is covered with shingles, which are laid without any straight lines, in order to present an old effect.



The Fireplace in the Living-room Is Built of Wire-cut Bricks Laid Edgewise

Plaster Columns Carry Out the Characteristics of the Farm House

The first floor has a square hall in the center of the house. It has ceiling beams, and these and all the trimmings are painted white. The main stairway has square white balusters and mahogany rail, and in the wall rising at the side of the stairs, and over the pantry roof, is a large window containing six casements. The reception-room is a necessary adjunct to a house when space can be allowed for it, as it maintains a place which can be kept always in order for the receiving of one's friends. It is treated with old ivory-white paint, and the walls are covered with coral brocaded silk. The living-room is the feature of the house, with its adjoining studio. The trim is stained and finished in a dark brown and waxed. At one end of this room is a bay window with leaded casements, while at the opposite end is an open fireplace built of brick laid with wide white mortar joints.

Bookcases are built in at either side, and above is a mantelshelf supported on brackets. The studio extension is a unique feature, both inside and out. It has a high pointed ceiling over the north window, which rises into the peak of the roof, and built in Gothic form.

The dining-room is finished with a dark brown stained trim. The pantry is fitted up complete. The kitchen is furnished with a range, sink, dresser, store pantry, servants' toilet, and laundry separated from the kitchen and fitted with three laundry tubs. The rear stairs continue right up to the third story, which contains the servants' quarters and trunk room, while the front stairs end at the second story with a large open rail into the hall below.

The second floor contains the sleeping-rooms and bathroom; the latter having tiled wainscoting and porcelain fixtures and exposed plumbing.

The third house in the series was also built at Wayne. The building was designed with a low effect, produced by placing the greatest dimension of the house toward the street; this

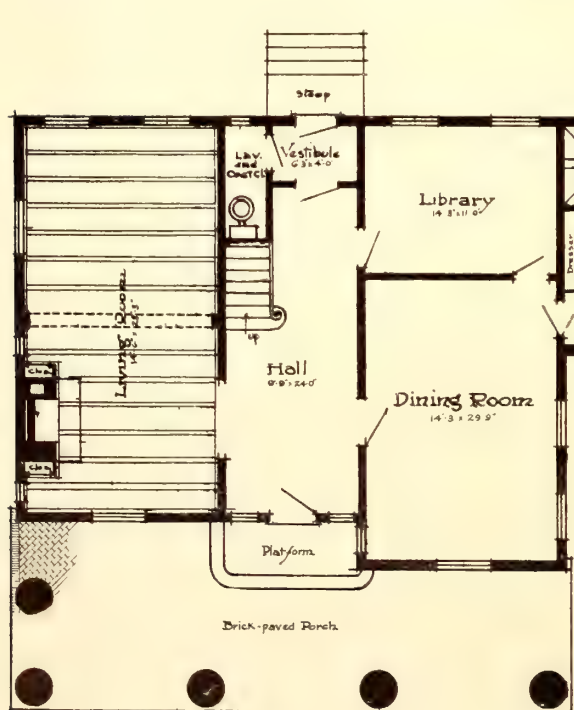


The Dining-room Has a Two-tone Mustard Colored Wall Covering and White Painted Trim

at the side of the property into the pergola have proved so convenient and attractive that these are used in preference to the ones designated by the original plan.

By this arrangement it has been possible to increase the size of the lawn space in front and use the one walk, which was intended for the service end of the house. This walk is inclosed by a privet hedge, which extends around the house.

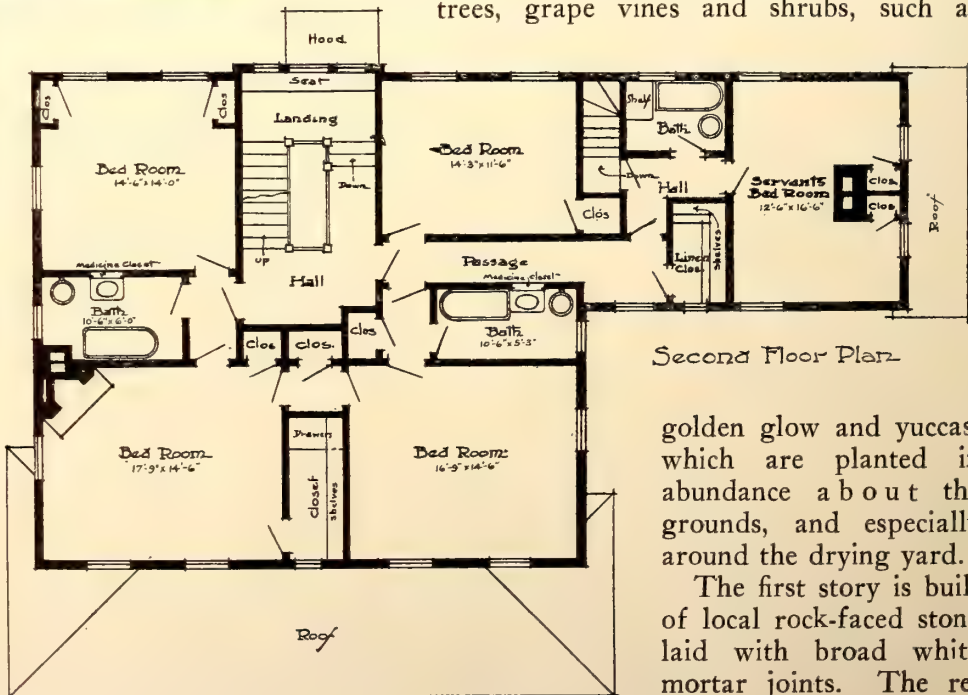
Midway between the street and the pergola is a rustic arbores entrance to the bowling green, in front of the house, which is large enough for a tennis court. The walk to the service end of the house branches off at the kitchen entrance and passes on to the croquet court, which has been leveled out of the sloping ground at the rear of the property. This court is surrounded by fruit trees, grape vines and shrubs, such as



First Floor Plan

breadth is somewhat extenuated by the pergola, which extends from one end of the house.

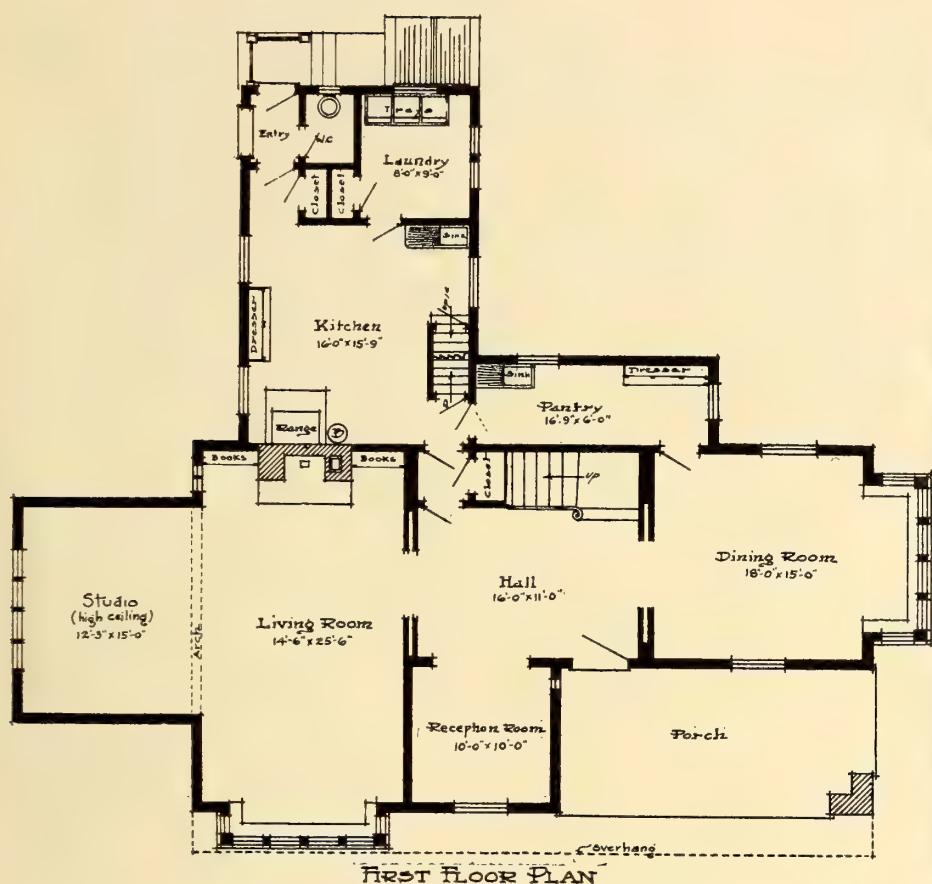
The main entrance is from the steps opposite the door opening on to the lawn, but the stone steps leading from the gravel path



Second Floor Plan

golden glow and yuccas, which are planted in abundance about the grounds, and especially around the drying yard.

The first story is built of local rock-faced stone laid with broad white mortar joints. The re-



The Bay Window Is a Feature of the End of the House

mainder of the building is housed in a gambrel roof with Dutch characteristics. The exterior is covered with shingles, and the trimmings are painted an old-ivory white.

The hall is trimmed with chestnut. It has a Dutch door with leaded glass windows on either side, a wainscoting of

chestnut battens and moldings, and a staircase of simple but artistic design. The walls are tinted an old rose.

The living-room extends the entire depth of the house, and has a wainscot of chestnut battens and moldings. The mantel, placed over a fireplace with Welsh tile facings and



The House Has an Individual Character



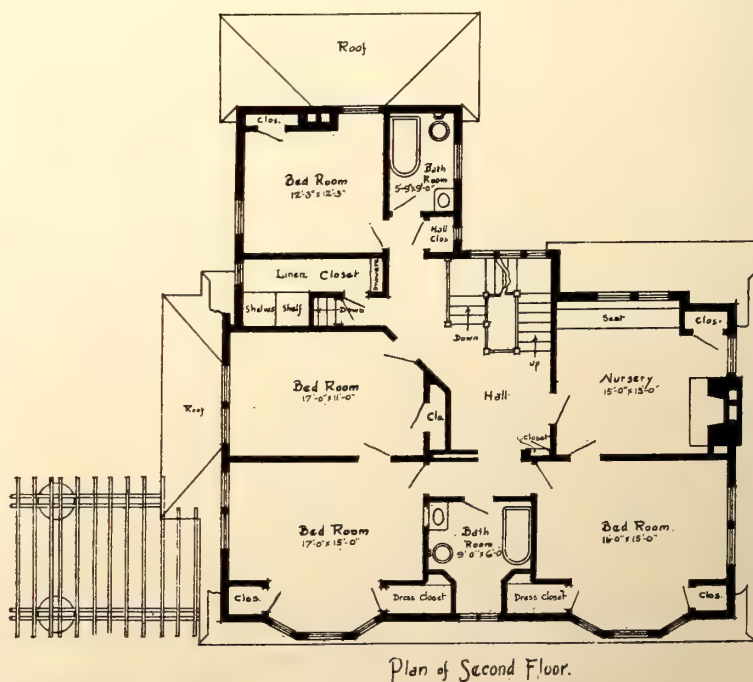
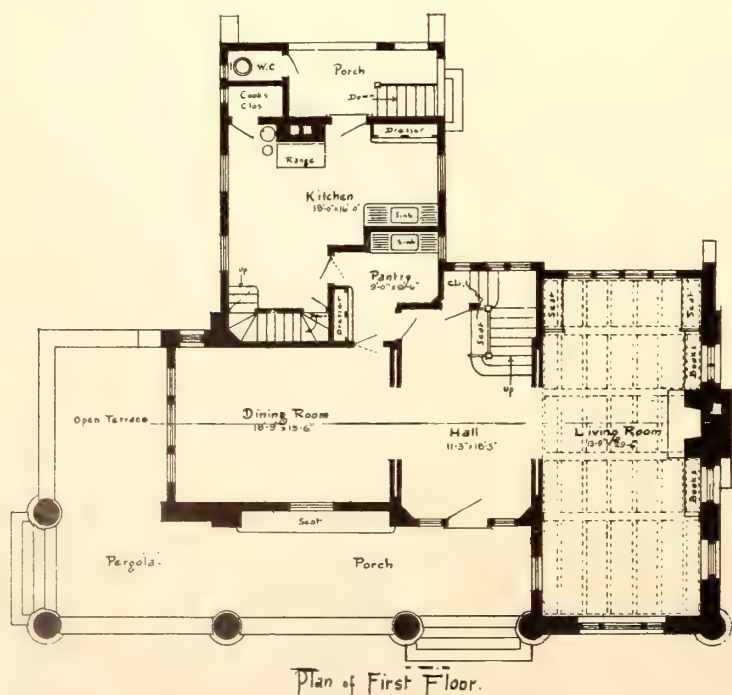
The Breadth of the House Is Extenuated by the Pergola at One End of It

hearth, is but a continuation of the wainscot and bookcase cap; the bookcases being built in on either side of the fireplace. The upper walls are covered with a heavy leather effect in golden brown. An attractive feature of the room is the sloping ceiling at the rear end of the room, which comes down close to the top of the four leaded glass casement windows, with a clear space in the center of each, forming separate framed pictures of rolling country. The ceil-

ing throughout is beamed and ribbed with heavy molded chestnut.

The dining-room is stripped in white with a plate rail forming a cap around the room. The panels between the strips are covered with a flat relief gold paper, and the walls and ceiling above are in buff.

The kitchen is large, and is fitted up complete. The laundry is in the basement; the steps from the ground to the





A Trim and Wainscoting of Chestnut and an Artistic Staircase Are the Features of the Hall

servants' porch at rear of kitchen are within the lines of the porch, and do not obtrude, as is so often the case, where the porch is a whole story above the lawn.

The second floor is unusually large, due to the space which overhangs the front porch, and contains five bedrooms, two bathrooms and a linen closet. The bathrooms are tiled, and are furnished with porcelain fixtures and exposed nickelplated plumbing. The third story has three bedrooms, a bathroom and a large loft.

The four main bedrooms of the second story can communicate each with the other. When the sliding door is



A Chestnut Wainscoting with a Heavy Leather Effect Above in Golden Brown Is Harmonious



The Dining-room Is Stripped with White Painted Battens, the Panels Being Filled in with Gold Paper

drawn, closing off the passage from the hall between the two front rooms, these rooms are en suite, with a bathroom between, yet not opening into either. This is an ideal and most healthful arrangement. Many and large are the closets in this house, which include medicine closets in the bathrooms and halls and an umbrella and cane closet near the front door, as well as a coat and telephone closet under the main stairs.

It is comparatively easy, or it ought to be, to see and to understand the reason for the success of these houses. Were I to be asked the most obvious reason I would unhesitatingly reply that it is due to their simplicity. Interesting they are in a very real and penetrating way, but, above all other things, their designs are permeated in every part with a true and artistic simplicity.

For a house must be artistic as well as simple to have successful architectural character. It must be well designed and well

built. It must be suited to any requirements that may be demanded of it, and available for any use to which it may be put. All these, as well as many other matters, are answered, solved, demonstrated and given expression in these interesting houses. Very different as they are in design, they possess a distinct individuality in style, so pronounced, indeed, that the fact of a common authorship needs to be known before it can be recognized.

These houses, therefore, point a valuable object lesson. They are thoroughly excellent; they are well studied and are carefully designed and exceedingly well built.



The Plant and the Season

By S. Leonard Bastin



HERE is nothing in all the wide world to compare with the magical touch of spring. A few weeks of genial weather, and the sun-kissed countryside is adorned with the vivid greens of the most joyous time of the year. The sequence of the seasons and the changes which their rotations bring about are such ordinary happenings that few people will consider that there can be any mystery in the matter. Yet the problem as to how plants know the seasons is to a very large extent

an unsolved one, and one of rare and unusual interest. At first sight it may appear that the plant is aware of the passage of the seasons by the changes which take place in the weather at the different quarters of the year. But although in some localities there is a very definite line between the periods, this is far from being a universal condition. In this connection the behavior of trees in Great Britain, where the variability of climate is notorious, is very instructive. It is not an unusual circumstance for the winter to pass without any severe frost, the weather being mild and open through-



The Trees and the Season: the Winter and Summer View



Individual Trees Are Often Ahead of Their Fellows; This One Is Three Weeks in Advance of Its Neighbor

out. One might assume that the trees and plants would continue to grow with small check beyond that occasioned by the casting of foliage—but this is very far from being the case. However inviting the season may be, there is no attempt to start into growth until the arrival of the springtime. Of course, it is obvious that cold has a strong controlling influence upon all vegetation, but it is submitted that there must be something more than this to be considered.

It is an undoubted fact that many plants continuing for more than a year require a period of rest at regular intervals. An experiment with two hyacinth bulbs was interesting in this respect. An endeavor was made to induce one to start into growth in the late summer, but no amount of encouragement would make the bulb send up more than a few inches of shoot. Four months later the other bulb, which had completed its resting period, was planted and allowed similar conditions, when it soon burst into a wealth of floral loveliness. It is clear that the first bulb had not been able to come to a proper maturity, while the latter, after a long period of quiescence, was able to come to a perfect development. As opposed to these instances, however, there are many plants in favored districts which are in an active state of growth from one year's end to the other. Witness the extraordinary vigor of the orange tree, whose whole life history is one tale of activity.

It is contended that plants know the seasons from force of habit—that the entire business of casting foliage and fresh growth is part of a routine which becomes woven into the very existence of the individual. There is a good deal of truth in the assertion; species transported from one part of the world to another will often continue for some long time to carry out the old seasonal changes, quite oblivious to the fact that these are incongruous to their new conditions. All gardeners are

only too well aware of this, for many species coming from countries where the spring is ahead of ours continue their habit of starting into growth at a certain time, with disastrous results if no protection be provided.

But that, after all, there is some secret among the plants which can not be explained on any of the grounds that have been dealt with—that the members of the vegetable kingdom have some definite means of finding out the changes of the seasons—is almost certain. How do all the aquatic plants know when they may start into growth? Certainly not entirely by the rise in the temperature of the water, for exotic species kept in tanks under glass, where there is always plenty of warmth, recognize the coming of spring and the approach of winter infallibly as do their fellows out of doors. Still more marvelous are the Alpine soldanellas. These little plants actually appreciate the influence of the spring under a thick coating of ice and snow, and, by means of the heat which they are able to generate in their developing flowers, bore their way upward toward the light and air. One is totally at a loss to explain such marvels as the result of any kind of cause and effect. Again, consider the plants which flower in total defiance of the weather conditions altogether. Take the white hellebore of Austria as an instance. For some reason which it is not easy to penetrate it appears to suit the convenience of this species to come to its maturity in the dead of the winter. One may find the lovely white blossoms pushing their way up through the crust of snow quite fearless of the keen winds which rush through the forests. As well the little winter aconite recks nothing of the cold; and the list of these hardy plants might be enlarged almost indefinitely to show that in many species at any rate the weather has but small controlling influence.



The Hyacinth in Its Own Season Yields a Wealth of Flower and Perfume



Snow Does Not Always Prevent Flowering

The Himalayan arum (*Sauromatum guttatum*), a plant which is a most interesting one for amateurs to grow, has been enabled to scheme out its mode of living in a way which indicates a clear knowledge of the seasons. In the natural habitat of this species the year is sharply divided up into two periods, one wet and the other dry. Now it would seem that this plant depends for the fertilization of its blossoms upon a certain insect which is about only during the dry season. This makes it necessary that the flowers should be produced at that time. But vigorous growth is impossible when everything is parched and dry, and the clever plant has found an ingenious way out of a difficult situation. During the wet season, when the arum produces its leaves and roots freely, a great effort is made to store up as much nutriment as is possible in the bulbous root. At the approach of the dry weather the leaves and even the roots of the plant die away altogether. But after a short time the bulb begins to send up another shoot, which is really a flower bud, and such is the vigor of the plant that it is able to develop this quite perfectly in all respects without making any roots at all. Perhaps still more clever are those plants which are able to exist for years, and do not seem to suffer, even though there is no chance of making any active growth. Some of the mosses (*Selaginella*) often referred to, and indeed sold as, Ana-

statica (the Rose of Jericho) seem to be almost incapable of dying. For years they will lie in a dry state seemingly devoid of any life at all, but immediately the rain comes they assume a pleasant fresh-green appearance and start to increase very much in size. Observers say that these plants when in their dry condition are often blown over miles of country, and that in this way the distribution of the species is brought about.

Although in some ways not quite so startling, the change which comes over the plants at the approach of winter is as remarkable as that which takes place in the spring. During the late summer the plants exhibit a very clear knowledge of what they are confronted with, and are careful to take steps to meet the altered conditions. With the waning of the summer there is a very decided slackening in vegetable activity, and so provident are they that long before it seems to be really essential, the growth and extension of the individual is abandoned for the year and preparations are made for the rigorous weather which is at hand. The growing shoots resolve themselves into buds, which are well worth watching in the fall, when it will soon become evident that it is not only in the spring-time that they are of interest.

Few people are aware of the extent to which the plant pushes its preparations for the spring at the end of the summer. Pull a



The Oak in Full Summer Dress



The Oak Preparing for Winter

bud to pieces just after the leaf has separated from the twig and it will be a matter for surprise to see how far advanced is the new shoot. All the leaves are there, in a diminutive state, it is true, but still in a perfect condition. In most cases every part of the baby organ is thickly covered with down, and in addition to this there are, of course, the protecting scales, which are at times layered one upon the other, three or four courses in depth. So that, no matter how hard the frost may nip, there is no possible fear of the young leaves suffering.

A very large number of plants of perennial habit with soft stems do not remain above the ground during the winter. After they have blossomed their growth gradually decreases in vigor, and finally they die down altogether. Snugly packed away in Mother Earth, whose brown bosom is clothed with a thick coating of snow, these species are unseen throughout the rigorous months. But long before we above the soil have begun to think that spring may be a possibility these discerning roots have appreciated that the cold weather is on the wane. The sluggish sap becomes active again, and from the crown of the root-stock pink shoots begin to force their way up through the mold. The spring sun has not shone for many days ere these pushful plants break away from their prison and extend upward into the light and air.

In reviewing the whole question of the plant and the season it must be admitted that we are dealing with a very obscure problem. Putting aside everything else and coming down to the one fact of the movements of the sap in a tree we are confronted with something which is very mysterious. Take a walk in a forest in the springtime, and one is surrounded on every side by one of the greatest marvels in the world—yet a miracle of which one scarcely thinks. The sap in these trees has been lying practically motionless



A Hyacinth Bulb Grown Out of Season Yields Only a Few Inches of Shoot

throughout the whole winter, yet without any very clear cause this becomes on occasion tremendously active. The upward flow rushes from the roots to the branches above with a force which is little short of terrific. A bladder tied over the cut end of a young tree which was still rooted in the ground was burst into atoms in a very short while by the force of the rising sap. Reaching the uttermost limit, the downward stream is commenced, and thus the vitalizing fluid of the tree, now much elaborated, finds its way back to the roots again. These currents once properly established continue their courses throughout the whole summer, and it is not until the fall that there is any slackening in its flow.



The Flower of the Himalayan Arum Is Produced from Its Bulbous Root After the Leaves Have Died



The Himalayan Arum Seems to Know the Seasons in a Way of Its Own



CORRESPONDENCE



The Editor of *American Homes and Gardens* desires to extend an invitation to all its readers to send to the Correspondence Department inquiries on any matter pertaining to the decorating and furnishing of the home and to the developing of the home grounds.

All letters accompanied by return postage will be answered promptly by mail. Replies that are of general benefit will be published in this Department.

Problems in Home Furnishing

By Alice M. Kellogg

FITTING UP A GUEST ROOM FOR THREE HUNDRED DOLLARS

ALTHOUGH the limit of expense is fixed at three hundred dollars," writes a correspondent, "it is not necessary to include the minor decorations or accessories, nor the bathing arrangements, as a bathroom opens from this apartment. The walls are already papered, and the floor and woodwork are in good condition. What is desired is a list of up-to-date, comfortable fittings for making a guest feel at home in a well-appointed house; the furniture to be, preferably, of mahogany, well made, but without carving or inlay."

A model guest room of the present day is supplied with two single beds. In white enameled iron a good style may be had for ten dollars each; box springs at the same price, and hair mattresses and feather pillows for fifteen dollars for each bed. The outfit of sheets, pillowcases, blankets, comfortables and spreads may be as economical or as expensive as desired. A mahogany night-stand, or small table, to place at the head of the beds, may be had for twenty dollars. A bureau (sometimes called a dresser) may take the place, in a room of this kind that is not continuously occupied, of a dressing-table and chiffonier, and the price is fifty dollars. For chairs of comfort the most economical is the willow, in an arm pattern with hair cushion, at twelve dollars, and a rush-seated rocker for fifteen dollars. A slipper chair in simple design may be found for nine dollars. A writing-table and chair, at thirty dollars for the first and twelve dollars for the second, can be selected in Sheraton design. A divan and its cover will cost thirty-seven dollars. A large Wilton rug, nine by twelve feet, costs thirty-seven dollars and a half; or, if small rugs are preferred, the same amount could be expended on other sizes in the same make. Short curtains of white muslin, and brass rods, will cost nine dollars and a half. Later on, long curtains to the floor, of a thicker material, could be added.

In planning for the accessories for a room of this character the following articles should be remembered: down pillows, with pretty covers, for the divan, and a warm spread; hanging shelves for books; the equipment for the writing-table; a small table with drawers to hold sewing materials; toilet articles for the bureau; a trunk rest; a *costumier* to hold night garments; hangers and hat supports for the closet; a clock for the mantel, and some simple holders for cut flowers.

COLOR SCHEME FOR A WINTER COTTAGE

A correspondent who is building a cottage in the South for winter occupancy inquires about the selection of colors to use on woodwork and rough-plastered walls. As these two details are of fundamental importance in creating a harmonious color scheme, they require careful consideration, with some provision for the movable furnishings that are to be installed later on.

As the woodwork on the first floor is of birch and chestnut, it may be stained a medium dark brown in the hall and living-room, and a weathered gray in the dining-room. To give a feeling of hospitable warmth to the entrance to this home, it is suggested that a light orange or deep buff tint may be given the walls of the hall. When rugs are under discussion, the Navajo may be selected for this part of the house. In the living-room a repetition of the woodwork adopted in the hall may be varied with a wall of gray or a natural linen tint. As the exposure here is very sunny, the window curtains may be of figured green and blue on a gray ground, with a Scotch rug of greens and blues.

For the dining-room the wall tint may be the soft green of the well-known saji ware that is sold in the Japanese shops. A brown India drugget would look well in this room, and blue and green china for tableware.

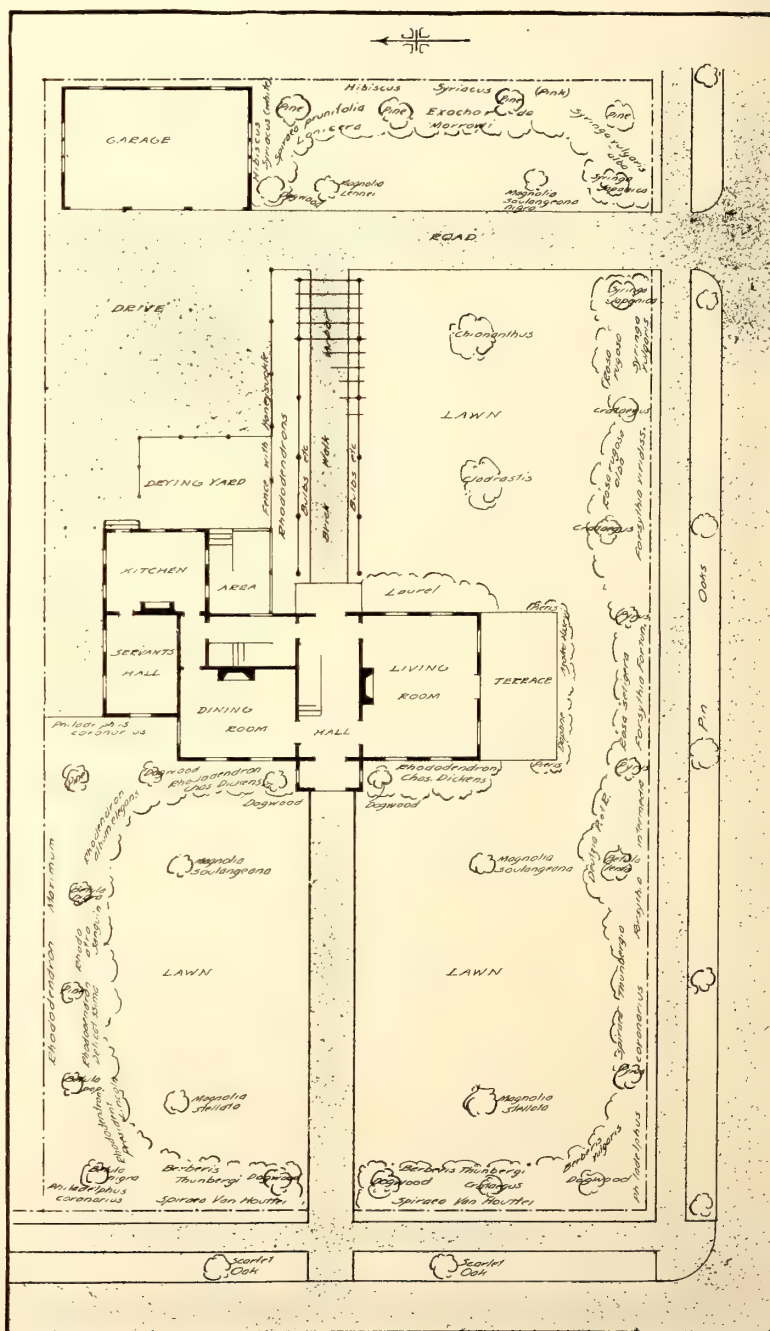
(Continued on Page xii)

Garden Work About the Home

By Charles Downing Lay

TWENTY-FIVE SHRUBS AND TREES FOR A SMALL PLACE

ONE of our correspondents (B. M. H.) asks us to name twenty-five shrubs and trees for a small place, but to select twenty-five good trees and shrubs for a small place is like selecting the one hundred best books, or like choosing a library to provide mental stimulation in the quiet intervals of African



The plants shown on this plan are those given in answer to B. M. H.'s question. They can be bought for about one-hundred and seventy-five dollars, but the cost of plants varies so greatly with their size and variety that no more definite figures can be given without specifications.

(Continued on Page xiv)



HALL EXECUTED IN ENGLISH OAK AND CAEN STONE.

PERIOD decoration, in the English styles, is a most important department of the activities of The A. J. Crawford Company. This firm has been so long engaged in the collection of English antiques and has secured such extensive opportunities to study English interiors renowned for beauty and purity of design, that the authenticity of its reproductions is utterly beyond question. Notable interiors executed for its American patrons will be cited, and photographs furnished upon application.

A. J. Crawford Company 251-255 Fifth Avenue New York
1 East 31st Street

The World's Finest Nursery Products

WE do not wish to be boastful by saying our Nursery products are the finest, but we mean just what we say. In the Nursery business there are grades and different qualities of grades. We grow and sell only the finest, which is the cheapest, but not always the lowest in price. Before accepting the lowest price on your lists of requirements, you should visit our Nurseries.

ROSES. In addition to those growing in our Nursery, we have selected from the world's finest and best-grown Roses, the plants we offer this season. Roses are still one of our leading specialties. Many hundreds of well-tried varieties, in tens of thousands of plants, are in our storehouses ready for shipment to any point, far or near.

RHODODENDRONS, ENGLISH HYBRIDS and MAXIMUM. Of these, many thousands are perfectly acclimated in our Nursery. Plants in all sizes and every color known to this class of large-leaf evergreen flowering Shrubs. Come and see them.

SHADE and FRUIT TREES. Our stock of these trees is exceptionally fine this year; trees that will grow and give results the first season.

EVERGREENS. We have many hundreds from 3 to 12 feet tall, in all the finest and handsomest varieties. The specimens now growing in our Nurseries are conceded to be the finest ever produced in America.

BAY TREES and BOXWOOD for Formal, Italian, French and English Gardens, interior and exterior decoration, in all forms and sizes.

OLD-FASHIONED FLOWERS. We have the most complete collection of these popular favorites in the country. Our Landscape Department makes a specialty of Old-Fashioned Gardens.

These products, consisting of the largest selection of Ornamentals in the country, are produced in our 150 acres of Nurseries within eight miles of New York City Hall.

Our Illustrated General Catalog has helped thousands in making selections and purchases; it will help you.

BOBBINK & ATKINS
Nurserymen and Landscape Architects
RUTHERFORD, NEW JERSEY



BILTMORE NURSERY will gladly answer inquiries from friends and patrons concerning what to plant, when to plant and how to plant. The experience of over 20 years is at your command. Let us help you to make your home grounds

As Beautiful as Biltmore

We will undertake, at small cost, to prepare plans for beautifying the home surroundings, showing a pleasing arrangement of paths and drives combined with artistic grouping of trees and shrubs, on the lines which have given Biltmore its world-wide reputation for attractiveness.

The Biltmore Nursery Catalog, superb in illustration and encyclopedic in contents, cheerfully sent free, on application.

BILTMORE NURSERY, Box 134, BILTMORE, N. C.



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.

Denver

CHICAGO

Trenton

PROBLEMS IN HOME FURNISHING

(Continued from page 120)

Upstairs the pine woodwork may be painted white in bedrooms and bathrooms, and the walls of the sleeping-rooms tinted in light tones—turquoise blue and sage green for the bright rooms, salmon pink and canary yellow for the north and east outlooks. In the bathrooms it is customary now to use a cream white paint on the walls above the tiled wainscot, marked out in panels by a stencil border in color.

A simple treatment for the windows of this cottage would be to make short curtains of printed linen, cretonne or linen taffeta, repeating the color of the walls in the pattern. Cotton rugs for the bedroom floors may be of the same color as the walls, with the border of a deeper shade, or of two tones of green or two shades of tan.

A "BETWEEN-MEALS CENTERPIECE"

A "between-meals centerpiece" has taken the place of the ample spread that formerly was laid over the entire dining-table when the white cloth was not in service. This change has been noted by a correspondent who has studied the illustrations of dining-rooms. The question now asked is, Of what are these centerpieces made?

Various materials are used for a centerpiece that is laid on the oak or mahogany dining-table between the meals, but the most appropriate is linen in the natural color, or an old blue, olive or sage green, mahogany red or brown. A hand-woven texture, not necessarily of a fine grade, but suited to its decoration, is interesting in this position. White linen is sometimes chosen, but its striking contrast with the dark surface of the wood on which it rests is less artistic than a more quiet tone. The ornamentation of the centerpiece need not be carried farther than the edges, leaving the middle space to be covered with a jardiniere filled with ferns or a foliage plant, a flowering plant or a vase of flowers. The centerpiece may be round or square, and the size should be small enough to show one-third or more of the table as a margin.

Sometimes a square of velvet, with the edges finished with a metal braid, may be substituted for the linen; or a large leather mat, illuminated by hand painting, may be adopted.

WHEN TO USE A WALL PAPER BORDER

"In papering the walls of my bedroom," writes a Massachusetts reader, "will it be in good taste to use a border? And what kind would be suitable?"

A revival of interest in this phase of wall decoration has been apparent for more than a year past, and the present season shows its continuation by the many new varieties that have been put upon the market. The inquiry, however, is too indefinite to be given more than some general information.

If the bedroom in question has a low ceiling—not over eight feet high from the floor—it would be a mistake to diminish the height by introducing a horizontal line below the cornice. When there is nine feet or more of height to the side wall one might assume, perhaps, that the border effect would be of undoubted advantage, but the conditions of the wall space must be considered. Sometimes the upper part of such a wall is broken into by archways, window and door casings; and a frieze, if applied here, would be too mutilated to contribute any element of beauty.

The use of a frieze below a deep cove is not to be undertaken, either, without serious reflection, as one often spoils the other. The real merit of the frieze or border is to bring a decorative note into a room and to leave the main body of the wall as a background for

SEND FOR OUR CATALOG, "HOME HEATING"

HOT-WATER HEATED \$198

by ANDREWS SYSTEM EACH

14 ANDREWS HEATERS IN ONE BLOCK AVERAGE PRICE \$198

IT IS WELL WORTH READING

Paper Patterns for Heating Plants
About 40 years ago a man named Butterick made a business of cutting patterns for men's shirts. His wife suggested that patterns be made in similar manner for women's and children's clothes. He did this, and the result is the present tissue-paper pattern used in every home. By using these patterns any woman who can sew can save half the cost and make clothes fully as attractive and serviceable as she can get from a professional dressmaker.

We make patterns for Heating Plants. Send plan or sketch of your house for exact estimate free. Our price will include best radiators, pipes cut to fit, fittings, valves, gold bronze, and the now famous Andrews Steel Boiler. Everything complete, ready for erection, with diagram and directions, so any man handy with tools can erect. Andrews Steel Boiler has double heating surface, requires less fuel, is simple, durable, easily cleaned, and needs no repairs. We furnish the hottest radiators (100 square feet

with the Andrews System will do the work of 150 feet with the others); perfect control secured by our Regurgitating Safety Valve and Group System of piping. We design, manufacture, guarantee, and sell each plant direct from factory to user, giving you the lowest price for the value. Don't buy a heating plant, either water or steam, until you have sent for our catalog, "Home Heating," which explains fully how you can erect your own plant and save plumbers' charges. Send for list of our customers in your vicinity and examine their plants. We do it right in 44 States, Canada and Alaska. Plants guaranteed and sold on 360 days' trial free. (Remember we manufacture the most economical boiler, furnish the quickest circulation, hottest radiators and lowest price for the value.) Freight Rates Equalized. Cut out this ad. to-day, send names of other people going to buy and get full particulars. Old houses easily fitted.

ANDREWS HEATING COMPANY, 825 Heating Building, MINNEAPOLIS
783 LaSalle Building, CHICAGO

MANUFACTURERS CONTRACTORS CONSULTING ENGINEERS

GREGORY'S SEED CATALOGUE FOR 1908

We catalogue this season several choice new vegetables of sterling merit.

EARLY MORN PEA, the earliest, largest podded pea known. One farmer harvested eighty bushels from one planted and received from \$3 to \$3.50 per bushel. Quality of the best.

GREGORY'S EARLY EXCELSIOR, the best second early low-growing pea without any exception. A great favorite with the leading gardeners.

"BIG CROP", our new white potato, out-yields all the well-known varieties, is less affected by rot, is deliciously mealy. Let us tell you all about it. Catalogue free.

J. J. H. GREGORY & SON, Marblehead, Mass.

Take off your Hat to the
Write for Circulars and Prices to
F. E. MYERS & BRO.
Ashland, Ohio

THE PUMP THAT **PUMPS** **HAY** **TOOLS** **BARN DOOR HANGERS** **HAY RACK CLAMPS**

Gilson Gasoline Engine and Pumping Jack

JACKS TO FIT ANY STYLE PUMP

\$70.00 COMPLETE. Every country home supplied with our system always has water. Will run ice cream freezer, churn, washing machine, etc., etc.

All Sizes

Send for Catalog

GILSON

MFG. CO., 308 Park St., Pt. Washington, Wis.



Write for free catalog "Plants & Plans for Beautiful Surroundings"

Full of invaluable information, illustrations of flowers and beautiful lawns. It shows how the modest as well as the most extensive grounds can easily be made charming and attractive. There is nothing more pleasing and delightful to cultured taste than artistic and properly planted grounds. Write us today.

Wagner Park Conservatories, Box 322, Sidney, Ohio.



RIDER AGENTS WANTED

in each town to ride and exhibit sample bicycle. Write for special offer.

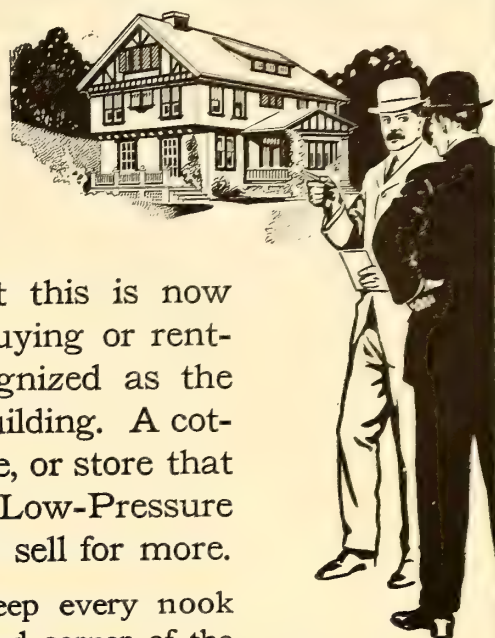
We Ship on Approval without a cent deposit, allow 10 DAYS' FREE TRIAL, and prepay freight on every bicycle.

FACTORY PRICES on bicycles, tires and sundries. Do not buy until you receive our catalogs and learn our unheard-of prices and marvelous special offer.

MEAD CYCLE CO., DEPT. C 227, CHICAGO, ILL.

How is it heated?

Haven't you noticed that this is now the first question asked in buying or renting? It is because now recognized as the most important feature of a building. A cottage, house, mansion, flat, office, or store that is heated by Hot Water or Low-Pressure Steam will rent for more and sell for more.



AMERICAN & IDEAL RADIATORS & BOILERS

keep every nook and corner of the building free from dampness or drafts, and clean, comfortable, and healthful for dwellers or workers.

Then there are the great economies to be considered. You save heavily at the coal-bin, burning, if you wish, cheapest coal screenings, poorest soft coal, coke, gas, wood—anything. These outfits do not throw ash-dust, soot, smoke, or coal-gases into the living-rooms, thus reducing house-cleaning one-half, and saving much wear on carpets and furnishings.

IDEAL Boilers and AMERICAN Radiators will outlast the building—require no repairs. When property is sold owner gets full money back, or 10% to 15% increased rentals. Quicker and larger loans are granted on property thus modernized.

Prices in Spring are usually the lowest of the year. In these less hurried months, too, you get the best workmanship—the quickest, most skillful fitters! Put your property in right heating condition now—ready for best living, renting, or selling. Don't delay investigating this big-paying building investment with its marked savings in fuel, labor, and repairs; besides the comfort, health protection, cleanliness, safety, low insurance, and durability. Quickly put into OLD buildings, farm or city—without tearing up floors and walls or disturbing occupants. Ask for book (free).



ADVANTAGE 12: All fire surfaces of IDEAL Boilers are at such pitch or angle that they are practically self-cleaning. Note that a deposit of 1/4 inch of soot, which is a non-conductor of heat, requires 50% more fuel than when the heating surfaces are clean. Ask for catalogue giving full ADVANTAGES.

Dept. 6

AMERICAN RADIATOR COMPANY

CHICAGO



THE "GLOBE" is built on honor and sold on merit

The "Globe" Ventilator

In Galvanized Iron, Brass and Copper
Also with Glass Tops for Skylight

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. *Smoky Chimneys Cured.*

"GLOBE VENTILATED RIDGING"

Patented and Trade-Mark Reg. U.S. Pat. Off.

Manufactured by
Globe Ventilator Company :: Troy, N. Y.



WIZARD BRAND MANURES

Cattle Manure in Bags

Shredded or Pulverized

Best for all indoor and outdoor work. No bad odor. Easily applied. Delivered east of Missouri River. \$2.00 per bag (100 lbs.) Write for circulars.

The Pulverized Manure Co. 21 Union Stock Yards, Chicago.



ANDREWS AIR-PRESSURE WATER SUPPLY for Country Homes

Running Water (well or cistern) from tank in cellar is forced to bathroom and kitchen, lawn and barn; also fire protection; never freezes, never runs over; tank 36x72, 80 lbs. pressure; pump brass lined; only \$60.

Free Estimates by our engineers.
ANDREWS HEATING CO. 963 Heating Building Minneapolis

"CORTRIGHT"

The Stamp of Superiority



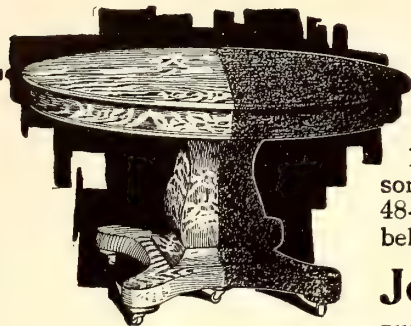
What is home without a "Cortright" roof? Insist upon seeing that embossed stamp, "Cortright" Reg. U. S. Pat. Off., is on every shingle, and you can rest safe from fire, storms and continual worriment

CORTRIGHT METAL ROOFING CO.

Philadelphia and Chicago



Refinish Your Furniture Woodwork and Floors



FREE Sample of Johnson's Wood Dye

for the artistic coloring of all wood, Johnson's Prepared Wax for polishing the wood and Johnson's Electric Solvo for removing old finish, also 48-page color book giving instructions. See offer below.

Johnson's Wood Dye is made for the express purpose of properly and permanently coloring wood.

It penetrates deeply, bringing out the grain, greatly increasing its beauty. Our Wood Dye is entirely different from colored varnishes, oil stains and other finishes offered for this purpose. If the color is in combination with a varnish, oil or finish, or the color is applied over old finish, the wood cannot absorb the color and is simply coated over, not dyed. Wood that is properly and permanently colored always absorbs the color. Johnson's Wood Dye can be easily applied, dries quickly and does not rub off. It should always be applied upon the bare wood followed by Johnson's Prepared Wax for the most satisfactory, artistic and beautiful effect, but any other finish may be used.

For refinishing furniture, woodwork and floors, Johnson's Electric Solvo will immediately remove old finish, leaving the wood bare and clean ready for the dye. Full instructions given in our booklet, "The Proper Treatment for Floors, Woodwork and Furniture."

Johnson's Wood Dye

"For the Artistic Coloring of All Woods"

IS MADE IN THE FOLLOWING SHADES:

No. 126 Light Oak	No. 128 Light Mahogany
No. 123 Dark Oak	No. 129 Dark Mahogany
No. 125 Mission Oak	No. 110 Bog Oak
No. 130 Weathered Oak	No. 121 Moss Green
No. 131 Brown Weathered Oak	No. 122 Forest Green
No. 132 Green Weathered Oak	No. 172 Flemish Oak
No. 140 Manilla Oak	No. 178 Brown Flemish Oak

By mixing two or more shades any colors may be obtained. To lighten use wood alcohol; to darken add Flemish Oak No. 172.

Half-pints, 30c.; pints, 50c.; quarts, 85c., at your dealer who sells paint

FREE Offer: Send to-day your paint dealer's name and 10 cts. (coin or stamps) to pay postage, and we will forward samples of Johnson's Wood Dye, Johnson's Prepared Wax and Johnson's Electric Solvo. 48-page color book, "The Proper Treatment for Floors, Woodwork and Furniture," sent FREE.

S. C. JOHNSON & SON,

RACINE, WISCONSIN

"The Wood-Finishing Authorities."

A.H.
3
S.C.
Johnson
& Son

Send FREE cans of Johnson's Wood Dye, Johnson's Prepared Wax, Johnson's Electric Solvo and 48 page instruction book for which I enclose 10c. to pay postage.

My paint dealer's name is

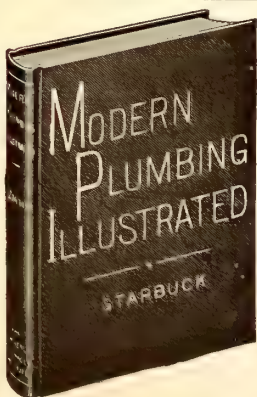
His address is

My name

Town and State

CUT OR TEAR OFF ON THIS LINE

Modern Plumbing Illustrated



By R. M. STARBUCK

400 (10 1/4 x 7 1/2) PAGES

55 FULL PAGES OF
ENGRAVINGS

PRICE, \$4.00

A comprehensive and up-to-date work illustrating and describing the Drainage and Ventilation of Dwellings, Apartments and Public Buildings, etc. The very latest and most approved methods in all branches of Sanitary Installation are given.

Many of the subjects treated in the text and illustrated follow in the next column.

MUNN & COMPANY, Publishers
SCIENTIFIC AMERICAN OFFICE, 363 BROADWAY, NEW YORK

SOME OF THE SUBJECTS TREATED

Connections, sizes and all working data for all Plumbing Fixtures and Groups of Fixtures
Traps - Venting
Connecting and Supporting of Soil Pipe
House Trap and Fresh-Air Inlet
Floor and Yard Drains, etc.
Rain Leaders
Sub-soil Drainage
Floor Connections
Roof Connections
Local Venting
Bath Room Connections [etc.
Automatic Flushing for Factories, School Houses, Use of Flushing Valves
Modern Fixtures for Public Toilet Rooms
Durham System
Plumbing Construction without use of Lead
Automatic Sewage Lift - Sump Tank
Disposal of Sewage of Underground Floors of High Buildings
Country Plumbing
Cesspools
The Electrolysis of Underground Pipes
Septic Tanks and Sewage Siphons
Pneumatic Water Supply, Rams, etc.
Examples of Poor Practice
Roughing - Testing
Continuous Venting for all classes of Work
Circuit and Loop Venting
Use of Special Waste and Vent Fittings
Cellar Work
House Drain - House Sewer - Sewer Connections
Plumbing for Cottage House
Plumbing for Residence
Plumbing for Two-Flat House
Plumbing for Apartment Houses
Plumbing for Office Building
Plumbing for Public Toilet Rooms
Plumbing for Bath Establishment
Plumbing for Engine Houses
Plumbing for Stables
Plumbing for Factories
Plumbing for School Houses, etc. [by Electricity
Thawing of Underground Mains and Service Pipes

pictures. This effect is particularly agreeable in bedrooms that are constantly occupied and where the repetition of figures all over the wall is wearying.

The old style of border was an eighteen-inch strip of paper on which a floral pattern was printed in colors to harmonize with plain paper that was used on the lower wall. Sometimes the border was only nine inches wide. When someone originated the novel idea of cutting out the design from the border and pasting it below the picture molding, it became so popular that certain patterns were at once brought out which could be treated in this way. Sometimes the border consists only of a looping of flowers or ribbons that, against a delicate-toned paper, gives the finishing touches to a simple yet artistic decoration.

GARDEN WORK ABOUT THE HOME

(Continued from page 120)

exploration. Nothing is more provocative of discussion and dissent than such marking of things with stars; no two people can possibly agree about the things that are included, nor can anyone except the maker of the list explain why others of equal or surpassing merit (as they seem) are left out and unstarred.

But such lists are always amusing, whether they be of books or of trees, and carry with them the challenge: "I think these are best, and I know you will agree with me."

We will suppose that the place for which we want our trees and shrubs is a small one in a village—a lot of seventy-five by one hundred and fifty feet—and that the greatest effect of size is to be sought by planting about the foundations of the house and along the boundaries, leaving an open lawn, and that large trees which would interfere with the best growth of shrubs and would shade the house too much are not desired.

We will suppose also that much quiet beauty, lasting the year round but changing with the seasons, is expected, and that the place will be easy to care for, needing little labor, and that unskilled, except for the personal attention given by the owner when the pleasant days of spring and autumn tempt one to outdoor work. There is to be no garden and no flowers except those of the shrubs and whatever bulbs may be grown among them or in the grass.

This is the sort of place which many suburban dwellers who care little for gardening, but who want a place to look well kept and pretty, would like; and, indeed, such treatment would relieve most of the monotonous bareness of our suburbs in March; for it is in winter as well as in summer that shrubs are needed. Then the surroundings of our houses with the leafless trees and the dull, dead grass seem very cold and ugly, but shrubs are always beautiful with their slender branches, sometimes tinged with red and yellow and with berries still hanging to attract the birds. A mass of shrubs gives relief and aerial perspective to the winter scene.

1. Daphne cneorum.
2. Pieris floribunda.
3. Kalmia latifolia.
4. Rhododendron maximum, and hybrids.
5. Azalea vaseyi.
6. Deutzia crenata.
7. Spiraea van houttei, S. prunifolia, S. thunbergi.
8. Rosa rugosa.
9. Rosa setigera.
10. Berberis thunbergi, B. vulgaris, B. sinensis.
11. Lonicera tartarica, L. ruprechtiana, L. morrowi, L. standishi.
12. Philadelphus coronarius.
13. Exochorda grandiflora.
14. Forsythia fortunei, F. suspensa, F. viridissima.

15. *Syringa vulgaris*, and hybrids.
16. *Chionanthus virginica*.
17. *Pyrus ioensis*.
18. *Crataegus* in many varieties.
19. *Cornus florida*.
20. *Hibiscus syriacus*.
21. *Magnolia stellata*, *M. soulangeana*, *M. acuminata*, etc.
22. *Betula nigra*, *B. lenta*, *B. papyrifera*, *B. populifolia*.
23. *Cladrastis lutea*.
24. *Pinus strobus*.
25. The oaks in many varieties.

To begin, then, with our list, which is arranged roughly according to size, from the smallest to the largest, No. 1 is *Daphne cneorum*, a low spreading evergreen, having deliciously scented pink flowers which cover the plant in May and again in September. It is easy to grow and lasting, but should not be too much shaded by other shrubs, but reserved for use at the side of the steps or by a low terrace wall. The *Daphne* costs about fifty cents for a small plant.

Next comes *Pieris floribunda*, the andromeda, another broad-leaved evergreen of fine color, bearing delicate sprays of white flowers resembling the lily of the valley in form, but lacking its fragrance. This reaches three or four feet in height when very old, and seems invulnerable to the coldest winds or the hottest winter sun. Small plants twelve to eighteen inches high cost a dollar, and are worth it.

The mountain laurel, *Kalmia latifolia*, is the third, and it seems unnecessary to describe its brilliant green foliage or its delicately colored flowers, but it is well to point out its great adaptability and hardiness and the ease with which it may be collected and grown. This is the cheapest of all broad-leaved evergreens.

The rhododendron is our best known broad-leaved evergreen. Its flowers have great variety of color in red tones and shades and are unsurpassed in magnificence of effect. The rhododendron needs the protection which is given by planting in masses, and is likely to suffer if it stands by itself. The rhododendron attains a height of from five to twelve feet. The price of rhododendrons varies so much, according to size and variety, that it is impossible to give their cost; good plants, though small, may be got for a dollar.

Azalea vaseyi is hardy, deciduous, and has the most beautiful flowers of any of the family. They are a wonderful pink—delicate as a shell in color and thoroughly satisfactory. It is at maturity five to twelve feet high; but in the nurseries is seldom seen over two feet. Such plants cost seventy-five cents.

All the above belong to the Heath family, and limestone soils should be scrupulously avoided for them.

The *Deutzia crenata* is a medium-sized shrub (five to seven feet high), bearing white or pink double flowers in early June, after *Spiraea van houttei* and before the *Weigelia*; at other times it is ordinarily interesting. "Pride of Rochester" is a good variety. *Spiraea van houttei* is the best of the family. It is indispensable, but so well known that any description of its beauties seems unnecessary.

Since the introduction of *Rosa rugosa* from Japan, a white-flowered form has been produced which to my mind is more beautiful than the red, and has the same poppy-like delicacy and grace of petal and the same large orange-red haws. The foliage of the *rugosa* rose is exceeding good, being dark green, rough and shining, and not easily injured by blight or insects. The branches are very spiny and reach six feet high.

Rosa setigera, the prairie rose, is more

Hardware and the House

"FAIRFAX"
(Colonial)
Wrought
Bronze

The selection of the hardware trimmings for your new house is of equal if not of greater importance than the choosing of the wall-paper or other decorative features. Hardware is purchased as a permanent ornamental utility, and by making its selection a personal matter you will be able to express your own individual taste and at the same time judge as to the quality of the hardware itself.

SARGENT'S Artistic Hardware

presents unusual opportunities for effective ornamentation. The many different patterns were designed to harmonize with any architectural motif and to accentuate the artistic appearance of any style of finish.

Sargent's Book of Designs—Sent FREE

No matter what the style of your new home, you can find designs of hardware in our free book that will exactly suit your requirements. The Book of Designs offers a choice of seventy patterns—all different—and is invaluable to all planning or building a home. We send it free to those interested. Address

SARGENT & CO.,
156 Leonard St., New York.

SEDGWICK THE ARCHITECT



Send One
Dollar
For

A Beautiful Book BEST HOUSE PLANS

It Contains 150 Designs
MEDIUM COST
HOUSES

\$1,000 to \$10,000

Two Supplements Included
Send 10c. postage for new
Improved Portfolio of
Modern Churches.

This Handsome House Cost \$3,500.00; Complete Plans \$15.

028 H Lumber Exchange, Minneapolis, Minn.

Paint Without Oil

Remarkable Discovery That Cuts
Down the Cost of Paint Seventy-
Five Per Cent.

A Free Trial Package is Mailed to Every-
one Who Writes.

A. L. Rice, a prominent manufacturer of Adams, N. Y., has discovered a process of making a new kind of paint without the use of oil. He calls it Powderpaint. It comes in the form of a dry powder and all that is required is cold water to make a paint weather proof, fire proof and as durable as oil paint. It adheres to any surface, wood, stone or brick, spreads and looks like oil paint and costs about one-fourth as much.

Write to Mr. A. L. Rice, Manuf'r., 227 North St., Adams, N. Y., and he will send you a free trial package, also color card and full information showing you how you can save a good many dollars. Write to-day.

Sample Free

Mention dealer's name
when you write.

Old English Floor Wax

"The Wax with a Guarantee"
Highest quality.
Most economical.

1 lb. covers
300 sq. ft.
50c. a lb.



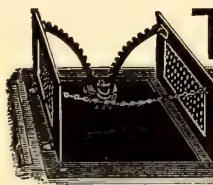
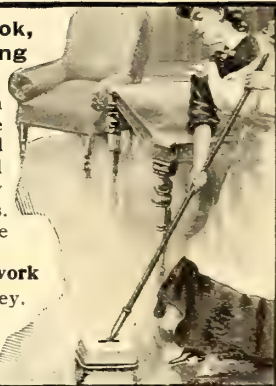
Send for Our Free Book, "Beautifying and Caring for Wood Floors"

It contains expert advice on keeping floors and furniture beautiful. It explains why Old English Floor Wax is accepted as the standard of "quality" by high-class professional decorators. We guarantee Old English to give entire satisfaction on

Floors, Furniture, Interior Woodwork
if used as directed, or refund money.

A. S. BOYLE & COMPANY
Dept. O, Cincinnati, Ohio

Largest Exclusive Manufacturers of Floor Wax in the World.



T. H. BROOKS & CO. CLEVELAND, O. FLOOR & SIDEWALK LIGHTS. OF EVERY DESCRIPTION. SEND FOR CATALOGUE.

The SCIENTIFIC AMERICAN BOY

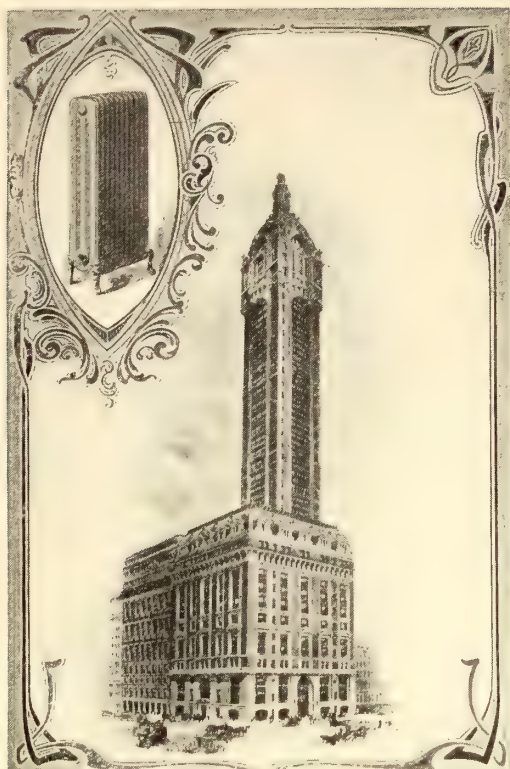
By A. RUSSELL BOND

12mo. 320 Pages. 340 Illustrations. Price, \$2.00, Postpaid.



STORY OF OUTDOOR BOY LIFE, suggesting a large number of diversions which, aside from affording entertainment, will stimulate in boys the creative spirit. Complete practical instructions are given for building the various articles. The book contains a large number of miscellaneous devices, such as scows, canoes, windmills, water wheels, etc.

MUNN & CO. Publishers of "SCIENTIFIC AMERICAN" 361 Broadway, New York



Kinnear Pressed Radiators

Selected for
THE SINGER BUILDING, NEW YORK
Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

**On the Wall—Off the Floor
Out of the Way**

If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.

Write for Catalog "D" for any desired information.

**THE PRESSED RADIATOR CO.
PITTSBURGH, PA.**



Clovers

We are the largest growers of Clovers and Timothy seed in the world. We make a great specialty of

**Timothy Medium Red Clover
Mammoth Red Clover
Alfalfa Clover Alsike Clover
Blue and Red Top Grasses**

Salzer's 20th Century strain of above seed is positively the purest seed on earth.

SALZER'S Great Catalog

Contains a splendid array of pedigree seeds for the American Farmer. It's the only original seed book published—brim full of bristling seed facts. It is gladly mailed to you, also samples of clovers upon receipt of 10c to cover postage.

**John A. Salzer Seed Co.
14 High St., LaCrosse, Wis.**



rambling, has smooth, gray-green branches and good leaves. It is in bloom through July, and the single pink flowers in clusters are very beautiful, though they lack fragrance.

Berberis thunbergii, the inevitable, the faultless, the gardeners' delight, will, of course, have the place of honor in front of the plantation, and there it will be as prodigal of its beauties, of its small graces and its sturdy bravery as ever. Its elder brother, *Berberis sinensis*, has much to offer in a quiet way, and should be tried. *Berberis vulgaris* is our common barberry, and is a useful shrub.

The *Lonicera* family is so large and all its varieties are so excellent that the choice of any one is an affront to the rest. *L. tartarica* and *L. morrowi*, *L. ruprechtiana* and *L. standishii* differ in time of flower and color of fruit and somewhat in habit, but one is safe with any of them.

Philadelphus coronarius completes our first dozen. It will be recognized more easily as *Syringa*, which is the lilac's formal name. *Philadelphus* is a large bush, growing to nine feet sometimes. Its great merit is in the creamy-white sweet-scented flowers and its considerable ability to endure the shade of trees and buildings.

Exochorda grandiflora, the pearl bush, has a delicate, slim refinement, hinting of its Japanese origin. In May it bears sprays of white, five-petaled flowers very gracefully carried on delicate branches.

Forsythia—there are several varieties much alike to the amateur—has more beauties than its early springtime haze of yellow. In the autumn its leaves turn brozy green and are almost the last to fall. It is rather stiff and ungraceful in winter.

All these shrubs can be bought for twenty-five cents in a two or three foot size, and are much cheaper in quantity.

The lilac (*Syringa* in many varieties) is the best loved of all shrubs, and now it is possible to have a long season of bloom by the use of the many newly introduced varieties, such as *S. pekinensis*, *S. villosa*, *S. josekaea*, *S. pubescens*, etc.; besides these there are the new varieties of the old white and purple lilac. "Ludwig Spaeth" is the richest lilac color, and some of the white ones, like "Marie Legeraye," have large trusses. The single flower even is as large as a silver quarter. The named lilacs should be on their own roots or grafted on lilac, and are then worth fifty or sixty cents each. They last a very short time when grafted on privet.

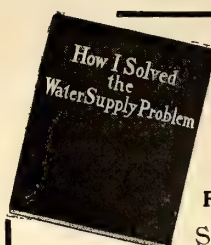
Chionanthus virginica, the white fringe, is the first of our list which becomes a small tree. This is a native shrub of exceeding beauty when covered in May with its tassels of white flowers. The foliage, too, is good in color, and the whole tree is quite distinguished looking. It is a vigorous grower.

Pyrus ioensis, the flowering crab apple, is covered with fragrant pink blossoms in May.

The *Crataegus* is good to break the sky line of a mass of shrubs, or as a specimen it is picturesque and informal, like an old apple tree dwarfed. There are innumerable and indistinguishable varieties—all have white flowers and red haws carried through the winter.

The dogwood (*Cornus florida*) is perhaps our most beautiful small tree. Its foliage is good, the branches delicate, and the red fruits give it brilliancy in winter. The flowers are the most striking of all outdoors, and the most decorative when brought in the house.

Hibiscus syriacus, or rose of Sharon, is large, hardy, and useful as a tall hedge plant and because of its flowers, which come late in summer, at a time when there are no other shrubs in bloom. The flowers of the old-fashioned variety are not good in color, being



Running Water with Force for Your Home

Farm, Village or Suburban

Send for this Book.

It tells how our specially designed, air tight steel tank and pumping apparatus, placed anywhere, with ordinary air pressure, does it. No overhead tanks to leak or freeze. Plenty of running water everywhere, also fire protection—that's the

Leader

Water Supply System

For country homes; public buildings; towns. Satisfaction guaranteed. Ask for free book—"How I Solved the Water Supply Problem." Send TODAY.

LEADER IRON WORKS

Factory and Main Offices 2175 Jasper Street DECATUR, ILLINOIS
Western Branch Dept. T, 126 W. 11th Street KANSAS CITY, MO.

Our Improved Method of

FINISHING FLOORS

old or new, for rugs or otherwise, with



LIKE THIS

GRIPPIN'S

Floor Crack Filler and Finishes.

Sanitary, inexpensive

and simple to apply.

A SAMPLE showing

how (while they last),

and descriptive matter

FREE. Write now.

GRIPPIN MFG. CO.

Dept. P NEWARK, N. Y.

Van Dorn Iron Works Co.



**PRISON, HOUSE &
STABLE WORK**

**JOIST HANGERS
LAWN FURNITURE
FENCING, ETC.**

CLEVELAND, OHIO



PATENTED

Standing Seam ROOF IRONS

CLINCH right through the standing seam of metal roofs. No rails are needed unless desired. We make a similar one for slate roofs.

SEND FOR CIRCULAR

**BERGER BROS. CO.
PHILADELPHIA**

2 H.P. STATIONARY ENGINE \$29.50 (ENGINE ONLY)

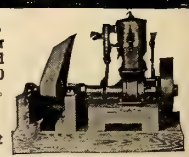
FOR Farm and Shop Work.

Start without cranking; no cams or gears. Burns Alcohol, Kerosene and Gasoline. All sizes in stock—2 to 20 horse-power. Steel connecting rods. Anti-friction bearings; no vibration.

Write for free catalog.

Run Separators, Corn Shredders, Grist Mills, Pumps, Dynamos, etc.

DETROIT ENGINE WORKS, 225 BELLEVUE AVE., DETROIT, MICH.





GARDEN FURNITURE

FOLLOWING our suggestion of last month, wherein we offered our services in the planning and laying out of gardens, we now show some examples of our work, of which we will gladly send illustrations, or our complete portfolio of "Garden Furniture" for twenty-five cents.

FOUNTAINS, STATUARY, COLUMNS, PERGOLAS, BALUSTRADES, STANDARDS, SUN-DIALS, PEDESTALS, BENCHES, TABLES, VASES, WALL FOUNTAINS, WELL HEADS, LIONS, SPHINXES, ETC., IN MARBLE, STONE, AND POMPEIAN STONE THAT SUCCESSFULLY WITHSTANDS THE AMERICAN WEATHER.

THE ERKINS STUDIOS
3 West 15th St. NEW YORK

ELLWANGER & BARRY

Have for upwards of 70 years been recognized as leaders in the production of HIGH GRADE

TREES

Shrubs, Roses and Hardy Plants

The fame of these great Nurseries has extended over the length and breadth of this country, as well as to all parts of the civilized world. They are prepared for the Spring season of 1908 with their usual large and exclusive collections at prices consistent with the high quality of the goods furnished.

They have no agents, but sell their products through the medium of a complete Illustrated Descriptive Catalogue which gives prices and contains full cultural directions.

Superb New Edition of this Catalogue is now ready and will be mailed free upon request.

Mount Hope Nurseries,
Rochester, N. Y.



From "Concrete Country Residences"



From "Reinforced Concrete in Factory Construction"



From "Concrete Construction About the Home and On the Farm"

For Factory For Farm For Home Concrete Construction is the Best

For the benefit of those who desire to make lasting improvements about the FARM, FACTORY or HOME, and as a guide to those contemplating new construction, we have published the following books

For the Suburbanite and Farmer

"Concrete Construction About the Home and On the Farm." A book containing directions for making and handling concrete; also many specifications, sectional drawings and photographs of the smaller constructions that can be built by the layman without skilled labor.

Paper bound copies, free upon request Cloth bound copies, 25c each

For the Home Builder and Investor

"Concrete Country Residences." A book containing photographs and floor plans of over 150 Concrete Houses, ranging in price from \$2,000 to \$200,000. The houses not only show a large variety of design, but are of several different systems of concrete construction. These are not imaginary sketches, but houses already built and designed by the best architects in the country.

Copies (168 pages, size 10x12) will be sent, express prepaid, upon receipt of \$1.00

For the Manufacturer and Merchant

"Reinforced Concrete in Factory Construction."

A book containing (besides several general chapters on concrete, concrete aggregates, methods and materials for reinforcing) ten chapters giving detailed descriptions of ten concrete factories and warehouses erected in various parts of the country by different systems, with photographs and sectional drawings and specifications furnished by the engineers in charge of the work.

This book, profusely illustrated (250 pages, size 6½ x 9), pamphlet bound, sent free upon request to Architects, Engineers and Manufacturers who contemplate building.

Cloth bound copies, 50c each

For the Mechanic and Artisan

"Concrete Cottages." A 16-page pamphlet showing photographs, floor plans and specifications for small concrete houses ranging in cost from \$1,500 to \$4,000.

Copies sent free upon request

THE ATLAS PORTLAND CEMENT CO., DEPT. 10, 30 BROAD ST.
NEW YORK



View of General H. O. Corbin's country residence, Chevy Chase, Md.
Supplied with water by Kewanee System. D. H. Burnham & Co., Archts.

Water for Your Country Home

It is now possible to have in your country home, all the conveniences and every comfort of a city water supply. This means an abundance of water delivered to all plumbing connections and hydrants under ample pressure. It means plenty of water in the bathroom, kitchen, laundry, lawn, garden, barn—anywhere. This service, together with first-class fire protection, is assured if you install

The Kewanee System of Water Supply

With the Kewanee System, there is no elevated tank to mar the beauty of the landscape, to freeze, leak, over-flow or collapse. No dangerous and inefficient attic tank is required. Use a Kewanee Pneumatic Tank which may be placed in the cellar or buried in the ground. The water is pumped into this tank and is then delivered by air pressure to all fixtures and hydrants.

The Kewanee System is based on a thoroughly scientific principle. It involves the

highest quality of equipment, together with many years practical experience and the technical knowledge of hydraulic engineers. We have solved over 8000 water supply problems successfully. Let us show you what we can do for you.

Here is what General Corbin says:

"The Kewanee System works better than I thought possible. I am showing it to lots of people and all like it very much."

No charge is made for preliminary specifications and estimates. We protect you with a guarantee of satisfactory results. Our complete 64-page illustrated catalog explains everything and it is free. Ask for catalog No. 36 and mention this publication.

Kewanee Water Supply Company

Kewanee, Illinois.

No. 32 Broadway, New York City.
820 Marquette Bldg., Chicago.
404 Equitable Bldg., Baltimore, Md.

a disagreeable blending of red and blue; but there are now several varieties in white and pink. The leaves are very late in coming out in the spring, which is an objection.

The magnolia family is a large and interesting one of small and large trees with showy flowers. *M. stellata*, Hall's magnolia, is the smallest, and bears star-like flowers in the spring before the leaves.

M. soulangeana is larger, with cup-shaped pink or white flowers, borne soon after those of *M. stellata*. The tree branches low and forms a round-topped open head.

M. acuminata, *M. umbrella* and *M. tripetala* are larger trees, very beautiful when they can be used.

All magnolias have clean, gray branches and good foliage, lighter on the under side.

The birches have the most delicate and ladylike beauty of all our trees, and should be more often planted. The common white birch (*B. alba*) in all its many varieties is a poor thing, not the equal of our gray birch (*B. populifolia*), and far inferior to the canoe birch (*B. papyrifera*), which is a regal tree, reaching sixty to eighty feet in height. The river birch (*B. nigra*), between the gray and the white in size, and the sweet birch (*B. lenta*) are both good.

Cladrastis tinctoria, the yellow wood, is a tree with pinnately compound leaves, belonging to the pea family. It always looks particularly well as a specimen on a well-kept lawn. The flowers are interesting and the leaves turn clear yellow in the fall.

To another correspondent (C. E. W.), who asks us what we consider the best evergreen, we may say that there is no "best," the purposes for which they may be used vary so greatly, but that the grandest of our evergreens is the white pine (*Pinus strobus*), whether it grows in woods, with tall, straight poles and a small top, or in the open, with a low-branched, picturesque head. No tree makes such a constant and effective appeal to so many of our senses. It is always beautiful, and everyone must remember its sweet aroma with delight and the sound of the wind through its needles with longing. It should be more often planted as a year-round screen; and as a wind-break it is excellent, though perhaps not the best.

The oaks are the most famous trees for magnificence and grandeur, and the white oak is thought our noblest tree. There are many varieties and forms of oaks that are useful in different ways; but if there is room for but one large tree, let it be a white oak.

The trees will cost from twenty-five cents to a dollar each in small sizes, which are most satisfactory.

In reply to A. M. B.'s question about the red cedar (*Juniperus virginiana*). The red cedar can be transplanted from the fields, in the spring or in August, without difficulty, if the work is done with care. It is the only substitute we have for the Italian cypress, and although it is not in any way the equal of the cypress, it is a useful tree for formal gardens or to give emphasis to a group in picturesque planting; and its color in winter suits our landscapes better than that of the cypress. Under cultivation it improves in color, luxuriance and rapidity of growth, just as any tree brought from the hard conditions of its native pastures improves in the rich soil of a garden.



HARTSHORN SHADE ROLLERS

Wood Rollers

Tin Rollers

Bear the script name of Stewart Hartshorn on label.
Get "Improved," no tacks required.

Philosophy of Protective Paint

A practical treatise on the subject of protective paint by a practical paint man of long experience. Write for free copy No. 106 B.

—Joseph Dixon Crucible Co., Jersey City, N. J.—

Details of Building Construction

A collection of 33 plates of scale drawings with introductory text.

This book is 10 by 12½ in. in size, and substantially bound in cloth.

By CLARENCE A. MARTIN

Assistant Professor, College of Architecture, Cornell University

Price, \$2.00

For Sale by
MUNN & COMPANY, 361 Broadway, New York

We will send
A **AMERICAN HOMES & GARDENS**
and Scientific American
for one year to one address for
FIVE DOLLARS
Regular Price
Six Dollars

GARDEN NOTES

By Eben E. Rexford

MANURE can be applied to orchard, field and garden now. Spread it as evenly as possible. Use it as liberally as circumstances will warrant, keeping in mind the fact that what we give to the soil is always returned to us in the quality and quantity of the crops we harvest from it.

The generous use of fertilizers is absolutely necessary if one would achieve anything beyond an ordinary degree of success in the growing of vegetables and small fruit. The amateur gardener is likely to lose sight of, or ignore, this fact. He can not afford to do so. Our most successful farmers and gardeners are those who have been applying fertilizers to their soils for years. They believe in keeping up soil-fertility, and the only way in which this can be done effectively is by returning to the ground yearly those elements which the annual crop extracts from it.

What plant-foods to use constitutes a problem each person will have to solve for himself. In its solution the kind and quality of soil with which he has to deal must be considered, also the crop he proposes to grow. Read up along these lines. Study the philosophy of the soil and the effect of various fertilizers on it. Consult men of sound sense and practical experience. It is not necessary for each person to experiment for himself in all departments of gardening, as some seem to think. Others have already experimented, and why should we not reap the benefit of their experience, and save ourselves the time and labor of going over the same ground. Knowledge at second-hand is just as valuable as first-hand knowledge, provided it is real knowledge.

Go over the plum and cherry trees and make a thorough search for black-knot before the season opens. Cut and burn each diseased branch. This treatment is considered so important that in several States laws have been enacted against leaving plum-knots on the trees.

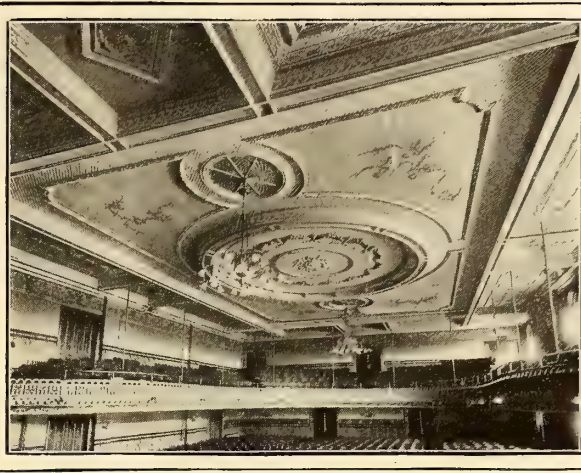
Much damage has been done, in late years, by borers in peach, plum, pear and cherry trees. Many experiments have been made, with a view to exterminating the pest, but, so far, no positive remedy has been found. The following preparation, however, has been found of considerable benefit, if used early in the season, because it prevents many eggs from hatching. Slake *fresh lime*, and prepare it as you would for whitewash. To two-thirds of a pailful of this liquid add one pint of gas-tar and one pound of whole-oil soap dissolved in hot water, or, if preferred, one pound of potash may be substituted for the soap. Then add clay enough to make the mixture as thick as cream. Mix thoroughly and apply with a stiff brush. Scrub the trunk and large limbs of the trees with it, and work it well into every crack and crevice. Remove some of the earth about the base of the tree and paint the roots liberally. This treatment will prevent the borer from doing the injury he would if left undisturbed. It also works well against bark-lice and scale.

Ashes and bonemeal make an excellent fertilizer for small fruit. Use in the proportion of one part bone meal to ten parts ashes. Mix well before applying. Scatter broadcast about the bushes, as soon as snow is gone.

Look over the small fruit plantation, and remove all defective plants. Especially such as show signs of disease. One diseased plant, if allowed to remain, may be the ruin of the entire collection.

Crop rotation should be practised in the garden. Change the location of your vegetables from year to year.

Small gardens can be spaded up to better



Berger's

"CLASSIK"

STEEL CEILINGS

cover the field so completely that suitable selection may easily be made for any class of room, whether something elaborate or something simple and low-priced is desired.

MOST COMPLETE LINE OF ARTISTIC STEEL CEILINGS IN EXISTENCE

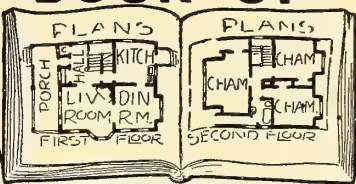
Have you the Catalog?
Write for it TO-DAY
Ask for D 64

The Berger Mfg. Co., Canton, Ohio

New York Philadelphia Boston Chicago St. Louis San Francisco Minneapolis Atlanta

SPECIALTIES: STEEL CEILINGS, ROOFING, VAULT AND SIDEWALK LIGHTS, FIREPROOFING, STEEL FURNITURE, ETC.

FREE BOOK OF PLANS


FOR Home Builders

With One Year's Subscription to

Keith's Magazine

Plans for your new home with all the information you need to make home building easy and satisfactory. Keith's Magazine is devoted to home building, decorating and furnishing. Each 64-page issue contains plans for seven practical, artistic house designs, drawn by the best architects in the country. Keith's Magazine is filled from cover to cover with helpful ideas and suggestions for home builders and home makers. It helps to make every dollar you put into your home count for beauty, utility and lasting satisfaction. Subscribe *now* and we will send you our handsome book, showing

42 COTTAGE AND BUNGALOW PLANS FREE

This book gives you your choice of 42 inexpensive, up-to-date, model designs, with accurate descriptions, illustrations and cost estimates at current prices. The book also tells how you can obtain Free Blue Print Plans. With Keith's Magazine and its free information service, together with our books of designs, your building simply cannot go wrong, because

Keith's Magazine

deals in facts. It can be relied upon absolutely as the recognized authority for home builders, and is the only publication of its kind in existence.

One year's subscription to Keith's, \$1.50 with illustrated book of 42 Cottages and Bungalows FREE. Book of designs for 74 Homes costing \$3000 to \$5000, and Keith's for 1 year, \$2.00. Book of Designs for 72 Homes costing \$5000 and up, and Keith's for 1 year, \$2.00. Book of 120 Beautiful Interiors and Keith's for 1 year, \$1.75. Single copies of Keith's at all news-stands, 15 cents.

MAX L. KEITH, Lumber Exchange 534, MINNEAPOLIS, MINN.

advantage than they can be plowed, for team and plow can not do the best kind of work when cramped for room. It will be necessary to use the spade to complete matters, after having used a plow, for much of the soil, at the edges of the lot, will be left unturned. Much can be accomplished in a day if a sharp, thin-bladed spade is used, and the work is by no means as hard and tiresome as most amateur gardeners seem to think. My preference for the small garden is the spade every time. Much neater work can be done with it than with the plow.

If your garden is without asparagus and rhubarb, do not fail to set out some of these plants this spring. Locate them at the sides, where they will not interfere with the use of the wheel cultivator.

If you are not already the owner of a wheel cultivator, don't neglect to add one to your stock of garden tools this season. It is the most all-around useful tool any gardener can have. With it he can clean and cultivate his garden in a fraction of the time that is required when a hoe is depended on. And the work will be better done.

In order to get the best results from the use

of a cultivator plant your garden in rows. Plant in such a manner that the cultivator can be run the entire length of the garden without turning.

The window-garden ought to be gay with blossoms at this season.

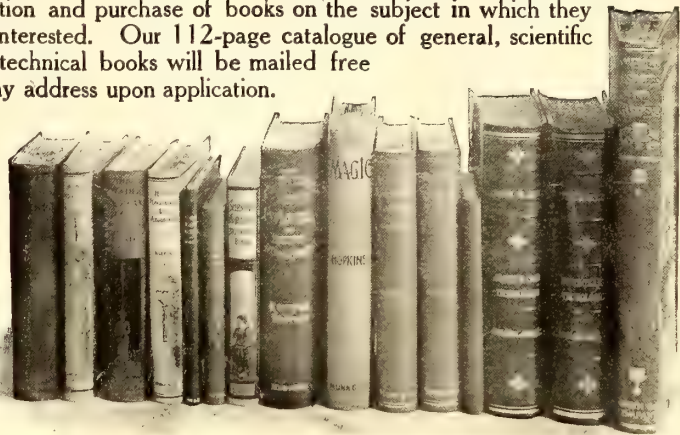
Make cuttings from your plants for summer use in beds. Go over them and remove all small branches that do not seem to be needed. Insert them in the pot, alongside the old plants, pinching the soil firmly about their base, and not one in ten will fail to grow. In this way one can easily secure enough young plants of geranium to fill a good-sized bed, and the old plants will be all the better for the pruning they get.

Bring up the plants that have been wintered in the cellar. As soon as they are placed in the light and watered well they will begin to grow. When new branches break, go over them and prune them into symmetrical shape. Pruning should not be done until growth starts, for one can not always tell in advance where new branches will be produced.

Fuchsias should be cut back at least half. In fact, leave little but the main stalks and

Our Book Department

WE OFFER our patrons and subscribers the advantages of a long established and widely experienced department, devoted to the publication and distribution of modern, up-to-date books pertaining to all branches of Engineering, Mechanics, Chemistry, Science, Industrial Arts, Trades and Manufactures. We shall be glad to aid our patrons in the proper selection and purchase of books on the subject in which they are interested. Our 112-page catalogue of general, scientific and technical books will be mailed free to any address upon application.



Some of the Scientific American Publications

The Scientific American Reference Book, compiled by A. A. Hopkins, 12mo, cloth, 516 pages, illustrated.....	\$1 50
The Scientific American Boy, by A. R. Bond, 12mo, cloth, 317 pages, 320 illustrations.....	2 00
Home Mechanics for Amateurs, by Geo. M. Hopkins, 12mo, cloth, 370 pages, 326 illus.....	1 50
Experimental Science, by Geo. M. Hopkins, 2 volumes, 1100 pages, 900 illustrations.....	5 00
The Scientific American Cyclopaedia of Receipts, Notes and Queries, edited and compiled by Albert A. Hopkins, revised edition, containing 15,000 selected formulas, 734 pages.....	5 00
Magic, Stage Illusions and Scientific Diversions, by A. A. Hopkins, 8vo, cloth, 556 pages, illustrated.....	2 50
The New Agriculture, by T. Byard Collins, 8vo, cloth, 374 pages, 106 illustrations.....	2 00
Industrial Alcohol, Its Manufacture and Uses, by John K. Brachvogel, 8vo, cloth, 516 pages, 107 illustrations.....	4 00
Practical Pointers for Patentees, by F. A. Cresee, 12mo, cloth, 144 pages.....	1 00
American Estates and Gardens, by Barr Ferree, quarto, 11x13½ inches, 340 pages, 275 illustrations.....	10 00
The Design and Construction of Induction Coils, by A. Frederick Collins, 8vo, cloth, 400 pages, 125 illustrations.....	3 00
The Technological Dictionary, Spanish-English, { Vol. I, Ingles-Español, \$8.50 { Two English-Spanish, by N. Ponce De Leon, { Vol. II, Spanish-English, 7.50 { vols.....	16 00

Full descriptive circulars of the above books will be mailed free upon application

MUNN & Co., Publishers, 361 Broadway, New York

A FEW YARD FRUITS

(Continued from page x)

do not know where we will find anything handsomer than Diamond. This is truly magnificent in size, while the tree is sturdy and productive and hardy. Mary proves to be another sturdy tree, bearing a yellow fruit of fine quality. Monarch is a very late plum, of huge size and fine quality, but I am not quite sure of the tree. Peter's Yellow Gage is an old plum, but it ought not to be overlooked in a small yard. It is the best yellow plum I have ever tasted. Grand Duke is a thoroughly satisfactory plum, ripening in October. The tree is very erect; the plum very large and very good. Reine Claude is nearly as good as the Green Gage, bears heavily, and ripens nearly as late as Grand Duke. After testing a large number of Mr. Burbank's introductions, I like best of all Shiro. The tree is absolutely hardy, and the plum a light yellow, of large size, and exceedingly beautiful as well as good. For late his Gold is the best that I have tested, and it is a noble plum. These two sorts show not the least sign of rot. America I like much better than I did, for a very early sort; and the tree is entirely hardy. It always bears heavy crops. I find that it must be picked, like Abundance, as soon as it begins to color, and ripened in the house. Red June and Sultan have not proved entirely hardy, but the first is of fine quality, while Sultan can hardly be exceeded. The Sultan is red-fleshed, and rather a straggling grower. On the whole, Abundance can not be dispensed with, for both cropping and quality. I have not yet fruited the Apple plum, nor the Climax. I like the Bartlett for its growth, being very much like a small Lombardy poplar.

If anyone cares to try peaches in the North I can recommend Crosby and Champion as two of the hardiest. Fitzgerald has given me no fruit. Carman has fruited once. I should select at present Alton, Champion, Illinois and Carman. Waddell is almost a copy of Carman and about as hardy. In my Florida garden I select from a list of very late sorts collected by my friend Munson, of Denison, Texas. Try growing seedlings.

I have two new grapes from Mr. Munson's hybrids, which are doing admirably well with me in New York, the Headlight and the Wapanuka. I notice two new grapes, which I have not yet tested, but feel very sure of, the Sunrise and the Eclipse. Of the older sorts I would hold myself pretty closely to Worden, Moores Early, Lindley, Niagara, Goertner and Herbert. These must be so planted that the Lindley and Herbert shall be pollenized from the others. Brighton is incapable of self-pollenization; but planted in the row with Moore or Niagara will be fine. Nectar is one more that must not be overlooked.

STUDY ARCHITECTURE

EASY LESSONS OR STEPPING-STONE TO ARCHITECTURE

BY THOMAS MITCHELL

A SIMPLE TEXT-BOOK telling in a series of plain and simple answers to questions all about the various orders, as well as the general principles of construction. The book contains 92 pages, printed on heavy cream plate paper, and illustrated by 150 engravings, amongst which are illustrations of various historic buildings. The book is 12mo in size and is attractively bound in cloth.

PRICE, FIFTY CENTS, POSTPAID
MUNN & CO., 361 Broadway, NEW YORK

stubby side branches. Aim to make these plants renew themselves almost wholly. A profusion of flowers depends on new and vigorous growth.

Do not prune hydrangeas at this season if you have any reason to think flower-buds were formed last fall. If you do, you will sacrifice this season's crop of flowers. If no buds show after the plants have begun to grow well, it will be safe to prune. This plant can be cut back sharply, as it sends out many new branches to take the place of old ones that are cut away.

Chrysanthemums will put up many sprouts from the old roots. Cut these apart and pot them, to grow into plants for fall use.

Take tuberous begonias and gloxinias out of the soil in which they were left in the fall and spread them out on a damp cloth in a warm spot to sprout. As soon as growth begins put them into six-inch pots of light, porous soil. The reason why sprouting before potting is advised is it is not always easy to tell which side of the tubers ought to go up or down until sprouts appear. If planted wrong side up they often refuse to grow.

Bring out your canas, caladiums, gladiolus and dahlias, and look them over carefully to

make sure of their condition. Throw away every root that shows any tendency to disease. Do not take these roots back to the cellar after having brought them up, but wrap them in paper and store in a cool, dry place until planting time.

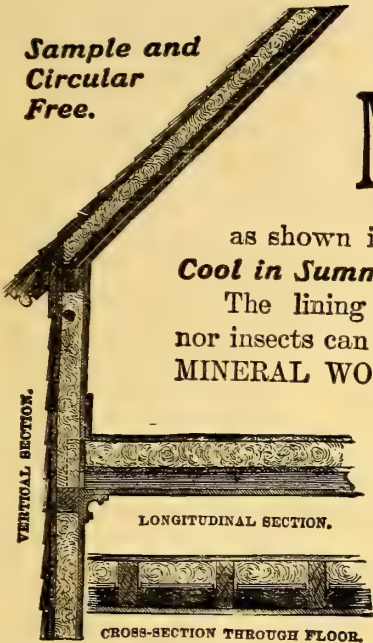
Fuchsias, being early bloomers, ought to be repotted before they have made much growth.

Pelargoniums should be showing buds now. Fertilize well, and be sure to keep the aphids from injuring them. Give plenty of sunshine and little heat. If any have bloomed and completed their flowering period, cut the plants back sharply—in fact, leave little but a stubby framework upon which, or from which, to form a new plant for another season's use. I would advise, however, starting new plants from cuttings made from the branches pruned away, as young plants are more satisfactory for window-garden use than old ones ever are.

Look the flower-garden over, and see what needs doing there this spring. Mark for removal all shrubs of inferior quality. You can afford to grow only the best.

If any shrubs seem to have outlived their usefulness, order others to take their places. Have these sent so they can be planted as soon as the ground is in working condition.

Sample and
Circular
Free.



A House Lined with Mineral Wool

as shown in these sections, is *Warm in Winter,
Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice,
nor insects can make their way through or live in it.
MINERAL WOOL checks the spread of fire and keeps
out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.
140 Cedar St., NEW YORK CITY.



It is most interesting to note that
the English Lantern, so universally
used in our modern homes, as well
as the mansions of old, was first made
of wood and bone for the purpose
of protecting from draughts the
notched candle which was kept
constantly burning to note the time
of day. In the adaptation of the
lantern to electricity—our most
modern illuminant—as shown in
the illustration above, it is not impaired in the
least as a work of art, nor does it in any way
lose its exquisite light-giving quality, notwith-
standing the fact it is no longer needed for
its original purpose, *the protection of a flame.*

*For the protection of our clients, our trade-mark will
be found on each and every piece of work made by us.*

The Enos Company

MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
San Francisco, 1748 California Street
Toronto, 94 King Street West
Pittsburg, G. P. Norton, Penn at 4th St.
NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & Co., BOSTON



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER TILING

An Ideal Floor Covering for Court
Houses, Banking Institutions, Churches,
Hospitals, Libraries, Business Offices,
Restaurants, Vestibules, Elevators,
Kitchens, Laundries, Pantries, Bath-
rooms, Steamships and Floating Pro-
perty generally.

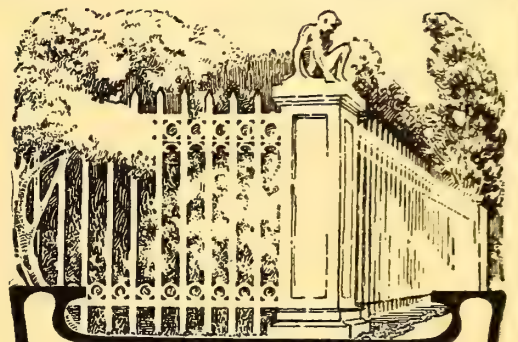
We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street



WROUGHT IRON FENCE And Entrance Gates WIRE FENCING

Ornamental Iron Work Tree-
Guards, Lawn Furniture Etc

Tennis Court Enclosures A Special
FEATURE

THE F. E. CARPENTER CO.
7 & 9 WARREN ST. NEW YORK

The Kimball Soloist



is a new
feature
for residence

pipe organs and is the world's most
remarkable achievement in self-playing
devices. This "Soloist," or solo-device,
may be built in any organ. For further
particulars write *Pipe Organ Department.*

W. W. Kimball Co.

New York Office
150 Fifth Ave.

Chicago Office
253 Wabash Ave.

PACIFIC MAIL



San Francisco
Hawaiian
Islands



Yokohama
Nagasaki
Hong Kong

The Sunshine Belt to the Orient

*Calm seas and summer skies
A one day's stop at beautiful Hawaii
The maximum of speed and luxury*

These are the reasons that make the Pacific Mail the ideal route to the Orient

From San Francisco to Hawaii, Japan, China and the Philippines

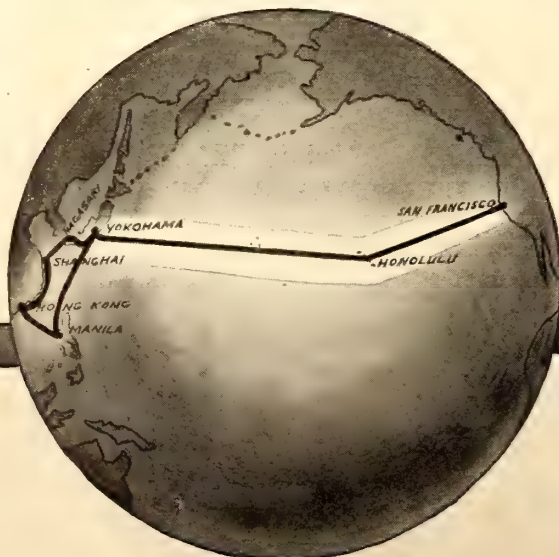
AROUND-THE-WORLD TOURS ARRANGED WITH STOP-OVER PRIVILEGES

Rates and information at any railroad ticket agent or from

PACIFIC MAIL S. S. CO., SAN FRANCISCO, CAL.

R. P. SCHWERIN, Vice-Pres. and Genl. Mgr.

CHICAGO
120 Jackson Boulevard
NEW YORK
1 Broadway 349 Broadway
WASHINGTON
511 Pennsylvania Avenue
CINCINNATI
53 East Fourth Street
ST. LOUIS
903 Olive Street
BALTIMORE
Baltimore and Hanover Streets



BOSTON
170 Washington Street
SYRACUSE
212 West Washington Street
PHILADELPHIA
632 Chestnut Street
HAMBURG (Germany)
Amerika Haus, Ferdinandstrasse
LONDON (England)
49 Leadenhall Street
22 Cockspur Street, N.E.

fNA
7100
A572
Hort.

AMERICAN HOMES_{AND} GARDENS



Vol. 5. No. 4

MUNN & CO. PUBLISHERS

Price 25 Cents

APRIL 1908



GREENHOUSE AND CONSERVATORY COMBINED

The conservatory opens directly from the main hall—the greenhouse adjoins the conservatory.

In one is a constant display of beautiful plants—in the other, cut flowers and vegetables are grown.

Architecturally, the combination is pleasing—from a practical point, most successful. Further information gladly given.

HITCHINGS & COMPANY

1170 BROADWAY, NEW YORK

TREES

Fruit and Ornamental Shrubs, Evergreens, Roses, Hardy Plants

All the Best and Hardest Varieties. Largest and most varied Collections in America at best prices direct from the grower. We have no agents. Beautiful new illustrated descriptive Catalogue, with cultural directions, mailed FREE on request.

Ellwanger & Barry

Nurserymen—Horticulturists

Mount Hope Nurseries.

ROCHESTER, N. Y.

ESTABLISHED 1840

The Outside "Furnishings" of a House

are as essential to beauty and comfort as the furnishings and furniture of the inside. Often places which have cost many thousands of dollars fail to present a pleasing and completed appearance because of failure to expend a few hundreds on trees and shrubbery. You needn't wait a generation for Trees, as you will have to do if you plant the sizes usually sold by nurseries. Hicks' Big Trees will give shade



WEEPING SILVER LINDENS MOVED BY US. PHOTOGRAPHED THE YEAR AFTER

and comfort right away. They've been growing 15 to 25 years in the Westbury Nurseries, and this time has been saved for persons who wish quick results. They are in prime condition for moving and placing where needed. We know of no similar supply elsewhere.

We have some big ones, well matured, grown and handled so they may be safely transplanted and shipped: Pin Oaks, 20 to 26 feet; Maples, 20 to 28 feet; Pines, Spruce and Cedar, 12 to 25 feet. Prices and full particulars given upon application. Describe your tree problems and we will suggest a solution.

ISAAC HICKS & SON, Nurserymen and Scientific Tree Movers, WESTBURY STATION, LONG ISLAND, N. Y.

Hicks Has the Trees Your Place Needs

BEAUTIFUL—AND CHEAP

Soft, velvety colors that will wear as long as colors can, and cost 50 per cent. less than paint to buy and apply, come from using

CABOT'S SHINGLE STAINS

Made with the best pigments, the best fixatives, and Creosote, "the best wood preservative known." The only stains made of Creosote and without petroleum.

Stained-wood samples and color chart sent free

SAMUEL CABOT, Inc., Sole Manufacturers
131 Milk Street, Boston, Mass.

AGENTS AT ALL CENTRAL POINTS



Green & Green, Architects, Los Angeles, Cal.

"Quilt," the warmest sheathing paper



435 7in. high Price \$3.
420 14in. high Price \$10.



A perfunctory gift reflects little credit to the donor, while a piece of TECO pottery testifies to the culture, and intelligence of the one giving; and implies the same

qualities in the one receiving—a gift coupled with a compliment.

Every piece of TECO pottery, with its soft, cool green tones represents the imprisoned inspiration of the artist who dreamed it.

For lawns, stair cases, verandas, conservatories.

Ask your local dealer or write to us. Our trade-mark is on the bottom of each piece.

The Gates Potteries,
651 Chamber of Commerce, Chicago.

Dealers in exclusive lines who wish to carry TECO should write us at once.



ARTISTIC HOMES

Before you build, send for "Hutton's Ideal Homes," a 48-page book containing designs and descriptions of Practical, Modern Houses, costing from \$1,000 to \$10,000. Suitable for any locality. A practical book for those intending to build. Postpaid, 25c. **MORACE T. HUTTON, Architect.** 67 Cutler Bldg., Rochester, N. Y.

GROWN IN NEW JERSEY

under soil and climate advantages—and ready to start growth again, anywhere, as soon as planted. Pomona Nurseries

TREES AND PLANTS

are the satisfactory kind. A complete assortment especially strong in Hardy Flowering Shrubs, Evergreens and Strawberry Plants. Landscape plans prepared and executed. Catalog free.

T. E. Steele, Dept. 34, Palmyra, N. J.

AUG 12 1985

LIBRARIES

Artistic Mantels



MISSION MANTEL FOR DEN

OUR CATALOGUES contain 130 designs, including Mission, Colonial, White, Mahogany & Oak. Everything, from the very cheapest to the best.

Fireplace Hardware and Tiling of every description.

Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.

Unity Building
Chicago, Ill.

306 Main Street
Jacksonville, Fla.

Factory, Knoxville, Tenn.



DINGEE Roses

"Dingee" is the name that has been associated with America's most famous Roses for nearly sixty years. It is a name that is in itself a guarantee of the strongest, hardiest and most beautiful roses grown.

Success in Rose growing depends upon two things—quality of the plants themselves and knowledge of how to care for them. The 1908 edition of our

New Guide to Rose Culture

is a book that tells just how to succeed with Roses. Describes over 1000 distinct varieties and has many full color illustrations of the newest and most beautiful Roses. Seeds a specialty. Complimentary copy sent to any address on request.

\$1.00

Buys

10

Famous
Roses

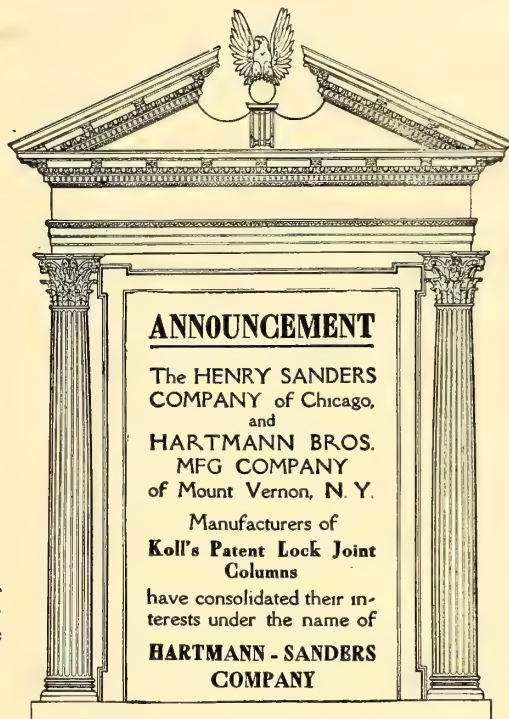
These ten Roses are all selected with the greatest care. All on their own roots and with proper care will grow and bloom anywhere. The ten comprises the famous Killarney, White Maman Cochet, La France, Souv. de Pierre Notting, Kaiserin Augusta Victoria, Helen Gould, Pink Maman Cochet, Mad. Abel Chatenay, Etolle de France, and the wonderful Tausendschön (Rose of a Thousand Beauties).

The Tausendschön is the sensation of the year. A hardy, climbing Rose loaded with clusters of blooms, each Rose a different color.

All ten for \$1.00. Safe delivery and satisfaction guaranteed. Orders booked for delivery when wanted. Now is the time to order.

THE DINGEE & CONARD CO.
West Grove, Pa.

The Leading Rose Growers of America
Established 1850 70 Greenhouses



ANNOUNCEMENT

The HENRY SANDERS
COMPANY of Chicago,
and
HARTMANN BROS.
MFG COMPANY
of Mount Vernon, N. Y.

Manufacturers of
Koll's Patent Lock Joint
Columns

have consolidated their interests under the name of
HARTMANN - SANDERS
COMPANY

The best Columns for porch, pergola or interior use. Send for catalogue A 19 of columns, or A 29 of sun-dials, pedestals, etc.

The Main Office and Factory will be at Webster and Elston Avenues, Chicago, Ill., and the Eastern Office at 1123 Broadway, New York.



The newer, better way; and cheapest in the end.

No pressure nor water in pipes and radiators; no air-valves; no noise. Just heat.

Radiators regulated at the radiator-valve—more or less heat at the touch of a finger.

Boiler automatically controlled: meets weather changes; saves bother and fuel.

Write for book illustrating and describing The Vapor System—the improvement on steam and hot-water

Vapor Heating Company

Broomell's patent Vapor System
121 S. Broad Street, Philadelphia

516 Pages, 107 Engravings

NOW READY

Price, Four Dollars

Industrial Alcohol

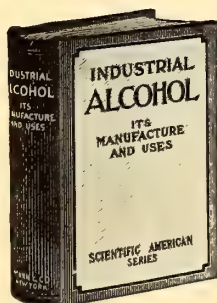
ITS MANUFACTURE AND USES

A Practical Treatise based on Dr. Max Maercker's "Introduction to Distillation" as revised by Drs. Delbrück and Lange

COMPRISING

Raw Materials, Malting, Mashing and Yeast Preparation, Fermentation, Distillation, Rectification and Purification of Alcohol, Alcoholometry, The Value and Significance of a Tax-Free Alcohol, Methods of Denaturing, Its Utilization for Light, Heat and Power Production, A Statistical Review and the United States Law

By JOHN K. BRACHVOGEL, M.E.



THE value and significance of a tax-free alcohol have been so widely discussed in the press and periodical literature of the entire country, that it is unnecessary to emphasize the great importance of the subject, especially to our agricultural and industrial interests. For years we have been far behind the nations of Europe in this regard, and in consequence our literature has been sadly lacking in authoritative works covering this phase of industrial activity. This book was designed with the especial purpose of filling this want, and it is the latest and most comprehensive work of its kind which has been published in this country.

Few in number are those to whom this book would not prove of interest and value. The farmer, the manufacturer, the power-producer, the householder, will all find that denatured alcohol is of such importance to them, that its use and introduction will effect savings and economies which were hitherto impossible of accomplishment.

FOR SALE AT ALL BOOKSTORES

BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont



FEATURES OF *The Easter* Metropolitan

On Sale March 15

The United States Army: Its Needs and Its Faults

Balloon Experiences of a Woman

Mrs. Julian P. Thomas, wife of Dr. Thomas, the well known balloon enthusiast, writes realistically of her many thrilling experiences in mid-air

General Fergusson's Reminiscences of West Point

The General roomed with Fitzhugh Lee back in the Fifties

Stories by Robert Hichens, Tom Masson, and many other favorite authors

The Easter Metropolitan will be full of good literature and art. *At all newsdealers'. 15c a copy; \$1.50 a year*

THE METROPOLITAN MAGAZINE, 3 West 29th St., NEW YORK



Kinnear Pressed Radiators

Selected for

THE SINGER BUILDING, NEW YORK

Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

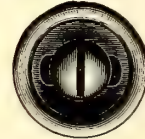
**On the Wall—Off the Floor
Out of the Way**

If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.

Write for Catalog "D" for any desired information.

**THE PRESSED RADIATOR CO.
PITTSBURGH, PA.**

PREVENTS DRAFTS, DUST AND WINDOW RATTLING.



IVES' PATENT
Window Stop Adjuster.

HEAVY BED

PATENTED.

The only Stop Adjuster made from one piece of metal with solid ribs and heavy bed that will not cup, turn or bend in tightening the screw. Manufactured only by The H. B. IVES CO., New Haven, Conn., U. S. A. (Fifty-page Catalogue Mailed Free.)

LIVE GAME

The celebrated Hungarian and English Partridges and Pheasants, the large Hungarian Hares, all kinds of Deer, Quail, etc., for stocking purposes.

Fancy Pheasants, Ornamental Waterfowl and Live Wild Animals of every description.

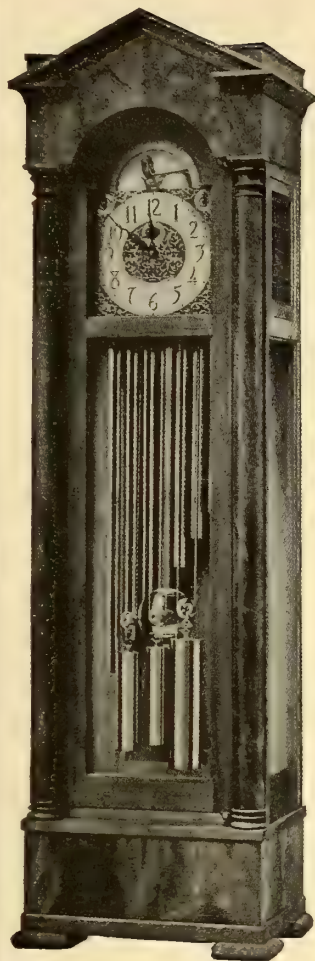
Write or Price List

WENZ & MACKENSEN, Dept. N., YARDLEY, PA.

"Concrete Country Residences"

Price \$1.00 Per Copy Express Prepaid

THE ATLAS PORTLAND CEMENT CO.
30 Broad Street, New York City



HALL CLOCKS

That are beautiful in design, finest in construction, richest in tone of chimes and superior time-keepers are some of the reasons that have made our business grow so rapidly.

Waltham Clocks

have a standard of value, whether it is a Hall Clock, "Banjo," Marble Clock, or Regulator.

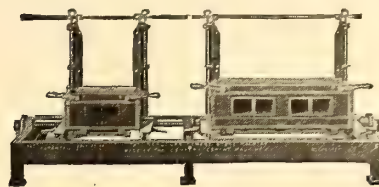
Nothing Better at Any Price

If your local jeweler does not sell our line send direct for our new illustrated catalogue

Waltham Clock Company
WALTHAM, MASS.

FREE THE STORY OF THE HERCULES

If you are at all interested in Concrete Machinery, you ought to send for our free 1908 catalog right now. This handsomely printed and superbly illustrated catalog is really a clear and concise text book on Concrete Construction.



Hercules Concrete Block Machine

If you really want a machine that will do all that all other machines will do—and some extra—and do everything better, then you want The Hercules. It is the face down, wet mixture machine, the only kind that will make a real coarse mixture block—a real concrete block. The Hercules is the strongest, fastest, simplest concrete block machine made and is adapted for any kind of work from an ordinary dwelling to a huge factory. You ought to send for The Hercules catalog to-day. You ought to know that The Hercules is the best—and why—and we can show you.



Made of Hercules Blocks

We are manufacturers of The Hercules Concrete Mixer, Curb and Gutter Outfits and Cement Tools. Ask for catalog.

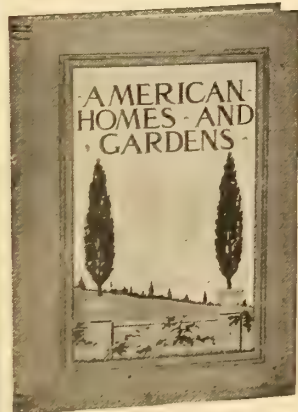
Century Cement Machine Co.
180 W. Main St., ROCHESTER, N. Y.

BOUND VOLUMES OF American Homes and Gardens

480 Pages :: 1,050 Illustrations :: Price, \$5.00

American Homes and Gardens covers a wide scope; it deals with house building from the design and construction of modest cottages on tiny lots to the building of mansions on large estates. All degrees of gardening, from laying out a landscape to the planting of a window-box, are dealt with. Practical questions of water supply, of sanitation, or of the arrangement of the kitchen receive equal treatment with draping of windows or the arrangement of old china.

American Homes and Gardens is beautifully printed. The year's volume contains more than a thousand engravings, as full of details and finish as actual photographs. They depict some of the old and historic mansions of America, and the most beautiful of gardens or of natural scenery. The following list of a few of the principal practical articles which appeared in *American Homes and Gardens* during 1907 will show the wide choice of subject:



Historic Mansions of the James River—Small American Homes—Inexpensive Log Bungalows—The Iris Garden—House-Boating in America—A Boy's Summer Camp—The Choice of a Dog—Ventilation—The Water Garden—Curtains and Draperies—The Wild Garden—Concerning Driveways—Heating the House—The Modern Bedroom—Touring in an Automobile—Flowers for House and Table Decoration—What is a Fireproof House—Interior Woodwork—White Lilac Culture—How to arrange Window Curtains—Street Entrances—Collection of Old Blue Staffordshire Ware—Novel Uses of Electricity—The Question of the Fire Place—Orchid Culture—Hand-wrought Iron work—Kitchen Furniture—Water Supply.

A limited number of volumes for 1907 are available. 480 pages. 1,050 illustrations. Price, \$5.00. Volume for 1906, \$5.00. Volume for 1905, \$3.50.

MUNN & CO., Publishers, 361 Broadway, New York



We DO Things That Others Dare Not Attempt

because the unusual facilities of our factory—the largest and best equipped in the world—our wide experience and skilled artisans enable us to execute the most intricate and delicate work ever attempted in sheet metal, promptly and with complete satisfaction.

Our 120 Page Catalogue

will be sent you on request and gives some idea of our great facilities. We shall be glad to submit estimates, designs, etc.

The W. H. Mullins Co. 202 Franklin St., Salem, Ohio.

Makers of everything in sheet metal.

Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO

JUST PUBLISHED THE NEW AGRICULTURE

By
T. BYARD COLLINS

8vo. Cloth. 376 Pages
100 Illustrations
Price, \$2.00, Postpaid



HIS new and valuable work sets forth the changes which have taken place in American agricultural methods which are transforming farm life, formerly so hard, into the most independent, peaceful and agreeable existence. Farm life to-day offers more inducements than at any previous period in the world's history, and it is calling millions from the desk. The present work is one of the most practical treatises on the subject ever issued. It contains 376 pages and 100 illustrations.

In brief, the Contents are as follows

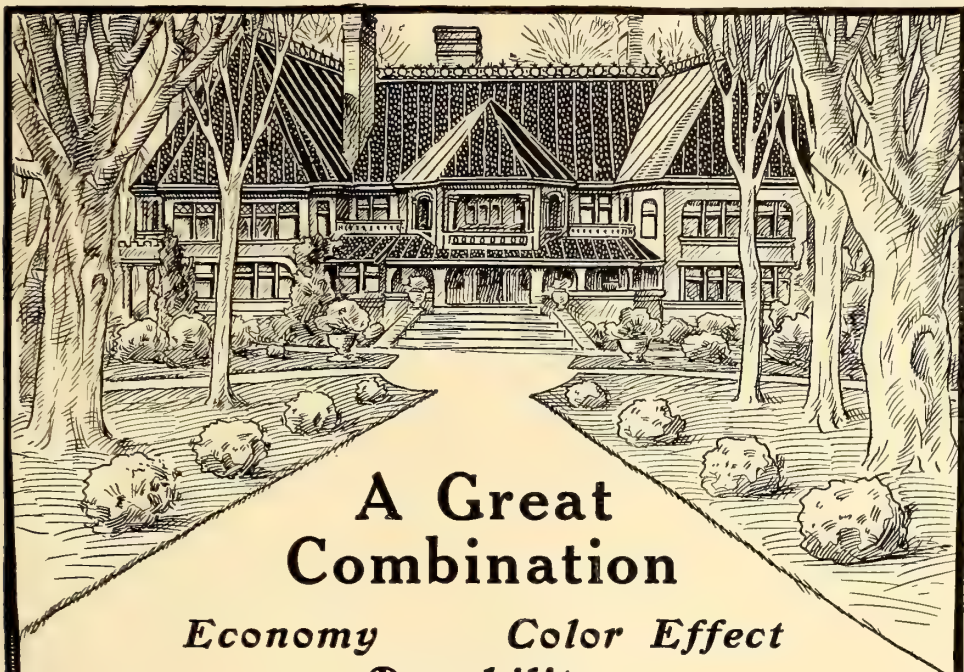
- CHAPTER I. This chapter contains a general statement of the advantages of farm life.
CHAPTER II. Deals with the vast systems of irrigation which are transforming the great West, and also hints at an application of water by artificial means in sections of the country where irrigation has not hitherto been found necessary.
CHAPTER III. Gives the principles and importance of fertilization and the possibility of inoculating the soil by means of nitrogen-gathering bacteria.
CHAPTER IV. Deals with the popular awakening to the importance of canals and good roads, and their relation to economy and social well-being.
CHAPTER V. Tells of some new interests which promise a profit.
CHAPTER VI. Gives a description of some new human creations in the plant world.
CHAPTER VII. Deals with new varieties of grain, root and fruit, and the principles upon which these modifications are effected and the possibilities which they indicate.
CHAPTER VIII. Describes improper methods in agricultural practice.
CHAPTER IX. Devoted to new machinery by which the drudgery of life on the farm is being eliminated, making the farm a factory and the farmer the manager of it.
CHAPTER X. Shows the relation of a body of specialists to the American farmer, who can have the most expert advice upon every phase of his work without any expense whatever to himself.



MUNN & CO., Publishers



361 Broadway, NEW YORK



A Great Combination

*Economy Color Effect
Durability*

All these qualities are combined in

RUBEROID RED ROOFING

Trade Mark Reg. U. S. Pat. Off

ECONOMY—Because it is moderate in price, requires no skilled labor to lay, and costs little or nothing to keep in perfect condition.

COLOR EFFECT—Its richness of color lends an air of elegance and refinement to any building.

DURABILITY—Because it outlasts any other roofing made. Will not melt, rot or corrode like tar, shingles or metal roofs.

Fire Resisting and Weather-Proof

Made also in BROWN and GREEN

Write for Samples and Prices

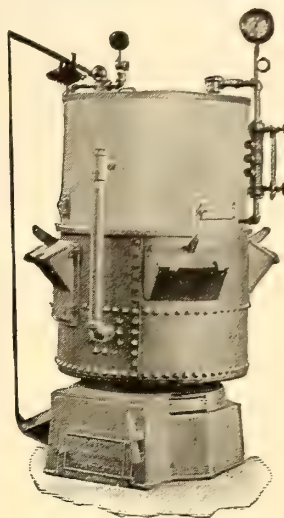
THE STANDARD PAINT COMPANY

100 William St., New York

Chicago St. Louis Kansas City Boston Philadelphia New Orleans

GORTON

SIDE FEED BOILERS SIDE FEED



For Steam
and
Hot Water
Heating

Insure a
Warm
Building
Day
and Night in
Coldest
Weather

Send for
Catalog

GORTON & LIDGERWOOD CO.
96 LIBERTY STREET, NEW YORK
Old Colony Bldg., Chicago 77 Oliver St., Boston



THE NEW CEILING AND SIDE WALL ON THAT ROOM

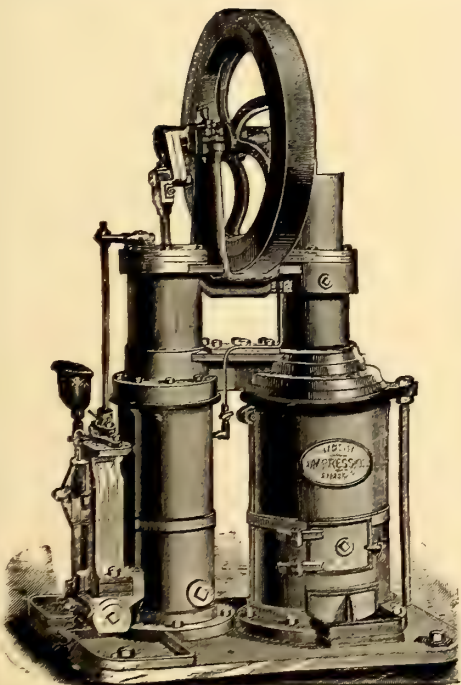
What shall it be? Steel, of course—because it is the most modern, sanitary and inexpensive, practically lasts forever.



Write to-day, giving dimensions and particulars. We will go into the matter with you thoroughly.

"When it has the ELLER trade-mark, it's the best in steel."

ELLER MFG. CO.
CANTON, OHIO



Improved Rider Hot Air Pumping Engine

AND

Improved Ericsson Hot Air Pumping Engine

PRICES GREATLY
REDUCED

Send for Catalog "E" to nearest office

Rider-Ericsson Engine Co.

35 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



Our remarkable recent inventions enable us to offer the public an intensely brilliant

Smokeless Gas

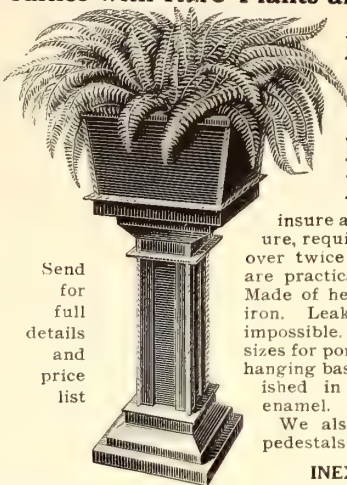
at much less cost than city gas, better, safer and cheaper than electricity, and costing but one-fourth as much as acetylene.

Most Durable and Least Expensive
Apparatus to Maintain

in effective perpetual operation. Gives services of lighting, cooking and heating. Fullest satisfaction guaranteed, and easy terms. The very apparatus for suburban homes, institutions, etc. We construct special apparatus also for fuel gas for manufacturing, producing gas equivalent to city gas at 50 cents per 1000 cubic feet, and made to respond to very large demands; also for lighting towns, etc.

C. M. Kemp Mfg. Co., Baltimore, Md.

Sub-Irrigation Overcomes All Difficulties with Rare Plants and Flowers



Send for full details and price list

THE ILLINOIS SELF-WATERING FLOWER BOXES

insure a uniform moisture, require attention not over twice a month, and are practically automatic. Made of heavy galvanized iron. Leakage absolutely impossible. In various sizes for porches, windows, hanging baskets, etc. Finished in hard, durable enamel.

We also manufacture pedestals to match.

INEXPENSIVE

ILLINOIS HEATER & MFG. CO., 3953 Wentworth Ave., CHICAGO

BUILDING Construction and Superintendence

By F. E. KIDDER, Ph.D., F.A.I.A.
Consulting Architect and
Author of "The Architect's and Builder's Pocket Book"

Part I. Masons' Work 430 Pages, 260 Illustrations

Part II. Carpenters' Work 550 Pages, 530 Illustrations

JUST PUBLISHED

Part III. Trussed Roofs and Roof Trusses

298 Pages, 306 Illustrations

Each volume 7x9 1/2 inches. Substantial cloth binding

Price for Parts I and II, \$4.00 each

Price for Part III, \$3.00. Sold Separately

Munn & Co., 361 Broadway, New York

JUST PUBLISHED

THIRD EDITION OF KIDDER'S Churches and Chapels

By F. E. KIDDER, Architect

This edition has been thoroughly revised by the author, and enlarged, many new designs being added, including several new designs for Catholic churches. There are 120 illustrations in the text and more than 50 full-page plates. The book contains a large number of plans and perspectives of churches of varying costs. Besides this there is much concise and practical information relating to planning and seating; details of Construction, Heating and Ventilation, Acoustics, etc., making it in its present form : : :

The Best American Book on Church Design and Construction

One oblong quarto volume. Price, net, \$3.00

Munn & Co., 361 Broadway, New York City



Save One-Half On Ice Bills

Do you want a good refrigerator? One that is not an ice eater—one that will soon pay for itself in saving on ice bills? Send us the coupon below, and let us tell you why the McCray Refrigerator will save you money on ice bills—and why you should not entrust the health of your family to an ordinary refrigerator.

Prominent physicians, hygienists, and experts on sanitation, have repeatedly warned the public that much of the illness of children can be traced directly to zinc-lined and unsanitary refrigerators. Zinc corrodes and forms oxides that poison milk and other food. Isn't it worth while for you to study the refrigerator question, and learn something about the hygienic

McCray Refrigerators

that are endorsed by physicians, hospitals, etc., and are used in thousands of the finest residences, clubs, hotels, public institutions, etc.? They are lined with White Opal Glass, Porcelain Tile, or White Wood, and have a perfect circulation of pure, cold, absolutely dry air. McCray Refrigerators are always sweet, clean and perfectly dry—so dry in fact that damp salt will soon dry in them.

McCray Refrigerators are built in all sizes ready for immediate shipment, and built to order for all purposes. Every refrigerator is guaranteed to give lasting satisfaction. Let us tell you how easily McCray Refrigerators can be arranged to be cooled from the outside.

Send Us This Coupon

and let us send you free our 40 page illustrated catalog that explains why McCray Refrigerators are superior to other refrigerators and different from ordinary ice boxes. Send us the coupon now.

McCray Refrigerator Co.

687 Mill Street,
Kendallville, Ind.

Branches in all principal cities.

McCray Refrigerator Company,
687 Mill Street,
Kendallville, Indiana.

Gentlemen:—Please send me your free Catalog of McCray Refrigerators.

Name.....

Street.....

City.....

State.....

BOOKS

RELATING TO

Architecture

Decoration

Furniture Rugs

Ceramics, etc.

will be recommended and supplied by our well equipped Book Department.

MUNN & CO.

361 Broadway

NEW YORK

SEDGWICK THE ARCHITECT



Send One Dollar For

A Beautiful Book
BEST HOUSE PLANS

It Contains 150 Designs
MEDIUM COST
HOUSES
\$1,000 to \$10,000

Two Supplements Included:
Send 10c. postage for new
Improved Portfolio of
Modern Churches.

This Handsome House Cost \$3,500.00; Complete Plans \$15.

1028 H Lumber Exchange, Minneapolis, Minn.



NEW BOOKS

THE ART AND CRAFT OF GARDEN MAKING —A Correction.

In the review of this book in the December AMERICAN HOMES AND GARDENS the price, through an error of the publishers, was inadvertently given as \$10.00 net. The actual price of this fine and valuable book is \$15.00.

THE MODERN GUIDE FOR FRUIT AND TRUCK SHIPPERS AND POULTRY RAISERS IN THE SOUTHERN STATES. By Thomas G. Thomas. Houston: Thomas-Willson Pub. Co. Pp. 459. Price, \$2.00.

Farming publications center so naturally around the climatic conditions of the northern States, since the larger number of such books are by northern writers, that it may be generally forgotten that distinctive conditions obtain in the southern portion of the United States. The author who undertakes to provide written instructions for farming operations naturally describes those that he is personally familiar with, and these, as has most frequently been the case, have been northern conditions. Mr. Thomas' book is written expressly to meet southern conditions. It is exhaustive in treatment and treats of a vast number of matters, all of practical value to the farmer. The range of topics, as is indicated by the title, is very broad, since the author not only explains how to farm, but tells his readers how to ship his produce. This gives the book a distinct value to farmers located at a distance from large markets.

Mr. Thomas divides his book into ten parts. The first includes introductory matter, and treats at length with shipping directions and the work to be done by large growers engaged in a shipping industry. Further parts deal with vegetables, fruit and nut culture; seeds, including their care and use; irrigation, drainage and fertilizers; poultry, raising frogs, dairying, bee-keeping and miscellaneous topics. Other parts treat of the benefits of organization among fruit and truck growers and poultry raisers, canning fruits and vegetables, together with a concluding section of useful receipts and general information. It is a volume that particularly appeals to the large farmer, but its pages are crowded with valuable information and description of methods that any one concerned with fruit and vegetable operations within the region of which it treats will find eminently useful. A careful index adds to its value.

CONCRETE COUNTRY RESIDENCES. New York: The Atlas Portland Cement Co. Quarto 16. Pp. 168. Price, \$1.00.

CONCRETE CONSTRUCTION ABOUT THE HOME AND ON THE FARM. New York: The Atlas Portland Cement Co. Paper. Pp. 127.

Issued primarily to advertise the material manufactured by their publishers, these two books have a genuine value of their own. Cement buildings are by no means new, but their erection represents a comparatively new phase of architectural activity. They have, however, long since ceased to be a novelty, and the numerous illustrations of the largest of these volumes, with handsome examples selected from structures erected in a wide

extent of territory, show how extensively this type of house has been adapted to modern American needs. The adaptability of a material is established by its usability; and it would seem to be a fair proposition that the material which can be used in the greatest number of ways is, of all materials available for use, the most desirable and the most admirable. The contents of these volumes certainly clearly establish the practically universal adaptability of cement. The book on country houses deals, as a matter of course, with structures of a single kind; but the volume on the home and farm shows, both by text and by pictures, that there is not a building needed for home or farm use that cannot be admirably constructed of concrete. Both will repay study; the one for the agreeable houses reproduced in its handsome pages; the other for its suggestiveness and practicability. As evidences of a modern age of concrete both are highly suggestive.

PRACTICAL STEAM AND HOT-WATER HEATING AND VENTILATION. By Alfred G. King. 8vo. Cloth. 402 pages, 302 illustrations. New York: The Norman W. Healey Pub. Co. Price, \$3.00.

In these northern latitudes every householder is forced to have an interest in heating and ventilation. Although the simple open wood fire of the "good old days" still continues to provide its crackling companionship, its habit of roasting the near side of the anatomy while the far side freezes, makes the possession a source of more evenly distributed heat a modern necessity.

The development of the art of heating has been very gradual. Among the ancient Romans the poorer classes were accustomed to make use of the practise followed at the present day by many savage tribes; namely, of building fires on the floor, the soot and smoke of which were more or less erroneously supposed to pass out through a hole in the roof. The brazier with carefully dried wood provided warmth for the wealthier classes. In America the first heating device was the enormous "New England" fireplace, burning a cart-load of fuel at once, and allowing fully ninety per cent. of the heat to escape through the gaping flue. The Franklin stove next came into use, made necessary by the increase in population, and the growing scarcity of wood. Upon the idea of the Franklin stove was built the inclosed stove with conducting pipes; and, finally, from this last grew the modern hot-air furnace.

The steam and the hot-water furnace make one short step further in the scale of progress, as a more efficient heat-conveyer was sought for.

The various systems of heating in practical use, too numerous even to mention, together with methods of installation and the like, are ably treated of in "Practical Steam and Hot-Water Heating and Ventilation," by Alfred G. King. Mr. King is well-known as a contributor to the literature of heating, and speaks from knowledge and experience.

Details of Building Construction

A collection of 33 plates of scale drawings with introductory text
By CLARENCE A. MARTIN
Assistant Professor, College of Architecture, Cornell University
This book is 10 by 12½ inches in size, and substantially bound in cloth. PRICE, \$2.00

FOR SALE BY
MUNN & CO., 361 Broadway, N. Y. City



"Standard"

PORCELAIN ENAMELED WARE

is a perfect unity of iron and porcelain enamel—the strongest and most durable combination ever produced in a sanitary fixture. By a secret process of manufacture these two elements become amalgamated—each is made an integral and inseparable part of the other. "Standard" fixtures have thus the indestructible strength of iron with the snowy elegance of fine china. This extraordinary wearing quality of "Standard" Ware is only one of the reasons why these beautiful fixtures afford more years of satisfactory service per dollar of cost than any other plumbing equipment in the world.

WRITE TO-DAY

for our free 100-page book, "Modern Bathrooms"—the most complete and beautiful book ever issued on the sanitary subject. "Modern Bathrooms" illustrates sanitary equipment of every style and price and contains valuable information on how to plan, buy and arrange your fixtures in the most economical and attractive way. Every householder should have a copy. Send for it at once (enclosing 6c postage), giving name of your architect and plumber, if selected.

Address, **Standard Sanitary Mfg. Co.** Dept. 23, Pittsburgh, Pa., U. S. A.

Pittsburgh Showroom, 949 Penn Avenue.

Offices and Showrooms in New York: "Standard" Building, 35-37 West 31st Street.

London, Eng.: 22 Holborn Viaduct, E. C.

Louisville: 325-329 West Main Street.

New Orleans: Cor. Baronne & St. Joseph Sts.

Cleveland: 648-652 Huron Road, S. E.

SPECIAL-PURPOSE FLOWERS AND PLANTS

By Eben E. Rexford

AMATEUR gardeners are always inquiring after plants with which to work out special designs, or with which to secure results somewhat out of the ordinary, and it is my intention to devote this paper to a consideration of plants and flowers suited to the wants of flower-loving persons who hardly feel familiar enough with this class of material to trust to their own individual selection.

"What shall we grow to shade doors and windows? We want something of rapid development. If it is a flowering vine, all the better, but shade is the all-important consideration."

The best vine for this purpose, all things considered, is, to my mind, the wild cucumber. No other annual vine excels it in rapidity of growth. It will grow thirty feet in a season, in good soil. It has attractive foliage, and about midsummer it comes into bloom. Its flowers are white—delicate, fringy little things, in spikes—and there are so many

What THIS LABEL Means to You—

THIS "Standard" Guarantee Label in "Green & Gold" appears on every piece of genuine "Standard" Porcelain Enameled Ware—the model bathroom equipment for your home. This label means that the bathtub, lavatory, closet, or any fixture bearing it, is a **guaranteed fixture**—guaranteed to be thoroughly sanitary, and with ordinary care to be a practically indestructible fixture; guaranteed by the makers to be in every respect a **strictly first quality fitting**. The "Standard" "Green & Gold" Label is your protection against the substitution of inferior goods. For the sanitary equipment of your home it pays to specify the most reliable equipment your money can buy. **It pays to specify "Standard" Porcelain Enameled Ware.** Specify "Standard" Fixtures, which cost no more than those made by inexperienced manufacturers, and look for the label to make sure you are getting the genuine.

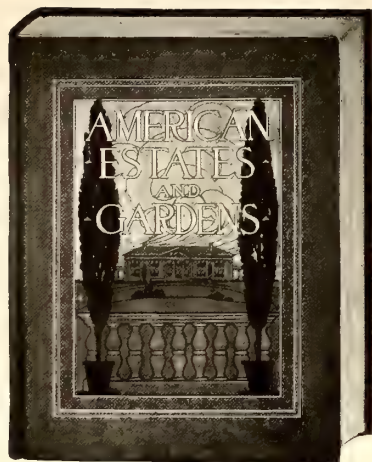
antecedent to be thoroughly sanitary, and with ordinary care to be a practically indestructible fixture; guaranteed by the makers to be in every respect a strictly first quality fitting. The "Standard" "Green & Gold" Label is your protection against the substitution of inferior goods. For the sanitary equipment of your home it pays to specify the most reliable equipment your money can buy. It pays to specify "Standard" Porcelain Enameled Ware. Specify "Standard" Fixtures, which cost no more than those made by inexperienced manufacturers, and look for the label to make sure you are getting the genuine.

of them that a plant will have the appearance of being drifted over with snow. The vine has tendrils with which it takes hold of anything within reach, therefore, it does not have to be given any special kind of trellis. It has one drawback. Its early leaves will ripen and fall off while those of later growth are in their prime, thus leaving its lower stalks naked and unsightly. This defect, however, can easily be remedied by growing tall plants at the base of the vines to hide their nakedness.

Another most excellent flowering vine is the good old morning glory, with its blue, purple, pink, carmine, violet and white flowers, produced in such profusion that they literally cover the upper branches in the early part of the day. This vine will climb to the second-story windows if given stout strings to climb by. Don't make the mistake of using ordinary twine, as the great weight of the vines will almost always break it down, and when that happens your vines are spoiled. This vine grows very rapidly, and blooms throughout the season. It is much showier than the wild cucumber, but it lacks the extreme delicacy which characterizes that plant.

Another good vine for covering porches

\$13 Value



For \$7.50

4to, 11x13½ inches
Illuminated Cover
275 Illustrations
340 Pages

Price
Ten
Dollars

American Estates and Gardens

By BARR FERREE

Editor of American Homes and Gardens Corresponding Member of the
American Institute of Architects and of the Royal Institute of British Architects



AMERICAN ESTATES AND GARDENS is a sumptuously illustrated volume in which, for the first time, the subject of the more notable great estates, houses, and gardens in America receives adequate treatment. It is a volume of 350 pages, enriched with 275 illustrations, of which eight are in duotone.

An effort has been made to select as great a variety as possible of the styles of architecture which have been introduced into this country as being specially adapted to the peculiar conditions of American country life.

Although the exteriors of some of the houses shown in this work may be familiar to a certain number of readers, few have had the privilege of a visit to their interiors, and, for that reason, special attention has been given to reproductions of many of the sumptuous halls and rooms of people of wealth, and no better way can be obtained of learning how the favored few live.

The illustrations are in nearly all cases made from original photographs and are beautifully printed on double coated paper. The book is attractively bound. This book will prove one of the most valuable books for the home, and will fill the wants of those who desire to purchase a luxurious book on our American houses.

MUNN & CO.
SCIENTIFIC AMERICAN OFFICE
361 BROADWAY NEW YORK

MESSRS. MUNN & CO.

Date

Enclosed find \$7.50, for which please send me *American Estates and Gardens* and (renew) (enter) my subscription for *American Homes and Gardens* for one year, in accordance with the terms of your special offer.

Name..... P. O.

P. O. Box or Street..... State

Building Construction and Superintendence

By F. E. KIDDER, C. E., Ph.D. Architect
Author of "The Architects' and Builders' Pocket Book."

Part I.—MASONS' WORK
(6th Edition)

421 Pages, 250 Illustrations

Part II.—CARPENTERS' WORK
(5th Edition)

544 Pages, 524 Illustrations

It has been the aim of the Author, in preparing these works, to furnish a series of books that shall be of practical value to all who have to do with building operations, and especially to architects, draughtsmen and builders.

Each volume is independent and they are sold separately.

The volumes are large 8vos. bound in cloth price, \$4.00 each.

FOR SALE BY

MUNN & CO.

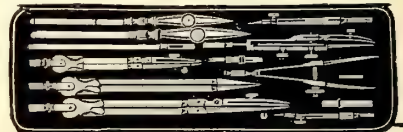
361 Broadway, New York

Made
their mark
Dixon's
Pencils

Write for
illustrated
booklet W free.

JOSEPH DIXON CRUCIBLE CO.,
Jersey City, N. J.

St. Louis, Mo. Baltimore, Md.
F. Weber & Co.
1125 Chestnut St., Philadelphia, Pa.
Architects' and Engineers' Supplies



"FABRIANO" Hand-Made Drawing Papers
Superior to any other hand-made paper
F. Weber & Co.'s Illustration Boards, Air Brushes
and Materials

OWN A FACTORY

and make \$10.00 a day making Concrete Building Blocks. Experience unnecessary. Big demand for blocks everywhere and immense profits.

Pettyjohn Machine

for \$33.25 and only up.



Guaranteed and sent on trial. Sand, water and cement only materials required. If you intend to build it will pay you to buy a Pettyjohn Machine and make your own blocks. Beautiful booklet on this great industry—FREE.

THE PETTYJOHN CO., 617 N. Sixth St., Terre Haute, Ind.



HOW WARM WAS IT?

In your home, office, or outdoors, to-day, yesterday or any day,

BRISTOL'S RECORDING THERMOMETERS TELL

Send for Catalog B

THE BRISTOL CO. Waterbury, Conn.
New York, 114 Liberty St. Chicago, 753 Monadnock Bldg.

and summer houses is the Japan hop. This plant—it is an annual like the other two—has foliage of a dark green ground broadly and irregularly blotched and marbled with creamy white and pale yellow. It grows rapidly and gives dense shade.

"I would like a sort of hedge between the flower and vegetable gardens. What would you advise?"

The zinnia is a very good plant for this purpose. It is of the easiest culture, grows fast, comes into bloom early in the season, reaches a height of about three feet, is compact and symmetrical in habit without training, requires no support, and continues to bloom until frost comes. It runs through a wide range of colors—red, scarlet, pink, orange, violet and yellow—and, because of its profuse blooming, makes a most brilliant show. Its flowers are shaped like Lilliputian or Pompone dahlias, and each plant will have hundreds of them.

Amaranthus is another excellent plant for hedge purposes. It grows to a height of about four feet. Many varieties have dark, bronze-green foliage, others foliage of a dull, deep-red. Its flowers, which are small individually, but are produced by thousands in long, pendant racemes, are mostly of the same dull but rich red which characterizes the foliage of some varieties, and are very striking because of their resemblance to ropes of coarse chenille. To secure best results from this plant as a hedge or screen, grow it thickly in two or three rows about a foot apart. Its decorative effect can be greatly heightened by growing a flowering plant of contrasting color at its base. The nasturtium, the large double yellow marigold, or the velvety maroon sort catalogued as African, are excellent for this purpose.

Sweet peas make a fine screen if given proper support. The best support I know of, when plants are grown for this purpose, is made by using two strips of coarse-meshed wire netting. Have two rows of the plants a foot and a half apart, and let the bottom of each width of netting run along each row, but let them meet at the top, like an inverted V. The vines will grow up through the meshes of the netting, and no wind will be able to dislodge them, or blow them over.

"I would like a large group of ornamental foliage plants on the lawn, but have grown tired of cannas, caladiums and plants of that class. What would you suggest for a change?"

If very large plants are wanted I would suggest, as best of all, ricinus, better known in most localities as castor plant or castor bean. If planted in a rich soil it often reaches a height of eight and ten feet, with foliage often a yard across, of a dark, coppery bronze, overlaid with a metallic luster. The best effect is secured by growing four or five plants in a group. None of the tropical plants which have come into prominence in gardening, during the last ten or twelve years, are anywhere nearly as effective as this easily grown annual, whose seeds sell at five cents a package. For a prominent location on the lawn no better plant could be selected.

The amaranthus advised for hedge uses makes a very showy circular bed on the lawn when grown in large masses. Its effect is heightened by using it in the center of the bed, and surrounding it with plants whose colors are in strong but harmonious contrast. The calliopsis, rich golden yellow, marked with brown, combines charmingly with the dull, deep, rich reds which characterize the foliage and flowers of the most desirable varieties of this too much neglected annual.

"I would like a bed of very brilliant flowering plants for the front yard. Can't have

Complete Outfit

HAND AND FOOT-POWER MACHINERY

OUR No. 7 SCROLL SAW
is warranted to be well made, of good material and workmanship, and to saw pine three inches thick at the rate of one foot a minute

SEND FOR CATALOGUE

W. F. & JOHN BARNES Co.
567 Ruby Street Rockford, Ill.

Price
\$15.00



BEAUTIFUL FLOORS

FLOORENE has during the past 20 years demonstrated its effectiveness as the best floor finish and preservative. It is unequalled for hard or soft wood floors, linoleum, oil-cloth, bath-rooms, kitchens, sinks, and will wear indefinitely. It will not scratch or mar white, is not affected by hot or cold water, and can be rubbed for dull finish if desired; is simple of application, economical, durable.

A trial of **Floorene** is all we ask. Write for booklet.

The American Varnish Co., Chicago

many, for I haven't time to take care of them, so want those which will give the most show for the least trouble."

An exceedingly brilliant combination can be secured by the use of *Salvia Splendens*—scarlet flowering sage—as the center of a bed eight or ten feet across, with calliopsis surrounding it. The scarlet and yellow of these flowers will light up the place as vividly as a bonfire, and both will continue to bloom until frost comes. They will require very little care.

Phlox Drummondii—the annual phlox—makes a very pleasing show in large beds if proper care is taken in the arrangement of its colors with a view to contrast and harmony. The pale rose varieties combine charmingly with the pure white and soft yellow kinds. A bed composed of these three colors alone will be found much more satisfactory than one in which a larger number is used. Set the colors in rows.

Petunias are excellent plants for large beds where a brilliant and constant show of strong color is desired. They bloom early, continue throughout the season, and almost take care of themselves.

"I would like a low bed, that is, a bed near the path, under the window, where it can be looked down upon. Tall plants would be wholly out of place there. What shall I use?"

The portulacca is well adapted to such use, as it only grows to a height of three or four inches, and spreads in a manner to form a carpet of dark-green foliage, against which its flowers of rose, red, crimson, yellow and white are shown with brilliant effect. This plant might with great appropriateness be called a vegetable salamander, as it flourishes

in hot, dry locations where most other plants would utterly fail. It fairly revels in intense sunshine.

The verbena is another very desirable plant for low beds. It is of spreading habit, blooms profusely and constantly, and comes in a wide range of rich colors.

The ageratum is a lovely plant for low beds, when covered with great masses of soft, lavender-blue flowers. Fine effect can be secured by using dark-yellow coleus or golden pansies as an edging, these colors contrasting charmingly with the pale-blue of the ageratum.

"What flowers shall I grow to cut from? Would like something not at all coarse, and something that will bloom with considerable regularity throughout the greater part of the season."

At the head of the list I would place the sweet pea. This is a stand-by for cutting purposes. The most satisfactory varieties are those of soft rose and white, the pure whites, the dainty lavenders and the pale yellows.

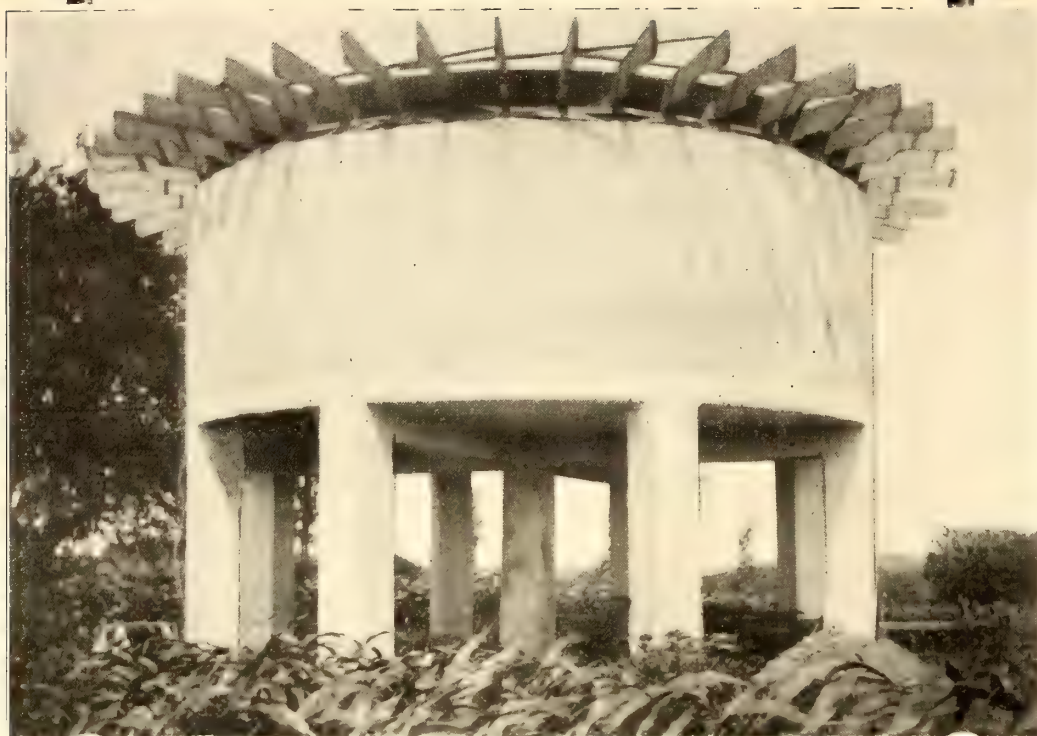
The aster is a magnificent flower, and it seems to be growing better and better each year. Nothing else among the annuals compares with it in lasting quality. If the water in which they are placed is changed daily its flowers will remain fresh for two weeks. The most useful variety for cutting is the "branching," with flower-stalks from a foot to eighteen inches in length. I would advise growing at least three colors—white, pale rose and lavender.

The newer varieties of dahlia, like the decorative, the cactus and the single sorts, are fine for cutting. Their flowers are not at all formal like those of the old very double kinds, and being so much lighter because of

FLOORS



ROOFS



**A concrete tank erected on estate of Edmund Tatham,
Katonah, New York**

Frederick J. Sterner, Architect - - New York
De Lancey A. Cameron, Builder - - New York

Tank designed for storage supply of 15,000 gallons, built entirely of concrete reinforced with Clinton welded wire. Before roof was placed over tank, and during winter months, ice 10 inches thick formed on water stored therein. No cracks or leakage have developed.

Clinton Wire Cloth Company
 CLINTON, MASS.

Ceilings

FIREPROOFING DEPARTMENT
ALBERT OLIVER
 1 MADISON AVE., NEW YORK

WASHINGTON: ROSSLYN SUPPLY CO., COLORADO BUILDING
 SYRACUSE, N. Y.: PARAGON PLASTER CO.
 ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
 SAN FRANCISCO: L. A. NORRIS, 835 MONADNOCK BUILDING
 SEATTLE: L. A. NORRIS, 909 ALASKA BUILDING

Partitions



JOIST HANGERS

should always be
used around
stairway wells
and wherever a
beam abuts its
support.

LANE BROS. CO. (The Door Hanger Manufacturers) 434-466 PROSPECT ST.
POUGHKEEPSIE, N. Y.

their fewer petals, they can be arranged much more gracefully. They last well, and, like the aster, will be found in bloom late in the season, if protected from the first early frosts. They are excellent for use in large vases, and places where striking color effects are desired.

The gladiolus is also well adapted to cutting. Use it in tall vases, and cut the entire flower-stalk.

For small work—little vases for the home breakfast table, the desk, or gifts to friends—one ought to grow quantities of heliotrope, tea roses, Marguerite carnations and pansies, of course! Also some of the fragrant-leaved geraniums.

"We want some flowers that will bloom very late in the season. Are there any that can be depended on after the September frosts?"

Yes. First on the list I would name the aster, whose late flowering qualities have already been spoken of.

Ten-week stock is another good late bloomer. The snows of November often find it in full bloom, and seem powerless to injure it. It is delightfully fragrant, and particularly well adapted to cutting because of its long spikes of white, rosy-purple, pink and sulphur-yellow flowers.

The Marguerite carnation deserves a place in every garden because of its great beauty, and its late flowering habit. While not all plants grown from seed will give double flowers, a large share of them will be so, and in form, size and color these will compare very favorably with the greenhouse varieties of this popular flower. Most of them, too, will be delightfully fragrant. For choice little bouquets, either for home use or to give your especial friends, nothing can be finer.

Every garden ought to have its bed of tea roses to cut from. Young plants set out in May will begin to bloom in June, as a general thing, if given a rich soil. If kept well fed and cut back sharply two or three times during the season, they will continue to yield flowers clear up to the edge of winter. And one really fine rose is worth a score of ordinary flowers.

"I want some vines for the edge of my window boxes. What kinds will be likely to give most satisfactory results?"

Othonna is good. It grows rapidly. It blooms well, but is pretty without flowers. So is lysimachia, and moneywort, and tradescantia. All these will take care of themselves if you give them all the water they need.

Among variegated plants of drooping habit, suitable for use in window boxes, glechoma is very pleasing, with its green and ivory foliage. So is Vinca Harrisonii, with dark, glossy green leaves blotched with golden yellow.

The Madeira vine is excellent where a long fall of vines is desired. So is senecio, better known as German ivy. One of the best drooping flowering vines for a window box is the ivy-leaved geranium. Single petunias are equally valuable for flowers and for hiding the sides of boxes, as they will most effectively, if allowed to droop to suit themselves. Sweet allysum forms a charming edging for a box with its pretty foliage and great quantities of pure white, very fragrant flowers.

Ornamental Waterfowl

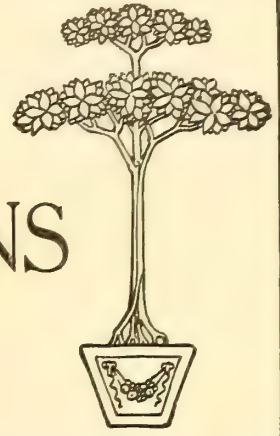
SWANS DUCKS GEESE

**Show Birds and Animals
of Every Description :: ::**

LOUIS RUHE, 248 Grand Street, NEW YORK



AMERICAN HOMES AND GARDENS



Price, 25 Cents. \$3.00 a Year

CONTENTS FOR APRIL, 1908

	PAGE
A COUNTRY CREEK IN SPRINGTIME	122
MONTHLY COMMENT	124
NOTABLE AMERICAN HOMES—The Country Seat of M. P. Slade, Esq., at Mt. Kisco, New York	By Barr Ferree 125
GARDEN STREAMS AND APPROPRIATE BRIDGES	By Phebe Westcott Humphreys 131
A REMODELED COLONIAL HOUSE—The Country Seat of Frederick Converse Beach, Esq., at Stratford, Connecticut	By Charles Chauncey 135
THE GARDEN JOYS OF A COUNTRY HOME.....	By Abbie I. Johnson 142
THE SUMMER HOME OF LUCIEN OUDIN, ESQ., WATER MILL, LONG ISLAND.	By Samuel Ward 147
THE APPLICATION OF STENCIL WORK IN HOME DECORATION	By Edward Fesser 151
THE FORCED CULTURE OF ASPARAGUS IN FRANCE	By Jacques Boyer 154
A HOUSE AT NEWTON CENTRE, MASSACHUSETTS.....	By Edward T. Wills 157
CORRESPONDENCE:	
PROBLEMS IN HOME FURNISHING	By Alice M. Kellogg 160
GARDEN WORK ABOUT THE HOME	By Charles Downing Lay 160

Ornamental Bedding Plants for Hedges.

Special Purpose Flowers and Plants.

New Books.

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada, \$3.50 a year

Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



A Country Creek in Springtime

AMERICAN HOMES AND GARDENS



Volume V

April, 1908

Number 4



The Pool and Terrace : The Country Seat of M. P. Slade, Esq., Mt. Kisco, New York

Monthly Comment



THE annual exodus to the country has arrived. All over the land country houses are being opened, swept and garnished and made ready for immediate occupancy, if, indeed, they have not already been taken possession of. Free excursions are being held weekly to new "home sites." Real estate men are proclaiming the merits of their wares from the pages of every newspaper, and the farmers are dusting off the accumulations of winter from their "For Sale" signs. With the chirping of the birds, the growing of the grass, the budding of the trees, the blooming of the crocuses and other early plants there is vast activity in the countryside, apart from the less exciting but vastly more useful operations of the farmer. One no longer counts how much the mercury is below the zero point, but how far it reaches above it. And with each ascending degree there is certain hope that the warm season has arrived, or at least is so near at hand that its gentle phases may be safely reckoned with.

OF the various persons who go out into the countryside in the spring none are so interesting as those who do so for the first time. Girded up with hope, buttressed with promises of economic living, of pure air, of convenience of access, of the advantage of individual ownership, and all the multitude of attractions that have taken them from their city home to a new one in the country, loaded to their hat-tops with anticipations of pleasures to come, they fare boldly forth to the new world they have chosen. A new world indeed is about to be theirs, and they have no doubt but that they will master it quickly, speedily, at once, and without any dislocations, mental or physical. Some heroic souls will doubtless accomplish this end in an exceedingly satisfactory manner, while those who do not are likely to spend many months in regretting they do not. Let all take comfort in the fact that the fittest will survive.

THE movement from the city to the country has now covered a sufficiently extensive series of years for certain well defined sorts of settlement to become apparent. One may, if one chooses, settle in a village; yet even here there is choice of locality, for there is the older, already established center of population, and the newer part where all may be newcomers. It is not always the most agreeable thing to settle down in a population of old settlers who have been living on one spot for many years; there is quite as much likelihood of the newcomer being received with suspicion as if he settled in an old and fashionable quarter of a city without any introductions whatsoever. In the new sections everyone is on the same basis so far as length of residence is concerned. It is a difficult problem and one that, in the end, must be solved from the social standpoint quite as well as from aspects of convenience, accessibility and expense.

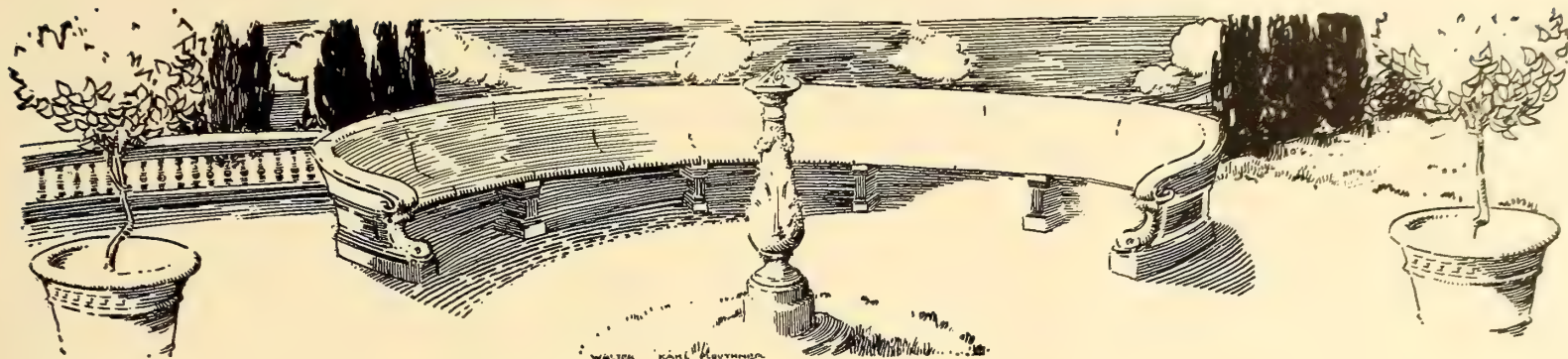
NOR is the difficulty lessened by seeking sites in the real country where the houses are some distance apart. Here one is apt to come into immediate juxtaposition with the native and the original inhabitant. To be sure, there is a certain joy in studying the unsophisticated countryman, but this delight is not always heightened by a state of permanent proximity. The greatest of pleasures pall at times, and the novelty of studying new types of human nature becomes wearisome at time when the type is discovered to be universal and identical in every available instance. But once located,

it is not easy to remove, and the homeseeker who has once established himself in a country home is likely to remain there for quite some time.

THE countryside movement has, as a matter of course, greatly enriched the native settlers and put money into their purses. So true is this that vast areas adjacent to our large cities have long since ceased to be used for farming or garden purposes, and are completely utilized as building sites. But every city still has much accessible surrounding territory in which the old settlers and the new live side by side. Here, if one cares for that sort of entertainment, the greatest sport arises. The native is frequently disposed to view the newcomer with more or less distrust. The latter has just come in; the former is where he belongs, having belonged there all his life. A vast gulf is instantly fixed between the two parties; or, rather, a series of gulfs, for each has his own kind, each of his own making. Of these various gulfs—and sometimes they take the form of mountains, and even, of mountain ranges—that created by the native is the most difficult to bridge and the most hazardous to cross. The native—bless his soul!—never knows it exists; he is the great modern example of the gentleman with a beam in his own eye industriously engaged in watching the mote in his neighbor's. And the more he watches the bigger he thinks that mote is, until he can see nothing else, and his new neighbors are forthwith catalogued among the impossibles.

OF course the newcomer has, by this time, reached an identical view concerning the old timer. Then the merry war goes on, neither side seeing the merit of the other, neither recognizing a common meeting ground, neither willing to make the smallest concession. It is a state of silent feud for which there is no real cure, since the fundamental fact of importance is that while the newcomer may make concessions, or be willing to do so, the native knows nothing of the give-and-take game, and entrenches himself within his amazing fortress of earth-aristocracy. The mere fact that a city man will move out into the country is fine evidence of a certain adaptability, since he shows, by this act, a willingness to try to adapt himself to the conditions of a new and untried life. But the old-time countryman stands everlastingly on his native soil. He may laugh at the city man; he is less apt to laugh with him.

The well-intended ladies and gentlemen who make a profession of writing on the merits of country life rarely take into consideration the social conditions and problems that are bound to arise with it. They tell us, and sometimes at great length, of what kind of houses to build and where; they describe the furnishings; they tell us what sort of animals we may raise and how we may raise them; incidentally they often give detailed estimates of profits; but they have little to say on the mental side of country living which, with most people, is apt to be manifested in social intercourse. As a matter of fact this is one of the most important aspects of domestic life, if not the most important. Men seldom realize it as fully as women, for the men folk generally go to town daily, mix with their fellows, and return with a sense of having lived through the day. But the women folks, often enough, simply exist. If their home work engrosses them, it is apt to be too heavy and wearisome; if they have an abundance of leisure, then time hangs heavily on their hands, and there is not the opportunity for the relief they crave.



Notable American Homes

By Barr Ferree

The Country Seat of M. P. Slade, Esq., at Mount Kisco, New York



THIS is a good deal of a drive from the station to Mr. Slade's beautiful house at Mt. Kisco, a circumstance that seems to be quite characteristic of most of the estates in this vicinity. There are no long open stretches of land here, but so many hills and vales, with apparently as much up-going as down, that I am sure the landscape, viewed from above, must present somewhat the appearance of a vast bowl dotted over with numberless protuberances. The newer houses affect the hilltops; the older ones nestle against the warm shelters of the hill-sides. There is constant change in this beautifully varied scenery, and there is calm and quiet in the air, save when a hideous discharge of powder tells the inhabitants that a fresh blast has been set off in the mighty works the City of New York is carrying on for its water supply not far away.

One does not, therefore, find the somewhat longish drive tiresome, for there is much to see and enjoy, and an inexhaustible stock of the purest air to give zest to the journey.

The interest is obviously heightened when so interesting a house as Mr. Slade's is the goal, an interest that is presently realized when the carriage passes into the courtyard before the house and the journey is ended.

The arrangement of the house grounds, especially at the entrance, is quite unusual. Standing, as the house does, in a somewhat remote location, it was rightly deemed advisable to differentiate the entrance grounds from those of the immediate vicinity; and there could have been no better way to accomplish this than by doing so boldly and directly, and inclosing a certain area within a solid wall. The advantages of this plan are obvious. In giving an ample area to this inclosure there is an apparent expansion of all dimensions. Being sufficiently large in itself to form a thoroughly adequate approach to the house, one has but to pass beyond it to the larger spaces without to realize the considerable size of the whole estate. It emphasizes the entrance front by providing a feature that is at once a part of it and an integral portion of the house. And it gives a privacy to the entrance that



The Walled Court of the Entrance Front



The Whole Exterior Is Trellised from Base to Cornice

could be had by no other means. The court is rectangular in form, the longest side being parallel to the house. The driveway enters on one of the shorter sides, describes a circle in the center of the court, and passes out on the opposite end to the carriage house and service department. The wall is solidly built of cement, and is unrelieved by ornament save for the simple coping and the stone balls with which the piers are surmounted. But obviously a solid wall in such a situation would cut off the view from the whole of the front, and thus destroy one of the very things that makes the place so enjoyable. Immediately opposite the front door, therefore, the wall is cut completely away, in a broad and ample opening; a spacious grassed path leads out into the adjoining woodland, which has been cleared in this axial line for the giving of a complete outlook over the view into the far distance that this arrangement discloses. Hence this simple, solid wall is an architectural device of exceeding cleverness; it emphasizes the entrance front, and its omission on the axis heightens the value of the outlook.

There can be no doubt of the first impression made by the house: it is that of a long, low structure, with a two-story portico at each end, and unrelieved by pro-

jections save for the very simple but beautiful doorway. The house is, of course, not low; but this effect is obtained by the unbroken length of the fronts, by its being planned as a somewhat long rectangle; by the continuation of the main roof over the end porticoes; and by the simplicity of the whole exterior design. Let me hasten to add that, as a matter of fact, there is but one end portico here; the other end, that of the service wing, is walled in, although its architectural treatment is identical with the open portico on the right. It may be stated here that the architect and designer of the grounds was Mr. Charles A. Platt, of New York.

The house is of white stucco, wholly covered, on both fronts, with an applied wooden trellis, widely spaced, which gives it a strong individuality of appearance, and which, in time, will be covered with the vines that have already made a good start. The ornamental embellishments are admirably restricted and in fine taste. Save for the trellises the walls are unrelieved below the cornice, which is broad, fine, strong and firm. The columns and pilasters of the porticoes are the single embellishments of the ends, except the trellis work and



A Look Into the Flower Garden

balustrades with which they are inclosed. The five dormers of the entrance front are alike in design and completely in keeping with the whole exterior. The roof is shingled, and the blinds throughout are painted Italian green. As a matter of structural information it may be added that the chimneys, save for their interior openings, are built of solid concrete to the top.

A word or two is needed on the doorway. The simplicity of its design is heightened by the fact that it is the single piece of ornament applied to the exterior. It is a triple feature, the doorway in the center being flanked with narrow windows inclosed within pilasters, designed with channels and Ionic capitals. Ionic columns of the Roman type stand on each side of the doorway, the lower portion of the entablature being recessed between them, with the uppermost moldings continued straight across and supporting a wrought iron railing that transforms the space above into a shallow balcony. The doorway itself does not rise to the entablature, space for a panel dated with the year of the building being arranged



Japanese Screens and Paintings Constitute the Wall Decorations of the Drawing-room

above it. Interesting as this frontispiece is one will not linger unduly before it, for it naturally suggests an interesting interior. The rectangular hall is of comparatively modest dimensions, and is intended to serve only as an entranceway and as a means of communication to the other rooms. The walls are paneled in white throughout. At each end are pilasters, forming a recess on the right, while on the left the space is occupied by a boxed staircase and by a passage that conducts to the service rooms. The floor

is laid with red Moroccan tiles, with wide white mortar joints. The furniture is Italian. The plan of the house is so obvious that its chief features may be discerned from this point of vantage. Immediately in face is the drawing-room, which occupies the whole of the inner center of the house. To the right, beyond the alcove and beneath the pilasters, is the library, with the den on the entrance front. To the left is the dining-room, with the butler's pantry and kitchen on the entrance front, and the servants' hall and laundry in a wing beyond the main house lines. The drawing-room, library and dining-



French Furniture of the Various Louis Periods Is Used in the Drawing-room

room all overlook the garden front. The spacious drawing-room is a noble apartment, with three great French windows opening into the terrace above the garden. It is trimmed with butternut trained with a special gum treatment that yields a soft brown effect. The walls are based with a low wainscot of this wood, which reappears in the plain but stately cornice with which the perfectly plain white ceiling is supported. The wall design is that of gigantic panels, inclosed within a simple molding that abuts against the wainscot and cornice, below and above and on the ends, against the uprights at the chimney-piece and the frames of the doors and windows. These panels are so large as to be continued around the corners of the room, which are curved and without the abrupt juncture of rightangled surfaces. The whole of this panel-surface is covered with Japanese grass cloth of golden brown hue known as gold antique. The window curtains are of damask, with a dull green body on which is a large pattern of Italian design in ecru. The wall decorations are,



The Inclosed Portico Is Furnished as an Outdoor Room



Screens and Shutters Inclose the Portico Above and Below

for the most part, Japanese paintings and screens. The fireplace has facings of red sandstone encased within a mantelpiece of simple design, which in its turn is applied to a background of paneled wood that extends to the cornice. The furnishings are, for the most part, French, and include some Louis XIV black walnut chairs, with others of the Louis XV period, and a Louis XVI console table. The light fixtures are of candle form applied to the walls.

The library is finished in walnut of a grayish tone. Save on the side of the fireplace its walls are entirely encased with bookshelves. These rise to the height of the doorways, the space above them having the wall brought out flush with the shelves, which thus have a completely built-in effect. The upper surface is covered with leather tinted grayish brown. The handsome furniture is entirely adequate and in keeping with the literary quality of the room. The window curtains are of soft crimson and gold mesh. The spacious fireplace has sandstone facings and wood trim, supporting a narrow shelf, with a paneled overmantel. The den, which adjoins this room, is treated with white enamel.

The dining-room, as has been pointed out, is on the opposite end of the house. It is wainscoted throughout to the ceiling in paneled butternut, the triple division of base, dado and frieze being maintained by panels of different dimensions and form, and the whole being surmounted by a cornice that carries the plain ceiling. There is no mantelpiece, but the fireplace facing of sandstone is finished with a simple molding of wood. An ornamental panel in color is let into the upper space. Channeled pilasters on either side emphasize the importance of this feature, which is further

increased by the antique altar lights that stand on each side of the fire opening. The chairs and side-board are Italian. The window curtains are of damask and resemble those of the drawing-room.

The second floor is given up to bedrooms arranged en suite with bathrooms. Altogether there are five bedrooms and four bathrooms, together with a dressing-room connected with the owner's suite. The trim throughout is white, and the wall treatment and furnishings are distinctive and harmonious. Each principal room has its own fireplace with gray brick facings. The bathrooms are tiled and wainscoted, with porcelain fixtures and exposed nickelplated fixtures.

The somewhat stately sobriety of the entrance front makes way, on the garden



The Library Is Finished in Walnut of a Grayish Tone



The Dining-room Is Wainscoted Throughout in Paneled Butternut

front, for a more festive treatment. The structural design is the same, save in the window treatment of the first floor and the fact that the roof contains but three dormers, while on the other front it has five. The most obvious individuality, however, is in the end porticoes, both of which are here exposed and constitute essential features in the design. The windows of the first floor all reach to the terrace level and have casement openings. The end windows—those of the library and dining-rooms—are triple openings, the central window being flanked with narrow single lights. The entire wall, as on the entrance front, has its trellis, but here it is emphasized above the windows of the first floor by a series of small brackets that support projecting strips of wood, which, when the vines have covered it, will have the effect of a green cornice against the white background.

The great porticoes at each end of the house are two stories in height, with a second balcony at the second floor. The columns on the ends are of the Roman Doric type. The intervening space, in the first story, is partly filled with square trellises, between which are spacious openings.

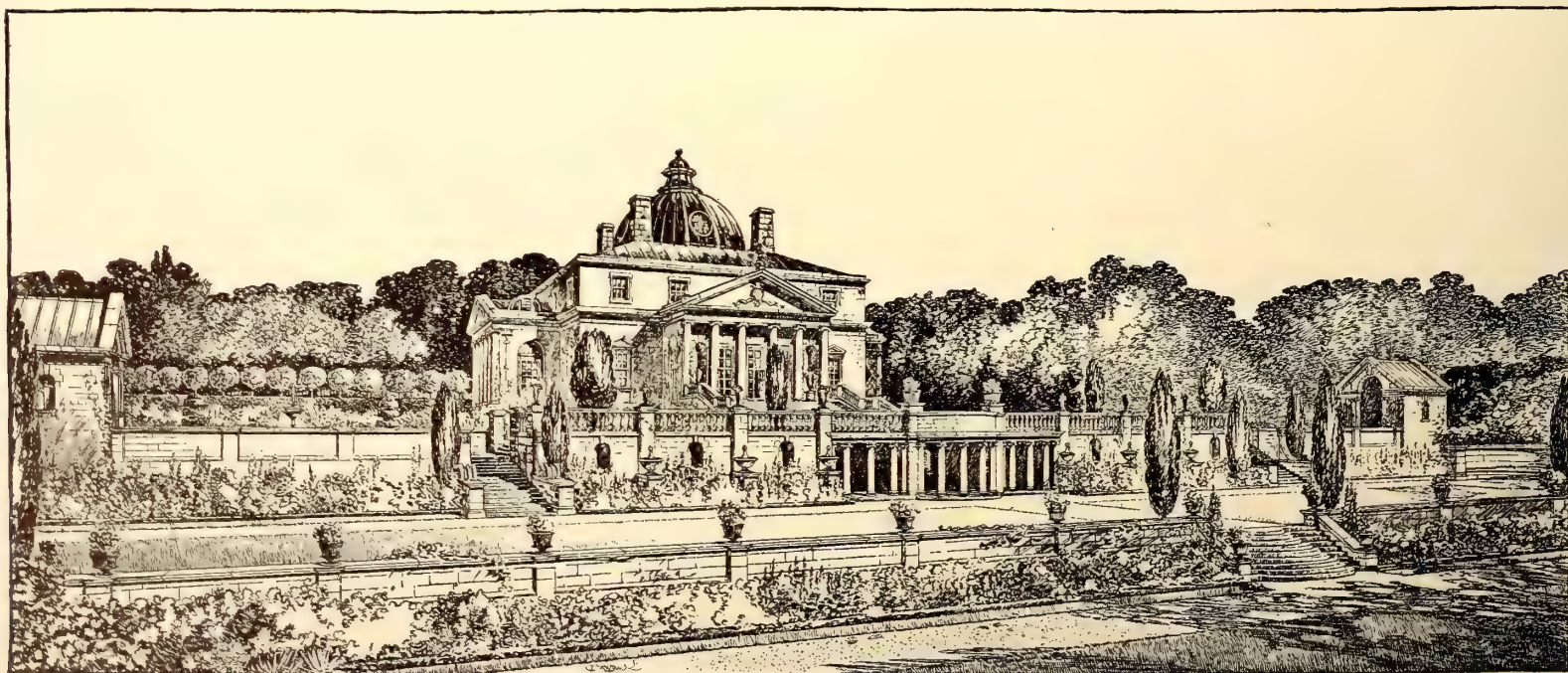


The Hall Is Paneled Throughout and Paved with Moravian Tiles

Within are Japanese screens. The ceiling is of paneled plaster and the floor of brick. In the second story the openings are closed below within ornamental balustrades in oblong panels. Solid green blinds complete the fixtures here. The portico to the right of the entrance front is open clear through to the garden front; but the other portico, while treated in exactly the same exterior fashion, is closed on the entrance front, and, on the other is but a comparatively shallow recess.

The immediate foreground to this delightful front is a terrace, floored with hand-made American tile of rough texture laid in herring-bone pattern. It is raised but three steps above the

ground, and is decorated with stone seats and with splendid vases at each end of the wide steps. Then comes a broad stretch of lawn, bordered on each side by a thickly planted growth of shrubbery and flowers, with bay trees in great square boxes. Further on a slightly lower level is reached, with a single step, and again great stone vases. Beyond, in the center of the lawn, is a pool, formal in shape, and with a cemented border; then more lawn, more planted shrubbery, and a great outlook over the country beyond.



Garden Streams and Appropriate Bridges



By Phebe Westcott Humphreys



GARDEN streams and bridges, in their artistic development, are well illustrated in some notable estates near Philadelphia. There are three distinct types of stream and bridge building on the Jay Cooke estate at Ogontz, valued for their characteristic treatment. One presents a deep natural stream that in the long ago provided the water supply for an old mill which still stands on a part of the estate. When the place came into the possession of the famous financier, he brought the same practical ideas to bear upon his garden building that had brought about his success in the building of a fortune. Not one suggestion of natural beauty was allowed to be sacrificed in the resurrection of the dilapidated old mill and its neglected water supply. An open vista was arranged through the intervening belt



Low Dams, Irregularly Spaced, Give a Constant Gurgle to the Water



A Shallow Stream Charmingly Bridged and Planted

of woodland, in order that this picturesque bit at the lower slope of the grounds might be in plain view from the upper walks and driveways about the house; the ancient mill was sufficiently remodeled to preserve it without marring its quaint old-fashioned outlines; the natural growth of fine old trees, with stream borders of briers, water-elders and other native shrubbery, have remained undisturbed except for the narrow clearing for winding walks leading down to the stream. No attempt at artificial planting or showy bridging of the stream has been allowed to spoil its wild beauty, only the natural wild flowers outline its shore, the hardy ferns and mosses cling to its steep banks, the sturdy milkweed nods its swaying bloom branches above its own showy reflection, and opens its brown pods to scatter its fluff-winged seeds upon the waters in the autumn; while the trailing partridge vine with its small red berries and evergreen foliage beautifies the spot throughout the winter. Rough logs sup-



Bridge Above a Dam



A Rustic Bridge of Simple Design



A High Bridge Across a Stream

port the wooden bridge, and plain wooden railings outline both driveway and bridge leading to the old mill and a natural bog garden in the hollow beyond.

Another section of this same stream at the upper end of the estate is so shallow in dry seasons that it frequently dried away to an ugly expanse of mud in midsummer, until it was dammed up with ornamental stonework. A broad stone wall reaches out from either bank of the stream making the waterway quite narrow where it flows over the dam. On one side of the stream the wall has been left without vine planting. On the garden side, where a sheltered resting place has been formed down close to the music of the waterfall, both vines and shrubbery have been planted to obscure the rough masonry; and the big trees springing from the water's edge have their trunks well covered with billowy vines that seem to sway and dance to the music of the dashing water.

The best hardy shrubbery for planting in such positions is the giant knotweed. This is a tall-growing species known botanically as *Polygonum cuspidatum*. It frequently reaches a height of from five to seven feet, and may be planted close down to the edge of the stream, where with one foot in the water and another on the land it will take strong root hold and cover its branches with billowy masses of foliage throughout the greater part of the year, and display misty clouds of bloom during August and September, when numerous long drooping clusters of white flowers develop at the axil of each leaf along the upper half of the stem. This is a striking plant for an isolated specimen of shrubbery, but it is especially beautiful when grown in its favorite moist situation on the edge of a garden stream, with its mist-clouds of bloom swaying over the water.

The charm of appropriateness between the garden stream, its planting and its bridging, is shown in many pleasing types on the Morris estate. On a quiet level stretch, in a secluded portion of the grounds, where there is little swelling of the stream with destructive dash and flow after heavy rains, an artistic stone bridge with steep archway has been erected, with big boulders at the side for stepping stones and resting places leading down to the water. A drooping willow has been trained to spread its branches above the bridge, reach down to the water, and shelter one of the most alluring of the boulder seats. Then all along the banks the planting problem has been solved by a variety of hardy iris and trailing myrtles. The hardy varieties of Japanese iris are especially appropriate for this planting. There is also a variety of iris of peculiar attraction for such situations known botanically as *Iris pallida folia variegata*. It is conspicuous because of its beautifully variegated foliage, each long leaf showing a background of glaucous green with broad bands of creamy yellow. There is still another variegated sort which is prized for stream gardening

because of its decorative seed pods. The foliage is not so showy as the *Pallida*, as the dark green leaves have narrow variegations of white; and the pale lilac flowers are rather inconspicuous, but the seed pods remain on the plants all winter, and are especially showy after they burst open and display their rows of orange-red berries. This variety is known botanically as *Foetidissima variegata*.

A portion of the Morris stream, where there is a steep slope to the ground, has been rather severely treated, as the dashing flow of water after heavy storms would not admit of plant growth at the stream's edge. In its rugged, rocky beauty, however, the treatment is quite as pleasing and appropriate as that of the sheltered and planted shores just beyond. A plain, strong wooden bridge spans the stream on heavy girders supported by high stone walls. Tall, stately clumps of bamboo planted near the bridge on the upper slope form a characteristic decoration peculiarly pleasing, while the stone-walled banks of the stream have as their only decoration native water plants with floating branches, that are not easily injured by rapidly flowing water. To increase the rugged beauty of this narrow waterway little shallow dams have been formed at regular intervals all along the sloping section, and even when the stream is comparatively quiet, in times of drought, there is always the flow and gurgle of shallow waterfalls—increased to wild dancing cascades in times of storm.

Where the Harrison estate slopes down to the Old Church Road a shallow stream has been attractively bridged across the public roadway. Here, where the county allowed only the plainest of serviceable bridges, private means have been expended for the public good, and a handsome stone bridge, arched above the stream, extends its stonework in an attractive curve to a mammoth stone gatepost; while just beyond, this same stream has been dammed to form a garden pond, while the roadway bridge passing over the shallow portion is decorated by a rustic railing. Clumps of hardy flowering shrubbery dot the grounds leading down to the stream, while growing along its edge and reaching down into the water are vines of the hardy vinca or trailing myrtle, and on the edge of the stream below the bridge there flourishes the *Marsilia*, or water-clover, with its odd fern-like leaves shaped somewhat like a four-leaved clover. This plant is appropriate either for growing directly in the water, at the shallow edge of the stream, in the soil along the bank, or in a bog-garden formed by the overflow of a natural garden stream—the leaf stalks stand erect three or four inches high when grown out of the water; when planted in the stream the curious decorative leaves float upon the water. It is difficult to destroy the plant, for even when torn from the soil by an extra rush of water, the torn and bruised portions will quickly take fresh roothold and continue to flourish.



Bridge Roadway with Rustic Railing



Entrance Bridge Across a Public Highway



Bridge to an Old Mill at Ogontz



The Country Seat of Frederick Converse Beach, Esq., at Stratford, Connecticut: The Great Portico of the Front



A Remodeled Colonial House

The Country Seat of Frederick Converse Beach, Esq., at Stratford, Connecticut

By Charles Chauncey



HERE is no more beautiful village in Connecticut than "Old Stratford," but it is not only its beauty, its fine streets and its magnificent trees that attract and please the visitor to the village, but more especially its historical associations, which are not only admired by the traveler but loved and revered by the descendants of the sturdy little band of pioneer planters who came and settled the town in 1639. The pic-

turesqueness of its situation is remarkable, for it is delightfully located on the banks of the Housatonic River to the east, Long Island Sound to the south, and to the north and west rise the peaks of the "Seven Hills."

The place was known as "Cupheag," a name given to it by the Indians, and signifying "a harbor" or "a place of shelter," so it is not surprising that the men and women who came with the Rev. Adam Blakeman should make their landing at "Little Neck" and find shelter and peace in so



Old Rose Brocade Covering for the Walls, and Ivory White Trim, Is the Color Scheme for the Hall. The Double Staircase Is Unusual



The Sun-room Has Green Painted Walls, Ivory White Trim and Willow Furniture with Turkey Red Upholstery



A View from the Hall Looking into the Dining Room



There Is an Effective Planting of Evergreens About the South Side of the House



The Pergola-like Covering



ing through the Library
ng-room



The Walls of the Dining-room Are Covered with Tapestry. Mahogany Furniture
of the Sheraton Style Is Used



g for the Well Curb



Doric Columns and a Classic Frieze Are Used for the Sun-room



The Sun-room Has Green Painted Walls, Ivory White Trim and Willow Furniture with Turkey Red Upholstery



A View from the Hall Looking through the Library into the Drawing-room



The Walls of the Dining-room Are Covered with Tapestry. Mahogany Furniture of the Sheraton Style Is Used



There Is an Effective Planting of Evergreens About the South Side of the House



The Pergola-like Covering for the Well Curb



Doric Columns and a Classic Frieze Are Used for the Sun-room

delightful a spot. With all these associations and environments it is not surprising that a descendant of one of the early planters should return to "Old Stratford" and reclaim the sacred land of his ancestors.

When the late Alfred E. Beach was seeking for a healthful and peaceful residence, he purchased a plot of land on Elm Street, with its boundary extending to the Housatonic River, beyond which broad views of Long Island Sound were obtained. He subsequently purchased the adjoining property on which there was a great Colonial house, and established what was termed the "Stratford Institute," creating a place where his children might be educated, as well as the children of other gentlemen of the village.

It was a great house, with stately Doric columns supporting a pediment at the front. A mere glance at the exterior of the mansion impresses one with its generous proportions,



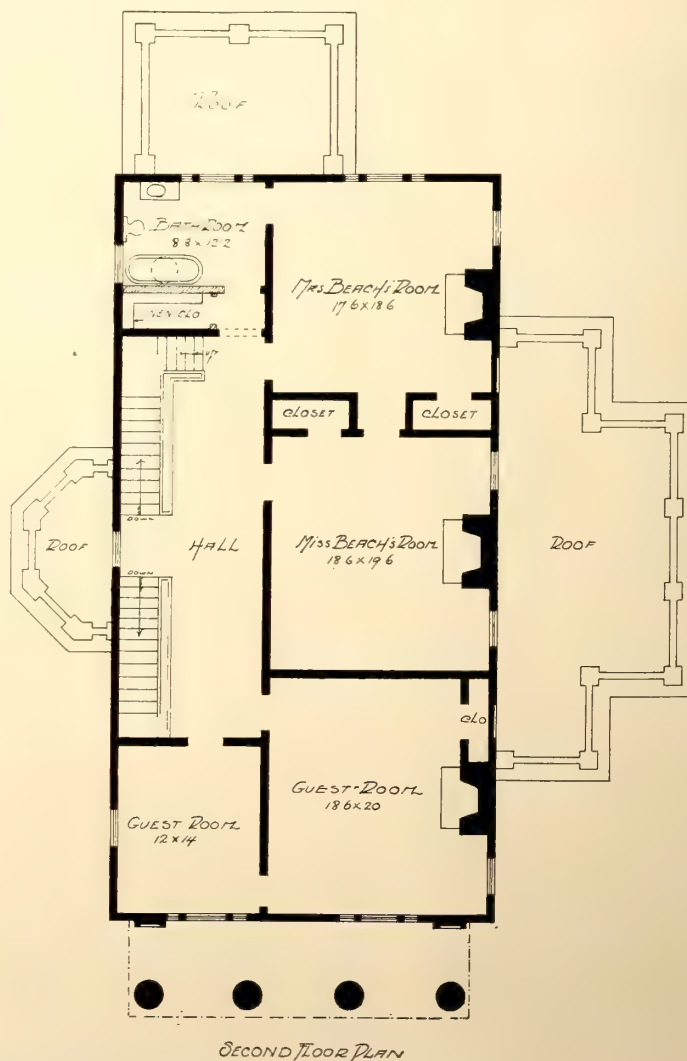
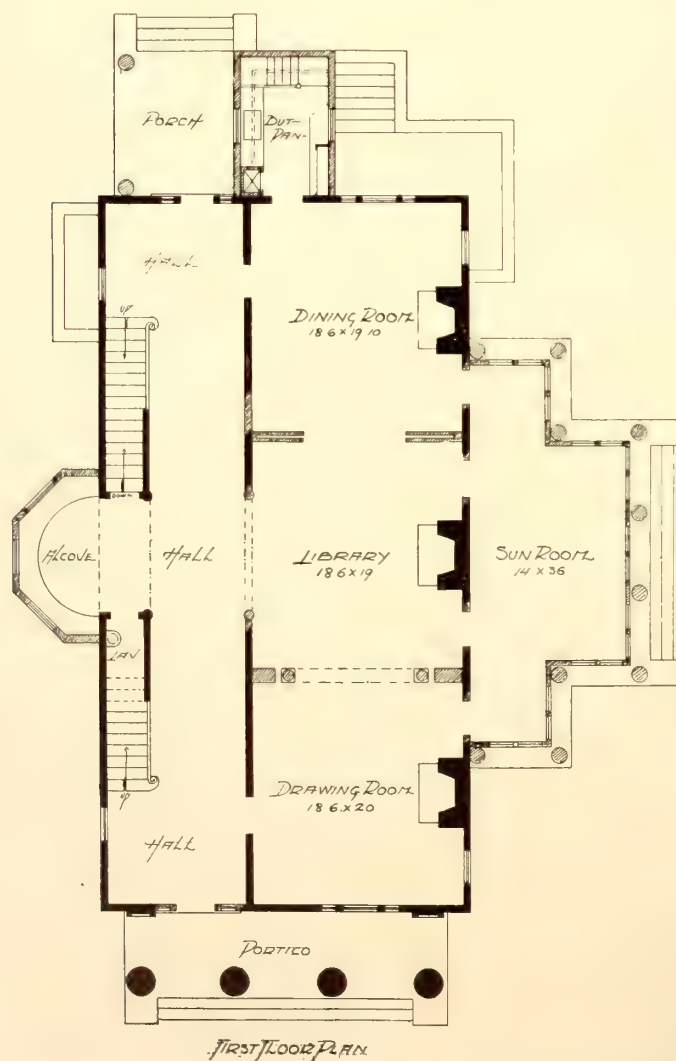
The House Before the Alteration

for it is a splendid old house and is a fine example of Georgian architecture.

The house was built in 1826 by Gen. Matthias Nicoll for his son-in-law, Capt. George R. Dowdall. General Nicoll furnished the materials for the house, and Messrs. Beardsley Brothers built it, according to specifications prepared by General Nicoll.

The form of the house is quite unusual for a house of the period in which it was built, and its plan, showing the

hall on one side and the three succeeding rooms on the other, is equally so; but this arrangement is best explained by the reason that Captain Dowdall was a seafaring man and was about to retire from following his profession. While making his last voyage to China, and during his absence, his wife, who was a daughter of General Nicoll, knowing that her husband might be an "uneasy sea-dog," concluded to build the house with a great hall twelve feet in width and sixty-two



Dotted Lines Show the Alterations to the Floor Plans

feet long, the length of a ship's deck, so that he might have a place in which to walk and exercise. To utilize this great length it was found necessary to build three rooms deep, each one being twenty feet square. She also built in the hall a twin staircase, rising from both the front and rear entrance doorways, to a broad joint landing at the second story. This was done so that the "sea-dog" might think himself going up to the hurricane deck on one side and down to the main deck on the other. The idea created an unusual arrangement not to be found in any Colonial house of record. In order to make a schoolroom, Mr. Beach removed all the partitions between the rooms on the first floor, and it remained in this condition until the present owner placed it in the hands of his architect, Mr. Francis Durando Nichols, of

Bridgeport, Conn., for the purpose of transforming it into a modern residence. The house was in a good state of preservation and was in reality only waiting for a future development, rather than a transformation. The main detail was classic;

the portico, at the front, was excellent, but the length of the house was too great for its width, so that in order to break the elongated lines the architect built a large bay window on the north side, and on the south added a sun-room, with detail and Doric columns to correspond with the classic character of the older parts. A butler's pantry was built on the east end, together with a new porch which was required. This concluded the additions to the exterior.

The absence of superfluous ornaments, and the solidity of the walls of the house, which were built of wood and lined



The Remodeled House Showing the Exterior Changes Made on the North and South Sides

with brick, offered ample opportunities for modification and enrichment. Woe to the architect, however, if any change had been made without restraint, good taste and judgment, which considerations, if not rightly heeded, might have made the place lose the distinction of character which was only waiting to be developed. The amount of change has certainly not been excessive, and the improvements have been carried out in sympathy with its subject and its environments.

The underpinning had bulged out, so it was found necessary to jack the house up, tie it together with steel rods and rebuild it. The platform on which the portico rests was rebuilt, but the front door was maintained, except that new

wall opposite and on the right side of the hall and repeat the arch and columns. By this alteration a broad transverse vista is extended through the library, taking in the fireplace, and beyond to the sun-room.

The hall and the interior throughout contained a simple trim with fluted bands and corner blocks. This was retained, and on the level of the window sills a heavily molded chair rail was extended around the hall and the three rooms on the first story, up the stairways and around the hall of the second story, creating the effect of a Colonial wainscoting, which enhanced the value of the interior decoration. The classic detail of the exterior was repeated throughout the interior,



Mahogany Furniture of the Colonial Period, a Queen Anne Mirror, Banjo Clock, and an Old Franklin Stove in the Fireplace
Are Some of the Ornaments of the Library

leaded glass side windows and transoms were inserted. In the interior the great school-room was divided into three rooms—a drawing-room, library and dining-room. The drawing-room and library are in reality one room, though they are separated by an archway supported on Ionic columns, while a wall containing sliding doors was inserted between the library and the dining-room. The sun-room was built so that it might be easily reached from each of the three rooms. The old windows were removed, the wall cut to the floor, and French windows were installed, forming convenient access to the sun-room.

The fine old staircase, rising from either end of the hall, formed an archway, at the corners of which were fluted Ionic columns. The wall space was broken at the north side of the house and a great bay window was built, which was lighted by three windows, in front of which is placed a circular window seat. This made a very attractive feature, but to increase the beauty of the effect it was decided to break the

and a cornice eighteen inches in depth, and of a character similar to the exterior frieze, was built at the intersection of the wall and ceiling throughout the first floor.

In the hall the wall space between the wainscoting and cornice is covered with a German wall paper in two tones of old rose with a heavy brocaded finish, while the walls of the drawing-room and library are covered in a two-tone mustard-colored silk. The dining-room walls between the wainscoting and cornice are covered with tapestry in green trees on a blue background.

The staircases in the hall, which are of mahogany, have been cleaned down, and in the removal of the varnish a compass in inlaid work was discovered on the top of each newel just where the rail sweeps down and forms a circle.

Oriental rugs in harmonizing colors of old rose, yellow and brown cover the highly polished floor of oak, while a thousand legged table, Chippendale chairs, an Empire sofa upholstered in old rose, a grandfather's clock, and family

portraits complete the ornaments of the hall. The portrait over the staircase is that of Moses Y. Beach, the founder of the New York Sun, and the grandfather of the present owner.

The columns and archway between the drawing-room and library are very effective. The library has an old Franklin stove with brass trimmings built in the fireplace and resting on a red-tiled hearth. Facings of similar tile are provided, harmonizing well with the Lake Coma marble mantel. An old banjo clock, a Queen Anne mirror hung over the antique tea table, an Empire bookcase and chairs, form a happy and harmonious furnishing for the room.

inclosed with glass doors in small lights. The radiator for this room is also a plate warmer, which is a great convenience for a pantry, specially where the kitchen is on another floor. A staircase leads down into the butler's pantry on the level with the kitchen, which is also fitted up with a dresser and ice-box. A laundry off the kitchen is fitted with porcelain tubs. There are plenty of closets and dressers provided in all the service part of the house.

The second floor of the old house contained a hall room at the rear and a bathroom where the stairs to the third story now ascend. The bathroom was removed to the third floor for the use of the servants, and a staircase, the same as the



The Archway Beneath the Double Stairway, with the Bay Window Beyond

The sun-room has the same wooden cornice as the library, and, together with the trim, is painted ivory white, while the wall space is painted an ivy green. This room is inclosed with glass, and is furnished with green willow furniture and upholstery of turkey red, and a rug of two-tone red.

The dining-room is a very handsome apartment. It is furnished with mahogany. The sideboard, china-cabinet, table and chairs are of the Sheraton style, except that the table has a pillar, instead of the corner legs of a true Sheraton dining-table, which is in good taste, but it might be noted that Sheraton never designed a pillar table.

The butler's pantry is conveniently placed, and contains a butler's sink, dresser, with drawers below and shelves above,

main stairs, was continued to the third floor. The rear hall bedroom, being twelve by twelve feet, and containing two large windows, formed an excellent position for the bathroom. Ample space was taken off this room for a linen closet.

The bathroom was wainscoted in white enameled tile and finished with a blue and white egg and dart molded cap. The fixtures are of porcelain, and the Roman bathtub is supplied with a shower and needle bath equipment. Over the Roman lavatory is placed a medicine closet with a beveled plate mirror, and with electric fixtures at each side. All the hardware trimmings for the bathroom are nickelplated.

The front hall room has a wall decoration in warm gray stripped wall covering, with a frieze of baskets of pink roses

(Continued on Page 153)



The Garden Joys of a Country Home

By Abbie I. Johnson

AN EXCELLENT rule to observe in making the most of a home in the country is to remember that nature never creates according to the compass and the square. A constant effort to work by line in what may be called home-made landscape gardening is certain to throw the shadow of stiffness over all. It is amazing to find in making up the floral and shrubbery plans for a small plot of ground, such as constitutes the majority of city workers' homes away from urban

are so often out of place in the modest acre of the everyday country home. Too often they remind one of the woman who wears a style of hat or bonnet because she admired it upon some one else, forgetting that to her it may be wholly unbecoming.

We may borrow much, in beautifying the home acre, from the pretentious displays characteristic of elaborate grounds wherein the professional landscape gardener reigns. In doing so, however, we should always remember that it is merely a solution and not the full strength of the original essence that we desire to obtain.

A common error growing out of forgetfulness of this fact is the planting of fancy roses as a part of shrubbery. These would be better grown, if utilized at all, on a trellis, or in a regular rose garden, where they can receive the attention they require. On the other hand, the wild rose may be cultivated with other bushes with excellent effect.

Let the place conform to the spirit of its surroundings. Above all things, the bushes should not be sheared. Primness is never wanted in the country home. When a bush is sheared it no longer exists in itself, but merely as the representation of the shear-er's idea.

While native shrubs can be grown more easily than others, if one must turn to other material there is nothing



Garden Lilies Are Particularly Desirable for Close Window Outlook

bustle, how much can be accomplished by utilizing the shrubs and flowers found in the woods and fields adjacent to the home site. Elaborate growths with amazing names, imported from famous gardens, possess a certain amount of charm—if properly disposed in the garden arrangement. The difficulty in this regard lies in the fact that such plants

are so often out of place in the modest acre of the everyday country home. Too often they remind one of the woman who wears a style of hat or bonnet because she admired it upon some one else, forgetting that to her it may be wholly unbecoming.

The plant is of the figwort family, and is an immigrant from South America, where it is highly prized.

The rhododendron is one of the most beautiful of shrubs, with its alternate often evergreen leaves and five-parted flowers. The combination of the rhododendron and the azalea, whose fragrant rose-colored blossoms are, under such conditions, seen with telling effect, is desirable and easily accomplished, as neither is expensive nor difficult to obtain. Really, the azalea and the rhododendron are of the same family, although the former is of Alpine origin.

In making the combination it is best to avoid all semblance of guided growth. In the Blue Ridge Mountains, where the rhododendron is seen at its best, the very harmony of its irregular growth adds immensely to the charm of effect. What may be called the purely natural effect can be secured with little trouble by planting azaleas and rhododendrons close together, and then letting them grow and spread at will, within bounds, of course. Twenty-one inches apart is an excellent distance to observe in setting shrubby growths.

If the acre contains a bit of woodland, there is opportunity for a charming rhododendron walk or path. This requires no elaborate preparation. The walk should wind about. Gentle curves are always a feature of nature's path-

ways. Set the rhododendrons about twenty inches apart, and let them alone. This is not nor will it be a place for the pruning shears to operate. The rhododendron, like the mountain laurel, is exceedingly prolific. Nor does it sap the lives of the trees among which it grows. At the same time it affords a density of growth that for a path screen serves admirably.

An error in the matter of porch and veranda growth all too frequently in evidence, and one which the country homemaker should avoid, is selection according to the idea that

anything which grows free and spreads rapidly will serve. Wistaria is perhaps the most popular of all the creepers, largely for this reason. To be sure it is charming in its way, but it has manifold defects, and compares unfavorably with other growths adapted to the same purpose.

What is more beautiful woven about a porch in nature's matchless fashion than the English ivy, or its American cousin, the Virginia creeper? Then there is the Tartarian honeysuckle. When in addition the porch or veranda is hedged about with old-fashioned lilac, the mock-orange or syringa, the dogwood or the sumac, the effect is delightful indeed. These are all plain and simple growths, but they furnish a wealth of opportunity for charming color combinations which will



Thicket Growth of Spotted Calceolarias



The Aubrietia Makes a Charming Border for the Driveway



The Blood-red Wallflower Is One of the Most Effective for Lawn Decoration

add as much to the appearance of the exterior of the home as does that old friend "Golden Glow" to the ancient fence corner.

A slight archway, preferably of especially provided iron work, which is both light and inexpensive, is a highly desirable addition to the appearance of the rear entrance to a country home. Here is where that old friend of the corn field, the pumpkin vine, can be utilized. There is no other plant or vine which grows more rapidly or creates a more luxuriant, denser shade than this. The tendrils are so strong that after they have made a dozen tight coils about a wire, or around each other, they become almost as tough as wire itself.

An immigrant porch screen is the Japanese *Aebia quinata*, hardy, a rapid grower, with small but fragrant flower. A plant of the same class and nativity is the *Celastrus orbiculatus*, a relative of our own bitter sweet. Its foliage is good at all times, but its chief beauty is its berried effect in late autumn and throughout the winter months, just at the time when the echoes of summer glories are most welcome. In planning the lawn decoration it is well to remember that flowers are grown for two purposes—to produce flowers and to add color to the landscape. When flowers are meant to be a part of the landscape picture they should have relation to

other things about them. Near the border masses, along the walks and drives, against a foundation or a fence—these are good places for them. As a narrow edging to a group of shrubby flowers are very effective.

Much depends on the selection of borders. The aubrietia, whose flower reminds one of the forget-me-not, makes a charming border for the driveway. All things considered, however, a mixed border is quite as desirable. For this daffodils, peonies, roses, phlox, larkspur and various other perennials are available, grouped according to the taste of the home-gardener. Plants, however, should always be grouped well, and not muddled up without reason.

For both the veranda and the lawn the fuchsia is exceedingly desirable. Few

flowers are more graceful in growth and freer in bloom. Large specimens can easily be kept through the winter when not exposed to frost. In choosing, select varieties of distinct colors. The effect is charming.

One of the most effective flowers to bed upon a lawn of moderate size is the wallflower. Its bloom is yellow, orange or blood-red, according to the variety purchased, but the latter is in stronger contrast against the deep green of the well-kept lawn. It grows from ten to eighteen inches high, and its flowers, at full bloom, blaze out in most gor-



Arabis and Tulips are Available for Almost any Situation



White Arabis and Tulips Effect a Striking Combination



Pansies Edged with Aubrietia Are Ornaments to any Lawn



Azaleas and Rhododendrons Grown in Combination Produce both Richness and Beauty



A Rhododendron-bordered Path

geous glory. The form of the bed is really of little consequence, although the wallflower rather gains than loses by irregularity.

Another flower that presents a far better appearance when allowed to grow along the lines of nature rather than those of artificial cultivation is the arabis, that member of the mustard family whose white or purple bloom is attractive under almost any circumstances. Hardy, requiring but little care, it flourishes under conditions that would prove fatal to many plants seasoned to unfavorable experiences. When combined in flower-bed composition with tulips the effect is striking. One may obtain the plant without difficulty, and its quickness to root, grow and flower renders it desirable.

The pansy is responsible for many beautiful garden pictures. It may be massed by itself, used to form edgings, or associated with tea roses and other plants, as it

forms a delightful groundwork for taller perennials. An attractive bed is formed of pansies edged with aubrietia. The selection of the pansy should be governed solely by the preference of the planter. To be on the safe side it is well to choose a variety that is small and dainty.

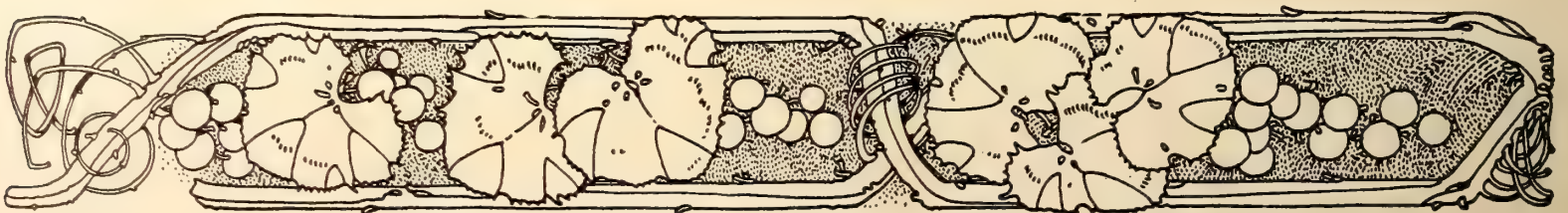
Lawn beds should always be arranged with the idea of maintaining a continuance of bloom. One way to reckon is, first, sweet William, then the aster, pansies, mignonettes, hollyhocks and nasturtiums. It is well to bear in mind that in poor soil nasturtiums run to flowers. In the spring-time one can not have too many daffodils, just as in the summer the more nasturtiums one possesses the better his floral fortune.

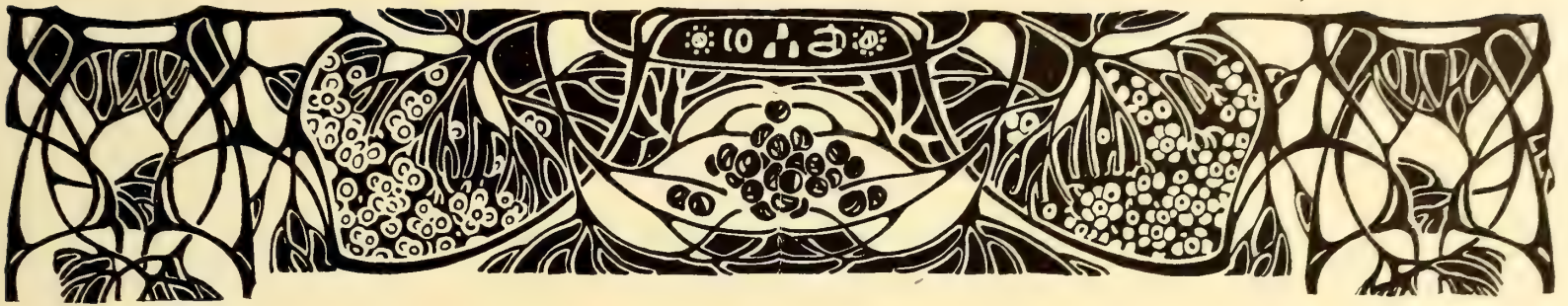
A blot on the landscape in more than one country



Pot Fuschias Are Among the Most Graceful Plants for the Porch Edge

home is found in the neglect to beautify the ground line at the home's foundation. Such neglect has no excuse whatever.





The Summer Home of Lucien Oudin, Esq.

Water Mill, Long Island

By Samuel Ward



HERE is no style of architecture which lends itself better to sea shore conditions than the Swiss chalet, which Mr. Lucien Oudin accepted for the style of his summer home at Water Mill, L. I. The house is beautifully situated on Water Mill Pond, which is a body of water separated from the ocean by the dunes with which the southern shore of Long Island is formed. From its various rooms and porches fine views are obtained across the pond to the ocean beyond the dunes. The principal characteristic of the house is the lean-to roof lines, extending down over the walls and forming a roof for the porches.

How rarely one sees a house that is as attractive viewed from the back as from the front, yet here is one where the treatment of the rear of the house gives an added charm. Its balcony, with steps descending in either direction, with its balcony above, is quite unique. The kitchen door opens to a porch, which is quite close to the "drying grounds," which are inclosed by a well clipped privet hedge.

The house, while not so large, is planned to give a feeling of roomi-

ness, but without loss of space. On every side of the house porch life can be enjoyed, for there are three porches placed on three sides of the house, providing ample shelter from the winds in any storm from any direction of the weather. These porches have columns built of rough-faced brick, which are large and solid, and present a picturesque effect, supporting, as they do, the roof of the house. The exterior walls are covered with shingles left to weather finish a silvery gray color, while the trimmings are painted a soft brown. The roof, which is shingled, is stained a dull red. The chimneys, built of red rough-faced brick, and the dormer windows which pierce the roof, lend character to the whole general scheme.

The main entrance to the house is reached from the driveway swinging in from the roadway, passing the stable at the front of the grounds, to the porch from which entrance is made into the house. Neither the hall, which is first entered, nor the remainder of the interior is plastered. The inside finish is simple, consisting only of the planed side of the boards which form the main walls. They are closely matched and are nailed on the outside of the studding, which is



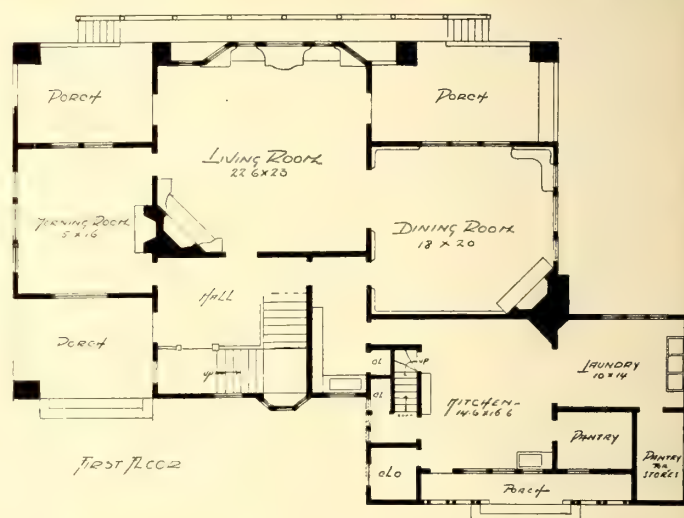
Picturesque and Interesting Is the Approach to the House, for One of the Many Porches Is Used as the Entrance to It



The Morning Room Has a Brick Fireplace, and Soft Brown Stained Woodwork



The House Is Placed on K



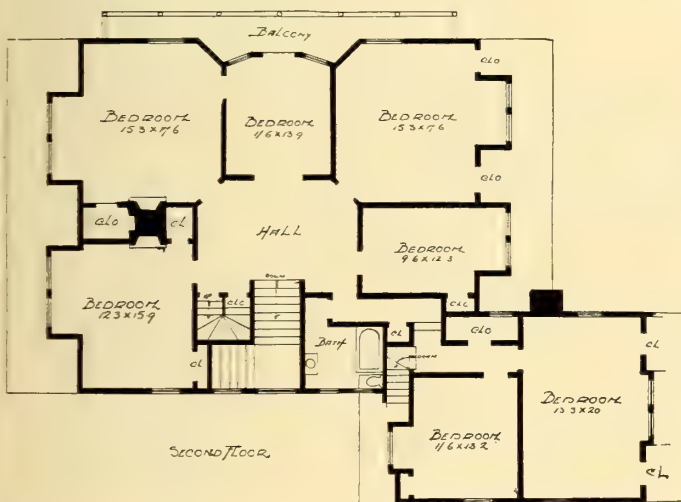
A Plate Shelf in the Dining-room Forms a Space for China ; the Fireplace Is Also a Feature of the Room



How Rarely One Sees a House that Is So



House Overlooking the Bay



The Hall Has a Stairway Rising from a Broad Landing in Which There Is Placed a Leaded Glass Window



House Attractive as Viewed from the Rear



A Brown Stained Trim and a Gray Stone Fireplace Are the Features of the Living-room



The Morning Room Has a Brick Fireplace, and Soft Brown Stained Woodwork



The House Is Placed on a Knoll Overlooking the Bay



The Hall Has a Stairway Rising from a Broad Landing in Which There Is Placed a Leaded Glass Window



A Plate Shelf in the Dining-room Forms a Space for China ; the Fireplace Is Also a Feature of the Room



How Rarely One Sees a House that Is So Attractive as Viewed from the Rear



A Brown Stained Trim and a Gray Stone Fireplace Are the Features of the Living-room

dressed and exposed to view. The effect is that of paneled walls. The joists are also dressed and exposed to view, and present the effect of a beamed ceiling. The woods used in trimming the interior are handsomely grained, and add greatly to the artistic effect, with the soft brown stain used for the finishing of the woodwork bringing out each detail of natural beauty.

The hall, as already mentioned, is provided with a broad landing placed one step above the level of the floor. It has a broad seat thrown across one end, while on the opposite side are the stairs to the second story. The second landing has a window seat placed into a bay window, which is lighted by latticed windows shedding a soft and pleasant light over both the upper and lower halls.

The hall opens into both the morning-room and the living-room. The former has windows on each of its three sides. A group of three windows is placed at the outside wall of the room, while directly opposite is built an open fireplace of red brick with its face rising to the ceiling. A hearth of similar brick is laid, and a wooden shelf forms a support for the necessary ornaments. From this room, and also from the hall, the main living-room is reached, which opens into each room, and on to each of the two porches facing the sea. The walls and ceiling are treated similarly to the rooms already described. The sea front here is divided into a group of window effects with a picture window placed in the center and at the angle on each side with latticed windows placed in between. Underneath these windows is a writing table, bookcases and seats. In one corner of the room is a great open fireplace, which is built of rock-faced stone from the floor to the ceiling. A massive stone shelf of similar stone, supported on corbels, forms the mantelshelf.

The dining-room opens from the living-room, and is treated similarly. It has a plate shelf placed about its walls wherever it was found convenient. The fireplace, with its hearth, and its facings extending from the floor to the ceiling, is built of red klinker brick. A mantel shelf is formed

by a brick being corbelled out, and by the face of the overmantel being recessed into a niche. Wooden seats are placed on either side of the fireplace.

The butler's pantry is fitted with a sink and dressers. The kitchen and laundry are fitted with all the best modern fixtures, and are so arranged that a cross ventilation is obtained. The cook's pantry is an unusually large one, and the store pantry is of good size. The upstairs rooms are as large and commodious as those be-

low. They are all treated in a similar manner, and are light and airy, presenting a cool and clean effect, which is very desirable for a summer home. There are four bedrooms, sitting-room and bath on this floor, and also two servants' bedrooms placed over the kitchen, and reached from the hall and from a private stairway leading from the kitchen. The bathroom is furnished with porcelain fixtures and nickelplated plumbing. All the rooms on this floor are arranged for comfort and convenience, and have been carefully planned with a view to making use of all the space to the best advantage, and much attention has been given to all the little details which go to make a home livable.

Mr. Grosvenor Attlebury, of New York, who was the architect of this house, sought to produce a design which would keep close to the ground, for the site was a bare and desolate one without trees, and it was especially desired to present a house which would not stand too prominently on the site. The long roofs, dying as they do into a lean-to effect, aid much in maintaining this point. The lawn was the most important feature surrounding the house, and it was thought best, since trees are difficult to grow in this soil, that an attractive grouping of shrubs and plants be placed along the walls of the house.

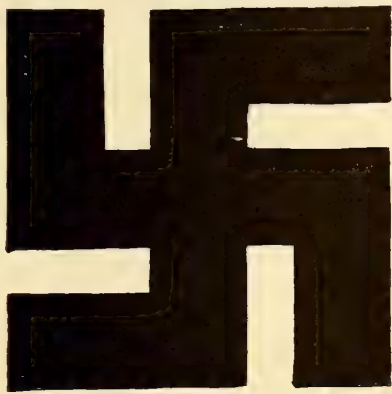
The stable, which is at the entrance to the grounds, is designed and built in a similar style of architecture, and is in keeping with the house. The whole property is inclosed with a privet hedge, with the corners broken by clusters of hardy hydrangea.



The Stable Is Designed in Harmony with the House



The "Swastika," or Symbol of Good Luck



It Is Generally Painted White on a Field of Almost Any Dark Color

THE APPLICATION OF STENCIL WORK IN HOME DECORATION

By Edward Fesser, Kensico, N. Y.



ANY quaint and beautiful designs can be used at home by the person possessing originality and a good sense of color. These designs can be reproduced upon almost any of the textile materials or grass-woven stuffs by means of a stencil, a blowpipe, and an atomizer. The oddest patterns as well as the most effective combinations in the chromatic scale are borrowed from the American Indians, and the simplicity of their designs lends itself the more readily to the worker with stencil and atomizer.

The first thing to do is to make a selection from some portion of an Indian rug or saddle blanket, making elaborations or eliminations according to the purpose for which the design is meant, always keeping the same scheme well in mind. Should the designer be near a museum of natural history he can gather many valuable notes from the original Indian exhibits by means of a small sketch-book and a box of water colors. If the design is to be applied to either portieres, lambrequins, sofa pillows, divan covers or borders for the wall, it should be first drawn to scale on a drawing pad and colored by hand in order to fix definitely the proper proportions as well as the relative values of the colors. The next thing to do is to procure a number of large sheets of white mounting board, such as photographers use, of medium weight, then draw to scale the outlines of the first primary color to be transferred: for instance, if in the design to be transferred there is a yellow and another color which is mixed with yellow, like blue and yellow, making green, then have your outline cover the green as well as the yellow, so that if there be a blue in the design the latter can be blown lightly over

the yellow and produce the desired green, and so on with the other combinations of color. Follow out as closely as possible the same principles involved in chromatic lithography or printing in colors. After the drawing for each color has been made take a sharp penknife and cut out the stencil, leaving a bridge here and there, to keep the narrow portions in place. When the stencils are all cut out, cover both sides of the cardboard with a generous coat of white shellac, using methylated spirits or wood alcohol to thin it, if necessary; this will stiffen the board and prevent the edges from warping or curling after the spray is applied. Stencils so made will be found as serviceable for ordinary purposes as those cut from sheet zinc. In certain complicated designs friskets must be used. Friskets are pieces of cardboard cut in such a manner that when pinned to the fabric they will block out certain portions of the design that are already tinted, or such portions that are to be left flat, that is to say, the original tint of the fabric. A careful study should be made of the design and color scheme and plans drawn out accordingly before an attempt is made to cut out either stencils or friskets. Once the stencils are cut and ready for use, the color schemes may be varied indefinitely with the same design. Next nail some boards together so as to make a

large rectangular drawing-board and suspend it in a perpendicular position against the wall, then pin your fabric upon it with thumb-tacks. When you have pinned the first stencil in place, great care must be exercised in having each succeeding stencil and frisket register accurately. This can easily be done by drawing two straight lines which will cross each stencil at right angles in the center.

The mixing of colors is very important, and much depends upon whether the finished



Stenciled Screen in the Author's Studio

article will be used for interior decoration, such as portieres, friezes, draperies and screens, or for divan covers and outdoor knockabout pillows. If used for decorative purposes only, the aniline dyes may be used, but it is a well known fact that the coal tar products will only become permanently fixed in a fabric through the process of boiling the materials therein. Consequently, if the articles are to be handled, or

can be procured at any artist material store as it is generally used to fix pencil and charcoal drawings with a thin solution of shellac. When used on villous fabrics the color can be applied in unvarying proportions, giving the appearance when dry of woven textures. The atomizer ejects the liquid in a more vaporous form, and can be used on the more delicate materials, such as velvets, velours and silks. If there be a

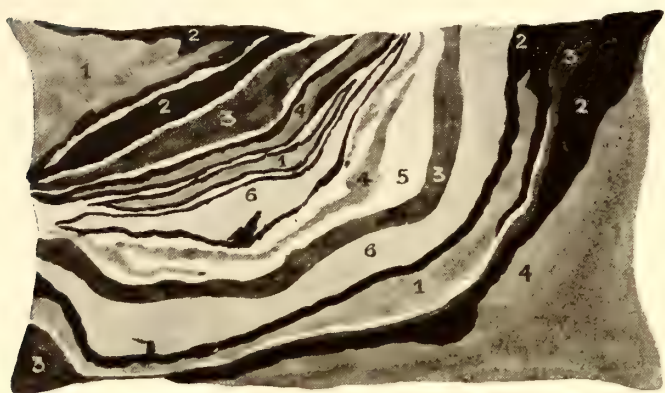


FIG. 1

Design for Divan Bolster

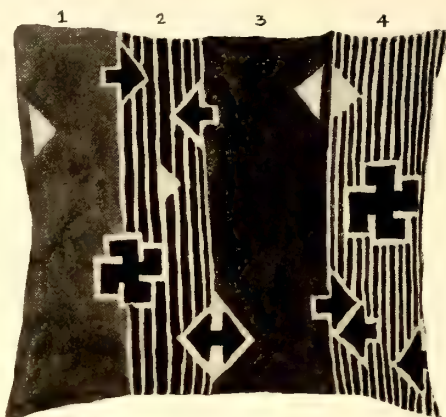


FIG. 2

Design for Pillow Cover (Sioux Indians)



FIG. 3

Design for Pillow Cover (Thompson Indians)

are liable to come in contact with moisture or rain, as would happen with a swinging divan cover on the porch, or with knockabout pillows, then permanent colors must be used. These can be made by using the ordinary oil colors in tubes and diluting with a little turpentine and a sufficient quantity of gasoline or naphtha to allow the fluid to flow freely through the blowpipe and atomizer; the gasoline being very volatile will leave the color so that it will soon dry and become permanently fixed.

When the material to be stenciled has the consistency of canvas duck or grass goods, a regular stencil brush can be used, but if the fabric has a nap or villous substance, the blowpipe and atomizer should be employed. A blowpipe

number of fine parallel lines close together in the design, it would be better to use a lath or a ruler and a stiff paint brush for oil colors, of the required size, than to cut out the lines in stencil.

For a central decoration the "Swastika," or good luck cross of the Indians, is very decorative. For unknown centuries this symbol has been used as a charm of fortune. Historically, it first appeared on Greek coins of the year 315 B. C., but it has been found among the relics of races of a far more remote age. It is probably the oldest cross and the oldest emblem known. The shields of the ancient Britons in the British Museum bear this design.

The drawings which accompany this article illustrate some

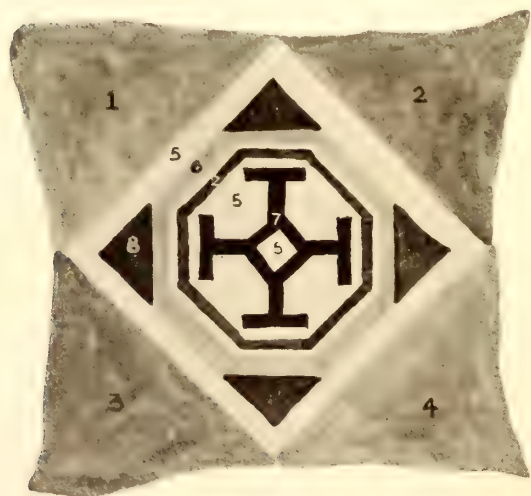


FIG. 4

Design for Pillow Cover (Alaska Indians)

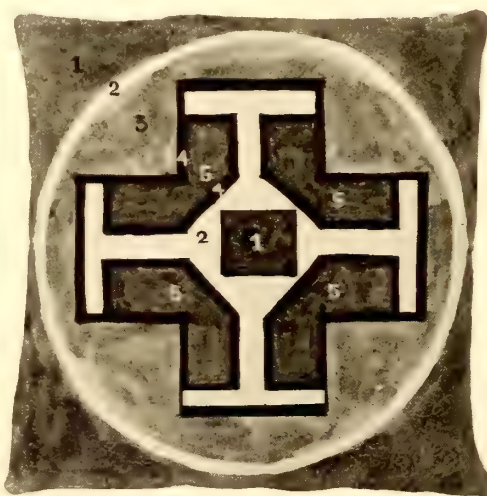


FIG. 5

Design for Pillow Cover (Alaska Indians)

Representing one of the two wheels of the truck used for carrying tepees and camp outfit.



FIG. 6

Design for Pillow Cover (Apache Indians)

FIG. 1.—*Color Scheme*.—(1) Roman ochre—mix yellow ochre and a little burnt sienna; (2) black; (3) brown madder; (4) deep olive—mix Indian red, Prussian blue and Van Dyke brown; (5) white; (6) light blue-green—mix emerald green with cerulean blue. Leave white space between dark colors. Outline light colors with black.

FIG. 2.—*Color Scheme*.—(1) Lavender—mix Paynes' gray and a little crimson lake; (2) deep red and white stripes—mix crimson lake and Van Dyke brown; (3) royal purple—mix cobalt-indigo and crimson lake. Swastikas, one black and one deep red; white borders. Arrow heads, black; white borders. Tepees, white.

FIG. 3.—*Color Scheme*.—(1) Sepia; (2) vermillion; (3) white; (4) black.

FIG. 4.—*Color Scheme*.—(1) Deep olive green; (2) deep terra cotta; (3) deep French gray; (4) deep tan; (5) white; (6) light Chinese blue—mix cerulean blue and white; (7) black; (8) indigo.

FIG. 5.—*Color Scheme*.—(1) Slate gray; (2) white; (3) Pompeian red—mix vermillion with Indian red; (4) black; (5) apple green.

FIG. 6.—*Color Scheme*.—Tepees, white; each tepee on background of dull red and dull blue alternately. Stripes, buff. Margin around design, deep red—mix vermillion, crimson lake and Van Dyke brown.



FIG. 7

Design for Divan Cover or Floor Mat
(Alaska Indians)

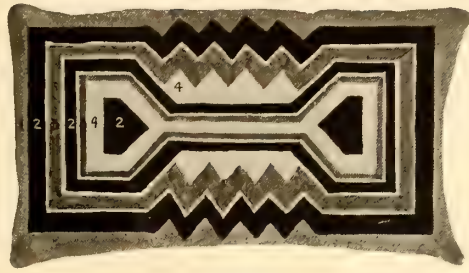


FIG. 8

Design for Divan Cover or Floor Mat
(Alaska Indians)

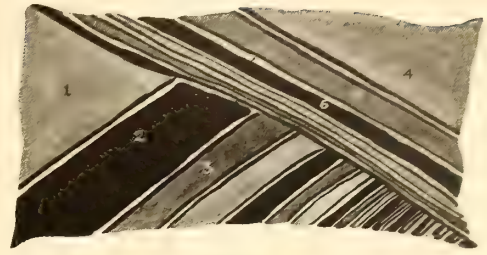


FIG. 9

Design for Divan Bolster
(Navajo Indians)

designs for stencil work based on Indian models. Their adaptability as well as real interest should be apparent at a glance. They combine, in a marked degree, distinguishing characteristics of beauty and novelty. The latter is an important element often desired in decorative work of this sort, and

not often so well supplied as here. While each of the designs here illustrated has been actually employed in stencil work, they are offered more as types of what might be accomplished than as definite suggestions. They obviously point the way to much individual ingenuity.

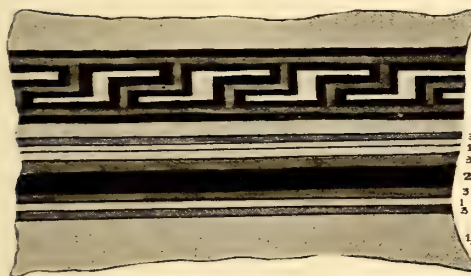


FIG. 10

Design for Border on Portieres, Lambrequins or Frieze for Wall
(Mexican Indians)

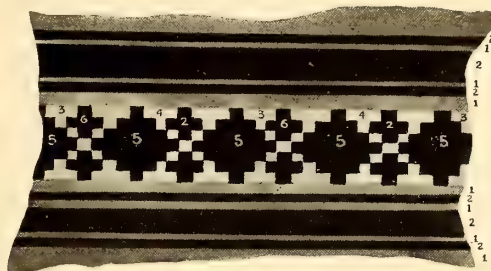


FIG. 11

Design for Border on Portieres, Lambrequins or Frieze for Wall

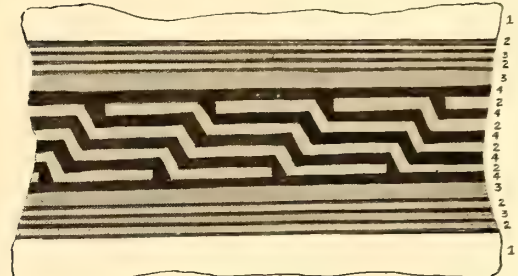


FIG. 12

Design for Border on Portieres, Lambrequins or Frieze for Wall
(Zuni Indians)

FIG. 7.—*Color Scheme*.—(1) Brown madder; (2) Van Dyke brown (alternate on both sides); (3) white; (4) indigo; (5) light cerulean blue. Repeat same scheme on both sides.

FIG. 8.—*Color Scheme*.—(1) Buff—mix yellow ochre and Van Dyke brown; (2) indigo; (3) deep vermillion; (4) white.

FIG. 9.—*Color Scheme*.—(1) Buff; (2) black; (3-4) French gray—mix Paynes gray and cerulean blue; (5) terra cotta—mix vermillion, Indian red and Van Dyke brown; (6) Van Dyke brown. Outline all stripes with black, leaving narrow white stripe between. Alternate colors of stripes in regular order.

FIG. 10.—*Color Scheme*.—(1) Tan—mix yellow ochre and burnt umber; (2) black; (3) dark Indian red—mix Indian red with Van Dyke brown; (4) white. Narrow lines, black.

FIG. 11.—*Color Scheme*.—(1) Light indigo; (2) deep indigo; (3) emerald green; (4) white; (5) black; (6) pink.

FIG. 12.—*Color Scheme*.—(1) Fawn—mix Paynes gray yellow ochre and a little crimson lake; (2) light cadmium—vary to flesh color—mix yellow ochre and rose madder; (3) cerulean blue; (4) deep indigo. Narrow lines, deep indigo.

The Country Seat of Frederick Converse Beach, Esq., at Stratford, Connecticut

(Continued from Page 141)

suspended on ribbon hangings. The adjoining guest room is finished in lavender, with a wall covering in gray, decorated with lavender Iris. Miss Beach's room is in two-tone pink satin stripped with a border in pink roses. The owner's room has a wall covering in a Dresden stripped paper of green, pink and blue-yellow. All the woodwork is painted ivory-white.

The third floor contains two servants' bedrooms and bath, one extra guest room, den and dark-room. Stairs lead to the attic, forming an ample space for storage. The house is thoroughly equipped with a telephone system from the kitchen to all the rooms, electric lighting system supplied by a private plant, and a steam heating apparatus with an indirect system for the first floor. The electric fixtures in the hall, drawing-room and library, as well as the side brackets throughout, were made from a special design, and repre-

sent the old-fashioned girandoles with crystal prisms and suspending chains. The dining-room has a dome of green silk, suspended with green silk cord and ornaments. The fixture in the sun-room represents a hanging group of Ascension lilies.

While the estate had many fine old trees and shrubs, it required some planting which was necessary to soften the lines of the building, which was done under the direction of Charles Downing Lay, landscape architect, of New York City.

It is interesting to note that the property upon which this house is built was an original allotment of land to the ancestor of the wife of the present owner, William Beardsley, who came from Stratford-on-Avon, England, in the good ship "Planter," in 1635. It is to William Beardsley and his company, who came from the home of Shakespeare, that it owes its name of Stratford.

The Forced Culture of Asparagus in France

By Jacques Boyer



ACCORDING to some authorities the ancient Romans were acquainted with the art of producing vegetables and flowers out of season. During the Middle Ages, however, methods of forcing were generally neglected, although they were still employed by a few progressive lovers of horticulture. The chroniclers describe, for example, a banquet given in the winter of 1249 at Cologne, by Albert the Great, at which appeared, among other curiosities, blooming rose bushes and trees laden with fruit. Hotbeds and coldframes were introduced by French gardeners at about the epoch of the Renaissance, and a little later Olivier de Serres recommended the use of bell glasses for forcing melons. The luxurious Louis XIV brought early vegetables into vogue, and in the eighteenth century greenhouses and hothouses began to appear in Europe. The forcing houses for fruit erected by Frederic the Great in

1752 are still standing at Potsdam; and visitors to Hampton Court in England may still admire the famous grapevine which has grown under glass for more than a century, and now covers an area of about two thousand seven hundred and



Storing Freshly Cut Asparagus in the Cellar



Women Bunching Asparagus for Market

fifty square feet. Finally, Bonnemain's invention of the thermo-siphon, or system of heating with hot water, and its application to hothouses by Gautier gave, about 1830, a great impetus to forced culture.

Still the commercial exploitation of forcing houses on a large scale in France is only about fifteen years old. In these great establishments, the largest of which are to be found in the French departments of Aisne and Nord, plants of many varieties are grown in winter. Until recently the production of grapes, cherries, peaches, pears and apples from February to June, and of lilacs and other flowers in winter, has engrossed the attention of the greenhouse proprietors, but several asparagus houses

have recently been established in the suburbs of Paris. Let us visit one of these establishments and examine the



Exterior View of an Asparagus House at St. Ouen, Near Paris



Planting Asparagus in a Nursery House

novel method of market gardening which furnishes this favorite spring vegetable all the year round. The grower's first care is to obtain a stock of good plants. For this purpose he selects a plot of light but rich soil as a seedbed. Here,

in October, or between the middle of February and the end of March, the seed is sown in rows ten inches apart. After the seedlings appear they are carefully thinned, only the strong and healthy plants being left. They are

transplanted when they are one year old. A year later they are dug up very carefully, to avoid breaking their brittle roots, and taken to the forcing establishment. Here they are received under a shed by women, who subject them to a rigorous process of selection, in which every plant with fewer than ten roots is rejected. The selected plants, from which the dead woody stalks are removed, are placed in baskets, which are taken on carts to the forcing house, where they are henceforth to grow under artificial and minutely regulated conditions of temperature and humidity. The forcing houses are low structures with sashes inclined at forty-five degrees to the horizon. The alleys run between rows of long iron boxes placed over pipes through which flows a stream of hot water from a boiler in the cellar. As



Interior View of an Asparagus House at St. Ouen, near Paris, Showing the Operations of Weeding, Watering and Gathering the Crop

land in the suburbs of Paris is valuable, space is economized in every possible way, and the plants are set very closely in the beds. In the hot atmosphere of the forcing house the asparagus shoots grow with astonishing rapidity, often increasing two inches in length in twenty-four hours, so that they are ready for market in a few days after planting. The roots furnish a succession of shoots during a period of two months. When they become exhausted they are promptly replaced by fresh plants, and so the harvest continues throughout the year. The cultivation consists principally of frequent hoeing, weeding, and watering. The shoots are gathered twice a day, usually by women, who lie on planks thrown like bridges over the forcing beds, as shown in one of the illustrations. As the stalks are cut they are put into small baskets, which are taken to the cellar as soon as they are filled. In the cool cellar the asparagus may be kept two or three days before being sent to market. As it is wanted for market it is put up in bunches by women, who assort the stalks according to size, arranging the larger ones around the outside of the bunch. A wooden mold or form is



Taking Up Exhausted Roots



Covering Asparagus Roots with Compost in Hotbeds

and surrounded by a frame which is surmounted by a glass sash. As soon as the first violent heating has subsided the roots are set in the beds, but they are not covered with earth for several days. The temperature of the bed is attentively watched. If it exceeds seventy-seven degrees Fahrenheit the thickness of the layer of manure must be reduced, and if it falls below sixty-eight degrees Fahrenheit the bed must be re-made. At night the sashes are covered with straw mats, and after the shoots appear they are opened more or less during the day, if the weather permits.

employed in making the bunches, which are tied with two osiers and made even at the base by cutting off any butts that protrude. Several times a day, according to the demand, a wagon laden with boxes of twenty-five or thirty bunches, wrapped separately in paper and packed in straw, leaves the forcing house for the Halles, the great market of Paris.

To most of the asparagus forcing houses are attached hotbeds in which the green asparagus known in all French cities by the name of "asperges aux petits pois" is cultivated. The hotbed is formed by removing the soil to a depth of from sixteen to twenty inches and replacing it with a layer of stable manure from twenty-four to thirty-two inches thick. This is covered with a few inches of rich mold or compost



Women Selecting and Preparing Asparagus Plants for the Forcing House



A House at Newton Centre, Massachusetts

By Edward T. Wills



HE building of a small house with architectural and artistic results is a difficult matter, but Mr. Edward B. Stratton, of Boston, Mass., the architect of this house, has very ably demonstrated the results that may be obtained by skilful treatment in the house which is illustrated herewith.

It is true that he has accepted the conventional gambrel roof house for his model, but in the arrangement of the various rooms he has departed from the usual custom of house planning. A study of the first floor will show the entrance to the house placed at the rear of the building, and by doing this, the space usually occupied by the entrance hall has been devoted to a living-room, thereby permitting of the placing of the main living rooms across the front of the house, with a view of the street.

A latticed pergola, supported on rustic posts, forms the entrance to the grounds, from which a walk extends to the entrance, and beyond to the garden at the rear of the property.

A service entrance is placed at the opposite side of the grounds. This scheme of arrangement is excellent for small plots.

The entrance-hall is finished with white and green painted trim. The wall space above the paneled wainscoting is covered with a white and green paper, harmonizing well with the white and green trim and the red tone of the Welsh tile with which the floor is laid.

The stairs rise out of this hall from a broad landing, on which is a leaded glass window, shedding a soft light. Old Italian jars and two or three antique chairs complete the furnishing of the hall in an appropriate manner.

The walls of the living-room are paneled with cypress battens, and the wall space between is covered with tapestry. A brick fireplace, laid in white mortar and surmounted with a molded cap, wicker furniture with brown velour upholstery, Mission furniture with brown leather upholstery, antique furniture and Oriental rugs of harmonizing colors, complete its furnishings. A door at one end of the room opens on to

the living-porch, on the front of the house and facing the street.

The dining-room, arranged at a higher level than the living-room, has paneled walls above the low wainscoting. The trim and moldings are painted ivory-white and the panels are covered with a brilliant colored paper in the pattern of the bird of paradise. There is a fireplace built of brick, with a paneled mantel. The furniture of the dining-room is good, especially the old sideboard and the corner closets of mahogany.

A door opens into the china closet, from which another door opens into the kitchen. The kitchen has received special attention in its appointments. It has a dresser, pantry, range, sink and a lobby large enough to admit an ice-box. A short flight of stairs opens on to the landing of the main stairway, forming a combination staircase, which is a desirable economy of space for a small house.

The second floor has a white painted trim. The walls are covered with artistic wall paper. This floor contains four good-sized rooms and a bathroom; the latter is furnished with a floor of artificial marble and porcelain fixtures and exposed nickelplated plumbing.

The third floor contains the servants' quarters and trunk room; and the cellar the heating apparatus, fuel rooms and cold cellar.

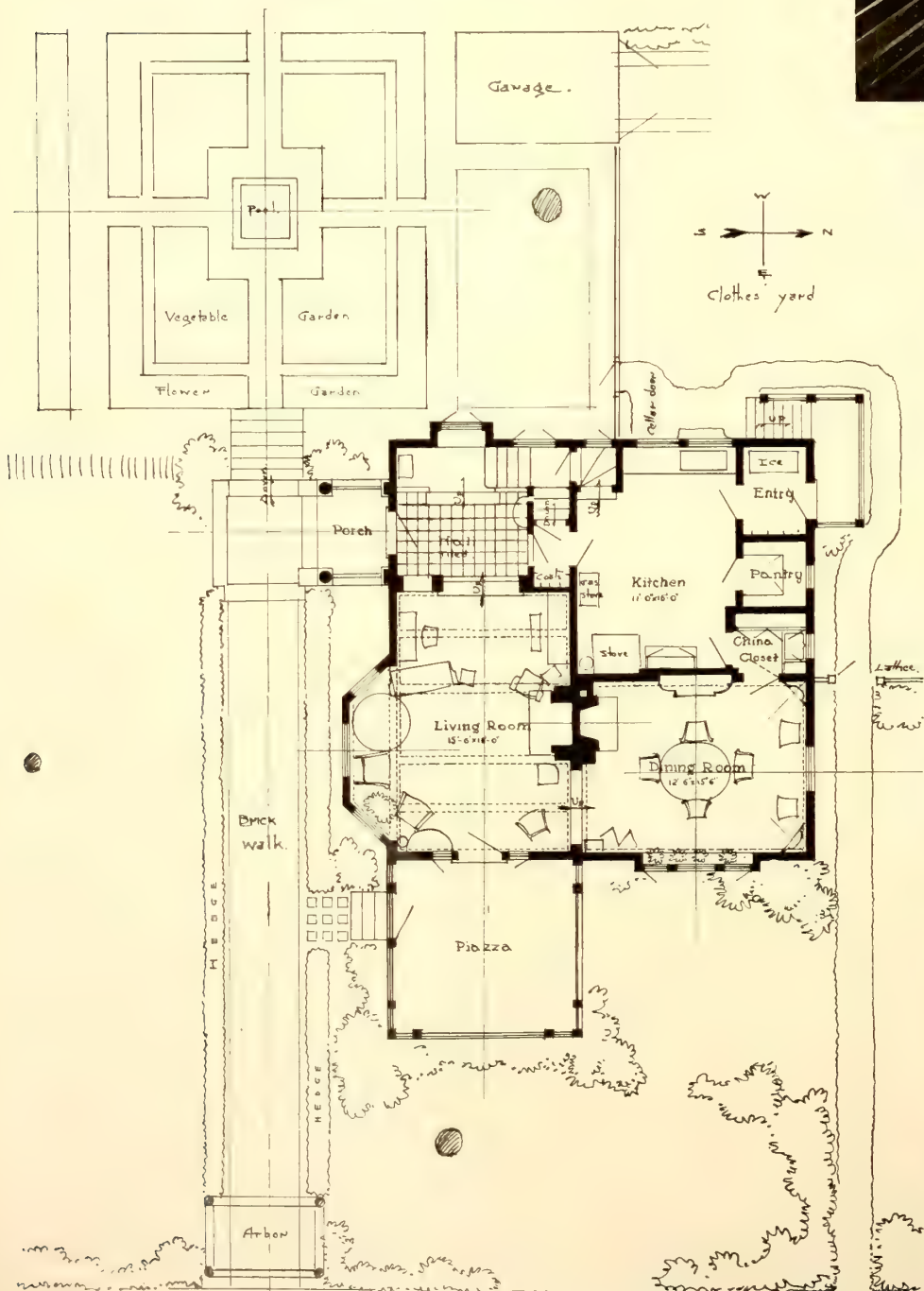
The formal garden which is laid out at the rear of the property is placed on an axis with the entrance walk to the estate, from which a broad and extended vista is obtained of the garden. The form of the garden is geometrical, with an attractive little pool in the center, from which the walks get their center. The various squares formed by these walks are planted with annuals and perennials, and in such a manner that there is a continual bloom of flowering plants from early spring till late autumn. The charm of the whole scheme is to show what can be done with a small plot of ground, and the whole idea has been most carefully considered. The service end of the grounds is entirely separated from the garden by a high trellis fence, on which are growing vines, forming a perfect screen.



White and Green Painted Trim and a Welsh Tile Floor Is the Treatment of the Entrance Hall



The Walls Are Paneled with Cypress Battens, with the Space Between Covered with Tapestry



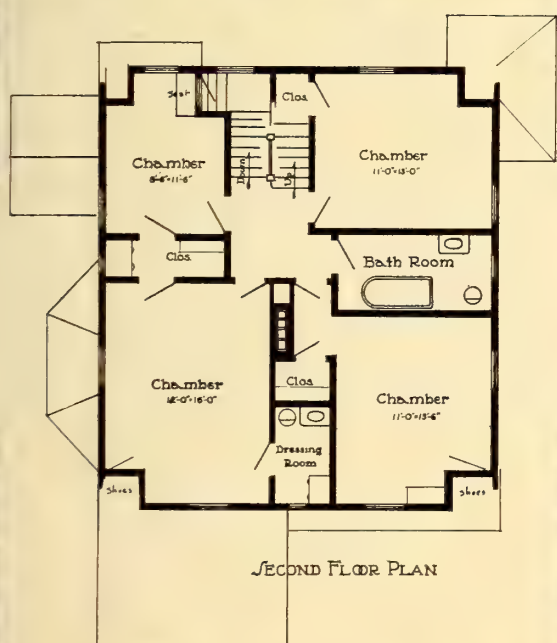
A Good Plan and Garden for a Small Plot



A Rustic Pergola Forms the Entrance



The Dining-room Has a White Painted Trim and Mahogany Furniture



An Essential Feature Is the Living-porch Separated from the Entrance



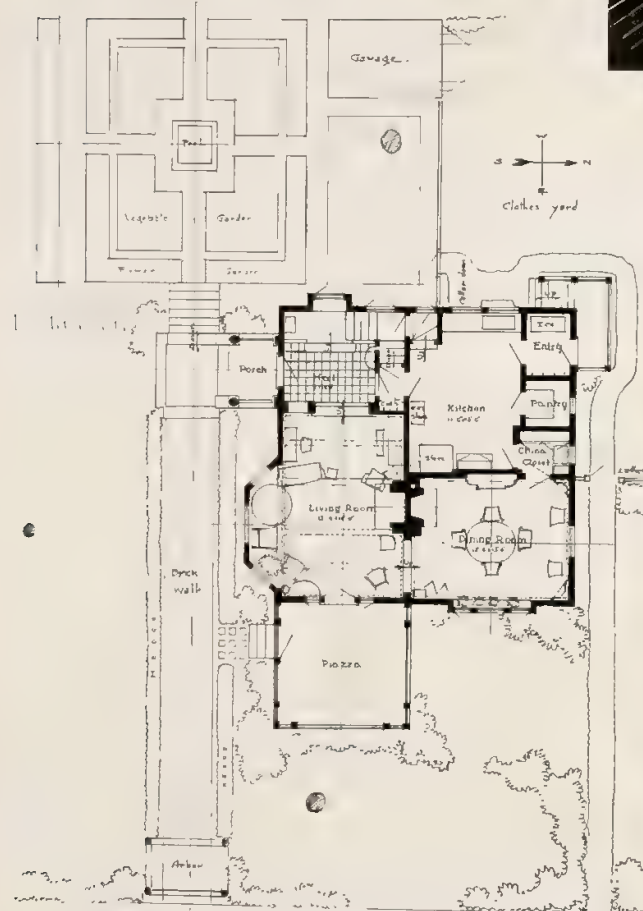
White and Green Painted Trim and a Welsh Tile Floor Is the Treatment of the Entrance Hall



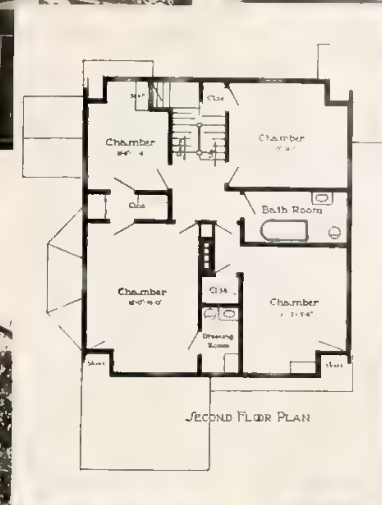
The Walls Are Paneled with Cypress Battens, with the Space Between Covered with Tapestry



The Dining-room Has a White Painted Trim and Mahogany Furniture



A Good Plan and Garden for a Small Plot



A Rustic Pergola Forms the Entrance to the Grounds



An Essential Feature Is the Living-porch Separated from the Entrance



CORRESPONDENCE



The Editor of *American Homes and Gardens* desires to extend an invitation to all its readers to send to the Correspondence Department inquiries on any matter pertaining to the decorating and furnishing of the home and to the developing of the home grounds.

All letters accompanied by return postage will be answered promptly by mail. Replies that are of general benefit will be published in this Department.

Problems in Home Furnishing

By Alice M. Kellogg

FURNISHING SMALL SPACES

APREVAILING distaste for overcrowding the home with too profuse decoration and a multiplicity of furnishings is intimated by the various inquiries that come to this department in relation to the furnishing of small rooms, apartments and houses so they will have an appearance at least of space.

The "tiny new house in a Boston suburb," about which a reader asks advice, is, fortunately, not already spoiled by mistakes either in the selection of wall coverings or of the movable pieces of furniture. The treatment of the walls and woodwork is a first consideration. The rooms on the first floor and the hall upstairs and down may carry a tone of deep buff, using a striped paper on the hall walls and a plain paper in the connecting dining and sitting-rooms. A light buff, or cream, may be the color for the kitchen and pantry walls.

Painting all of the woodwork white, with the exception of that in the kitchen, will be another means for contributing a feeling of space to these rooms. The walls in the bedrooms may be light tones of pink, green, yellow and blue, either put on as a tint or by hanging plain colored papers. For the floor coverings a solid color or two tones of one color is advised. If mixed colors are used the design may be one that is small and closely set. It would be well to have the dining-room and sitting-room rugs alike, and each one of a size large enough to cover the entire floor with only an eighteen inch margin of the floor showing. Small rugs may be laid in the hall and the bedrooms.

For the large openings, without sliding doors, from the hall into the sitting-room and from the sitting-room into the dining-room, a straight curtain in two parts of plain brown, double-faced velour may be chosen. Straight lines may be observed also with the window curtains, but a decorative note may be admitted here by selecting a fancy madras or a light-weight material in a pretty design. These curtains may hang to the sill.

In buying the furniture a consideration of the spaces of the different rooms must take precedence of any conventional notion for buying a dining-room set or "parlor pieces." A general rule worth remembering is not to buy what other people have in their houses as each family has its individual requirements.

A careful disposition of pictures and restraint in buying mantel bric-a-brac are necessary to complete the good effect accomplished by the larger furnishings.

A SUN PARLOR TO FURNISH

"I have had my southwest veranda inclosed in glass and steam heaters introduced," writes a Pennsylvania correspondent, "and I would like to have some suggestions for fitting it up for winter as well as summer comfort."

To mitigate a too-intense supply of sunlight, the Japanese rattan screens that are adjusted with side cords may be installed. Usually these come in the natural color, varnished, but they may be painted to match the inside woodwork of the sun-parlor. A large rug to cover the major portion of the floor will furnish more than small rugs distributed unevenly about. An India drugget in browns and greens is appropriate, if the cost is not prohibitive. In the nine by twelve size the price is forty-two dollars. (As an alternative a grass matting rug may be used.) A round table with a lower shelf, to stand in the center of the room, should be thirty-six inches in diameter. One of weathered oak may be bought from seven dollars up, according to the quality. A drop-leaf table, also of dark oak (price eighteen dollars), may be placed against the wall, to be ready for serving tea or refreshments. A willow stand with drawers and side pockets (twelve dollars) may hold sewing work, games or toys.

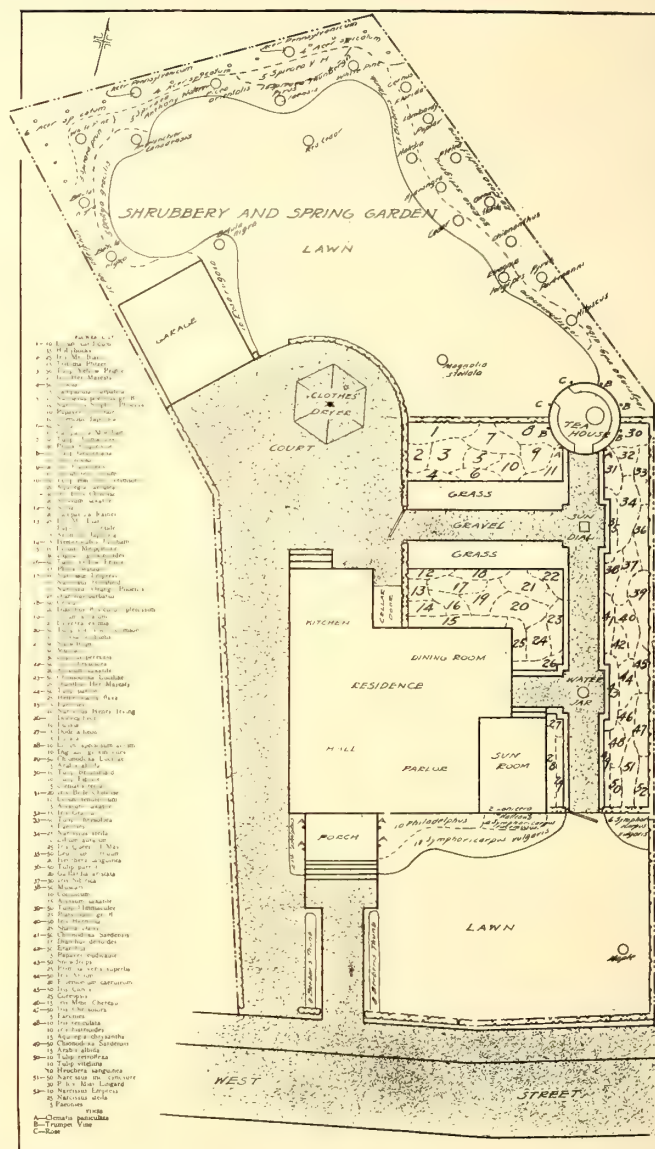
Instead of a hammock as a means for lounging, a long chair made of rattan or willow will be more suitable in the sun-parlor. If there

(Continued on Page xii)

Garden Work About the Home

By Charles Downing Lay

A GARDEN FOR A SMALL PLACE



I THINK a study of the little plan above will be of service as an answer to many inquiries about planting flower gardens, and as a reply to people who say, "Yes; I'd like to have a garden, but my place is not large enough."

The plan shows a place in a small city where nothing has been done in the way of gardening. The surrounding houses are similar in size and cost. All have unfenced yards, a shrub or two, and some fine elm trees. It is like the newer parts of a hundred other New England towns; there is plenty of shade in summer, but no patches of brilliant color such as a garden shows, and no privacy, no feeling for the homely, quiet pleasures. In winter it is cold in color and unattractive—leafless trees, gray road, brown grass, and each house as bare as a peg stuck in a board.

So much gardening can be done on a small place if one will but try, and so much can be done by planting shrubs to soften the hard lines, to make the distance to one's neighbor's back door seem greater, even if it is less than a stone's throw. It is partly because we do not plant enough about our houses, partly because there are no fences, that our towns lack the picturesqueness we admire abroad.

The American idea of having no fences is vulgar in principle, and must be carried out with the greatest skill, on places of some size, to

(Continued on Page xv)



CARVED AND GILDED MIRROR OF
THE ADAM PERIOD

The A.J. Crawford Company

LONDON

NEW YORK

251-255 FIFTH AVENUE and
1 EAST 31st STREET

Jacobean, Elizabethan and Queen
Anne Oak Paneled Rooms.

The Largest Collection of English
Furniture in America.

Old Carved Wood and Gilded
Mirrors in the English Periods.

"The Little Shop"

THE WORLD'S FINEST NURSERY PRODUCTS

ROSES

Our Roses will tell their own story when the blooming season comes. All our bushes are strong and will bloom profusely all the summer.

HEDGE PLANTS

We have them by the hundred thousand in our Nursery. We can supply any quantity.

BAY TREES & BOXWOOD

for Formal, Italian, French and English Gardens, interior and exterior decoration, in all forms and sizes.

SHADE & FRUIT TREES

Our stock of these trees is exceptionally fine this year, trees that will grow and give results the first season.

PERGOLA VINES

Don't hesitate to place your orders with us at once. We grow them by the thousand. You can see them that is the only way to buy nursery products.

OLD- FASHIONED FLOWERS

We have the most complete collection of these popular favorites in the country. Our Landscape Department makes a specialty of Old-Fashioned Gardens.

EVERGREENS

We have many thousands, from 1 to 10 feet tall, in all the finest and handsomest varieties. The specimens now growing in our Nursery are conceded to be the finest ever produced in America.

LILY BULBS

JAPANESE, EUROPEAN AND NATIVE KINDS. Our *General Catalogue* describes a large variety of these immensely interesting flowers, which are growing in our Nursery. We have kinds and varieties that will grow everywhere.

RHODODEN- DRONS

ENGLISH HYBRIDS AND MAXIMUM. Of these, many thousands are perfectly acclimated in our Nursery. Plants in all sizes and every color known to this class of large leaf evergreen flowering shrubs. Come and see them.

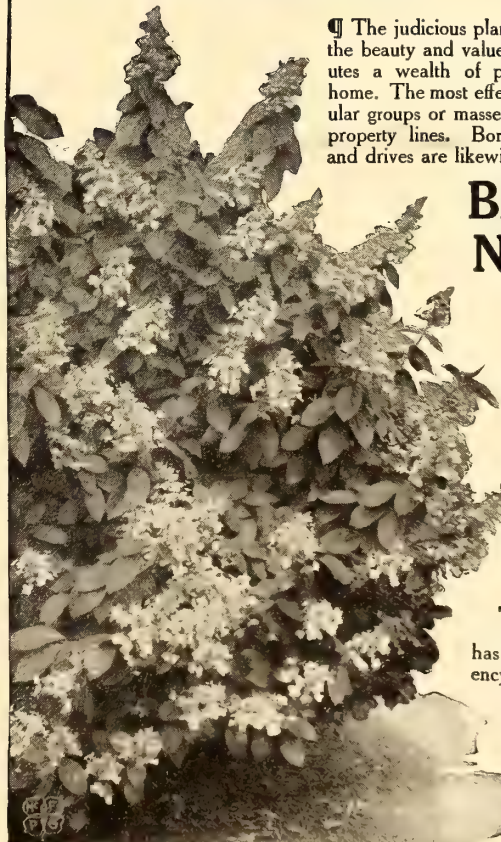
OUR ILLUSTRATED GENERAL CATALOGUE No. 12 will tell you about the above and all our other products for Lawns and Gardens. Ask for it.

You can visit our Nursery by taking the McAdoo Tube trains to Hoboken, which connect with the White Line electric cars passing our Nursery.

BOBBINK & ATKINS

Nurserymen and Landscape Architects Rutherford, N. J.

BILTMORE DECIDUOUS FLOWERING SHRUBS



¶ The judicious planting of shrubs adds greatly to the beauty and value of a property, and contributes a wealth of pleasure and interest to the home. The most effective planting is that of irregular groups or masses against buildings, fences or property lines. Border plantations along walks and drives are likewise desirable.

BILTMORE NURSERY

offers the most comprehensive stock of deciduous or leaf-dropping flowering shrubs to be found in America. The extensive collection is extremely practical, containing only carefully grown, vigorous and healthy plants. Over 500 shrubs, including Roses, are fully described in the 38 pages of the Biltmore Nursery catalogue devoted to this group.

This Great Book

has deservedly been called an encyclopedia of planting facts. It contains 196 pages, is beautifully printed and elaborately illustrated.

A copy will be
sent to you
free on request

BILTMORE NURSERY, (Box 144) BILTMORE, N. C.



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

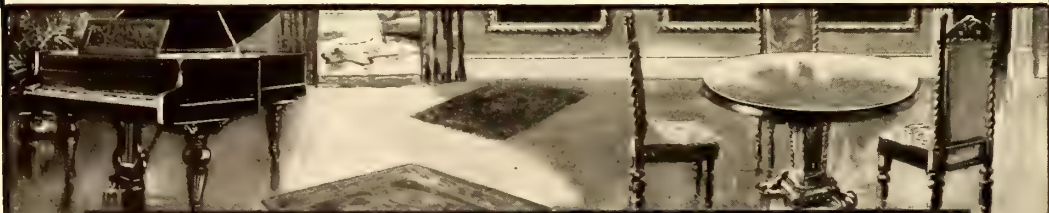
Showrooms: 91 Dearborn St.

Denver

CHICAGO

Trenton

A BOOK TELLING HOW TO **Make Floors Beautiful** SENT FREE ON REQUEST



For Floors, Furniture and Interior Woodwork

Old English Floor Wax

"The Wax with a Guarantee"

has become the standard of "quality" with professional decorators simply because it is made a little better than any other wax.

Old English Floor Wax gives that much-sought "rich, subdued lustre." It is transparent and accentuates the grain of natural or stained woods. Equally suitable for the finest inlaid hardwood or plain pine floors. Never peels nor shows heel marks. Won't scratch or become sticky. Preserves the floor and is sanitary because dust and dirt do not adhere.

Economical—1 lb. (50c.) covers 300 square feet. Put up in 1, 2, 4 and 8 lb. cans. Nothing equals it as a finish for furniture and woodwork.

Write for Our Free Book, "BEAUTIFYING AND CARING FOR WOOD FLOORS"

which contains expert advice on the finish and care of floors, woodwork and furniture.

A book to read and keep for future reference. Write for the book now and

Ask For Free Sample and mention your dealer's name when you write. Sold by dealers in paint, everywhere.

We guarantee Old English to give entire satisfaction when used as directed, or money refunded.

A. S. BOYLE & COMPANY, Department O, Cincinnati, Ohio
Largest Exclusive Manufacturers of Floor Wax in the World.



PROBLEMS IN HOME FURNISHING

(Continued from page 160)

is space for a swinging settle it may be suspended from the ceiling. In buying chairs for the sun-parlor it is better to get a few that are really comfortable and well made than to have a larger number cheaply made and uninteresting in shape. If the ordinary piazza chairs of sprint are chosen, they may be brought into better relations with their surroundings by painting them the color of the woodwork. A further help in making such seats attractive is to add some thin cushions and cover them with a French cretonne showing a bold design of birds, trees and flowers.

If foliage plants can be kept in the sun-parlor, they may be grown in some of the artistic garden pots that are made of terra cotta or composition. For holding cut flowers the Japanese hanging vases, covered with basket work, will give a variation from the ordinary glass or pottery holders.

ARRANGING A PLATE SHELF

The plate shelf in dining-rooms has become popular, as it affords an opportunity for varying the decoration of the walls of a home. What to put on this shelf, and how to arrange whatever objects are selected for it, has puzzled one of our readers who has lately moved into a house where the dining-room walls are fitted with a plate rail.

Without the collector's instinct for gathering together china and pieces of metal, the plate shelf is liable to take on the appearance of a bargain table, as there is a great temptation to pick up odds and ends at the department stores. The mission of a shelf of this kind is to bring together really choice articles in a position where they will be out of danger yet near enough to be seen and enjoyed. To avoid the commonplace must be the aim of one who is buying for a plate shelf. The location of the object and its background are also to be remembered. On a warm tan-colored wall pieces of blue china appear to advantage, and on a tapestry-covered wall a brass or copper tray, bowl or loving cup looks well. The Moorish and Spanish pottery, although rough in shape and crude in texture, is interesting when it is not brought into competition with finer ware. It is not necessary to have only plates upon a shelf of this kind, but other objects that fit on the narrow space may be added for variety.

A SUBSTITUTE FOR LACE CURTAINS

As the preference is for short curtains to hang to the sill, and the conventional, ready-made curtains are not desired by this correspondent (A. W. N., of Nebraska), the new filet lace by the yard is suggested. This material shows a fine square mesh, instead of the round mesh of the bobbinet, on which the pattern is woven. The width is forty-five inches, and the price is a dollar or more a yard, according to the design. As the filet lace comes in both white and ecru, it can be adopted either in rooms with white-painted woodwork, or where the wood finish is of a dark tone. The edges of the curtains may be trimmed with a narrow linen lace.

SIMPLE WALL COVERING FOR A MUSIC ROOM

"What is an inexpensive treatment for the walls of a room that is used chiefly for music?" asks a Michigan correspondent.

If the minimum amount of expense is to be paid for decorating these walls, a coat of water-color paint may be laid on the hard plaster. At some additional cost this plain effect may be relieved by stenciling a pattern over the tint, with a slightly darker shade. If a paper of good quality may be afforded one of the English silk fibers would look well. At still more expense a Japanese grass cloth in one

ABOUT PLANS

ARE YOU GOING TO BUILD RIGHT? Then send for my new portfolio of designs plans, complete instructions and guide for home builders (two books in one)

"CLAUSEN'S PLANS AND PROBLEMS SOLVED"

50 cts. This book contains 142 designs and plans of original homes beautiful fireplaces, attractive entrances, picturesque windows and groups of windows, stairways, dormers, kitchen and pantry arrangements, sideboards, etc. with complete instructions on the planning and designing of all parts of the home. **THE ONLY COMPLETE BOOK** of the kind published, containing extensive articles solving every problem that would confront the home builder. Also send for my book of practical suggestions, "JUST A WORD ABOUT PLANS."

COMPLETE PLANS, \$10 Studio, 705-7-9 Lumber Exc., Minneapolis
ARTHUR C. CLAUSEN, ARCHITECT

Take off your Hat to the

Write for Circulars and Prices to
F. E. MYERS & BRO.
Ashland, Ohio

THE PUMP THAT PUMPS **HAY TOOLS** **BARN DOOR HANGERS** **HAY RACK CLAMPS**

Gilson Gasoline Engine and Pumping Jack

JACKS TO FIT ANY STYLE PUMP

\$70.00 COMPLETE. Every country home supplied with our system always has water. Will run ice cream freezer, churn, washing machine, etc., etc.

All Sizes

Send for Catalog

GILSON MFG. CO., 308 Park St., Pt. Washington, Wis.



All features of **LANDSCAPE WORK** handled to produce pleasing, lasting and quick results. Write for free booklet, "The Landscape Beautiful" **H. R. COTTA, Landscape Architect, Rockford, Ill.**

Bath-room comfort

"Cleanliness is next to godliness," but requires a well-warmed bath-room for its full enjoyment, for only the hardiest men or women can bathe in a cold bath-room without endangering health.



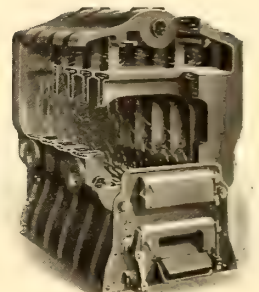
AMERICAN & IDEAL RADIATORS & BOILERS

make the bath-room comfortable, healthful, and inviting—give to the whole house a Florida-like climate. Bathing in a bath-room warmed by an **AMERICAN Radiator** is a pleasure—not a punishment.

In **IDEAL Boilers** you can use any kind of coal—slack or screenings—wood, coke, gas, oil—*anything* that will burn. These outfits for Hot-Water or Low-Pressure Steam heating save so much in coal and cleaning, in time and temper, that they soon pay for themselves.

The house is changed into a home, the family health is protected. As the outfit will not rust out or wear out, you get your money back if you sell your property, or 10% to 15% increased rental. Money put into these outfits is therefore an investment, not an expense.

Quickly put into **OLD** buildings, cottages, houses, stores, schools, churches, etc.—on **FARM** or in town, without tearing floors or walls or disturbing occupants. Prices now usually rule the lowest of the year—and in these less hurried months you get the services of the quickest, most skillful fitters. Don't put it off! Write us kind of building you wish to heat. Sales Offices and Warehouses in all principal cities of America and Europe. Valuable catalog sent free.



ADVANTAGE 13: The joints of an **IDEAL Boiler** do not come in contact with the fire—nor will they rust. Hence, an **IDEAL Boiler** outlasts the building—yet because built in sections it is easily increased or decreased in size if building is later altered.

Dept. 6.

AMERICAN RADIATOR COMPANY

CHICAGO





THE "GLOBE"

is built on honor and sold on merit

The "Globe" Ventilator

In Galvanized Iron, Brass and Copper
Also with Glass Tops for Skylight

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. *Smoky Chimneys Cured.*

"GLOBE VENTILATED RIDGING"

Manufactured by
Globe Ventilator Company :: Troy, N. Y.

JUST PUBLISHED THE SCIENTIFIC AMERICAN BOY

By A. RUSSELL BOND

12mo. 320 Pages. 340 Illustrations
Price, \$2.00, Postpaid

A STORY OF OUTDOOR BOY LIFE, suggesting a large number of diversions which, aside from affording entertainment, will stimulate in boys the creative spirit. Complete practical instructions are given for building the various articles. The book contains a large number of miscellaneous devices, such as scows, canoes, windmills, water wheels, etc.

MUNN & COMPANY

Publishers of "Scientific American"
361 BROADWAY, NEW YORK CITY



Cattle Manure in Bags

Shredded or Pulverized

Best for all indoor and outdoor work. No bad odor. Easily applied. Delivered east of Missouri River. \$2.00 per bag (100 lbs.) Write for circulars.

The Pulverized Manure Co.
21 Union Stock Yards, Chicago.

PREVENT ROT

Double the Life of Fence Posts, Porches, Tanks, Sills, etc. Prevent warping of Shingles. Use **AVENARIUS CARBOLINEUM**

Endorsed by the U. S. Department of Agriculture
On the market since 1875. Booklet free.

Surest Remedy Against Chicken Lice and Mites
CARBOLINEUM WOOD PRESERVING CO
350 West Broadway, New York, N. Y.



What the Name of Johnson Means to the Inside of Your Home

THE things most in evidence, inside your home, are the woodwork, furniture and floors.

And the beauty, harmony, durability and economy of your woodwork, furniture and floors, depend almost wholly upon the finish.

This is where the name of Johnson comes in.

We do not make paint, shingle stains, enamels, nor putty.

Simply because the subject of fine woodwork and proper wood finishing is so complex that it demands specialization.

Wood finishing specialties are our business—not one of many side lines.

And the woodwork of your home is important enough to require the benefit of special study on the subject.

For two generations we have worked for perfection in this line alone and that is why people who know have added to our firm name—"The Wood Finishing Authorities."

S. C. JOHNSON & SON, Station HG-4 Racine, Wis.

"The Wood Finishing Authorities."

If you wish to see them, we will send you a set of wood panels finished with Johnson's Artistic Wood Finishes.

JOHNSON'S
ARTISTIC WOOD FINISHES
JOHNSON'S

Within the past two years it has cost us over \$50,000 to find out things that others who make wood finishing preparations have yet to learn—we have paid \$50,000 to correct mistakes that other manufacturers are still making today.

If you finish your woodwork, furniture and floors with the product of other manufacturers you may become the victim of mistakes that we have, in

our case, paid a small fortune to rectify.

You are absolutely safe in using Johnson's

Wood Finishing Specialties but you are taking chances when you use any others.

Don't finish or refinish your home before you read our book.

It will surely give you some helpful suggestions and save you some money.

It may prevent you from making costly mistakes.

We will gladly send you a copy, with our compliments, for your name and address on a postal.

of the many artistic shades in which this wall hanging comes could be the choice.

To determine the right color for a room of this kind the woodwork, rugs, portieres, window hangings and furniture coverings—in fact, every article that contributes to the color effect, besides the conditions of light in the daytime and by artificial aid—must be taken into account.

LINING FOR A CHINA CLOSET

"My china closet is built into the dining-room and reaches to the ceiling. The walls are papered with dark red crepe paper, but the white plaster is left uncovered inside the closet. Please tell me what to do with this space."

The interior wall of the closet may be covered with the same paper that is on the walls of the room; or, if this can not be accomplished, a water-color paint to match the paper may be applied. Sometimes a textile fabric is tacked to the wall as a background for the china, and when this is done the wall color need not be followed if care is taken to select a contrasting color that is harmonious with the surroundings. A narrow furniture gimp may be glued over the edges of the material to give a neat finish.

THE WALLS OF A VESTIBULE

There are a number of thick papers made especially for the walls of a vestibule. Some of these are washable, which is needful when there is direct exposure to the weather. For a house of moderate cost, such as described in a letter of inquiry, the walls may be painted a deep buff or orange, or a plain burlap may be applied and then covered with three coats of oil paint. A plain or figured material that resembles unglazed oil cloth is also appropriate. In one's own house it would pay to wainscot the lower part of the wall with tile or wood, leaving only the upper part for decoration; or a simple and more economical expedient would be to make a wainscot of leather paper and finish the top with a chair rail. On the wall above an oil paint may be put on with a pattern stenciled over it in a darker shade of the body color.

THE DOUBLE FLOWERING CHERRY

By D. Z. Evans, Jr.

ON a large lawn, where a showy, handsome tree is desired, one really out of the ordinary, and one second only to the magnolia in point of beauty, is the double flowering cherry. Why these trees are not more often seen is no doubt due to the fact that they seem to be so very little known, especially at the North, though I have seen a number of them in the spacious southern lawns in all their striking beauty.

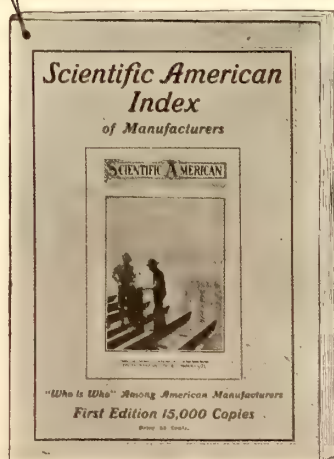
This tree is a true cherry in all its general characteristics of growth, form and leaf, differing only in the fact that it seldom, if ever, produces fruit. In fact I have never known one to fruit at all, though I have heard of one or two not well authenticated cases of a few cherries having been found on such trees. The tree is a fairly rapid grower, producing a beautiful shapely head, and annually producing a great profusion of large and beautiful double flower blossoms; these blossoms when fully developed resembling a miniature rose and having the long cherry stems. They are hardy, easily grown, and why the nurserymen and florists do not push the sale of this beautiful tree seems strange. They come into flowering when from three to five years of age and are much longer lived than the ordinary cherry, perhaps owing to the fact that they do not have to stand the strain of fruiting.

One of the largest and handsomest trees

SCIENTIFIC AMERICAN INDEX OF MANUFACTURERS

NEWLY EDITED
EDITION OF 1908

64 PAGES 2500 ENTRIES FREE



SOME TEN YEARS AGO the publishers of the SCIENTIFIC AMERICAN issued an index of leading manufacturers. This book has proved so popular that the demand has warranted an entire new edition. The invaluable list tells where to buy almost any article, and buyers who fail to find the information they desire can have their wants specially looked up without charge, and if necessary we will advertise their wants in our inquiry column without expense. The first edition of this index is only 15,000 copies, so that early application is necessary.

MUNN & CO., Publishers Scientific American, 361 Broadway, New York

of this kind I ever saw, several years ago, stood in the lawn of an old time southern homestead in Cecil County, Maryland. It was then some fifteen years old, and being in full bloom its strikingly beautiful appearance made it conspicuous among the many handsome native and foreign trees and shrubs scattered over the capacious lawn.

GARDEN WORK ABOUT THE HOME

(Continued from page 160)

produce the effect of a number of houses set in a beautiful park. A fence can be a pleasing decoration, even if there is nothing else on the place, and without the fence it is unlikely that there will be anything on it to brag of.

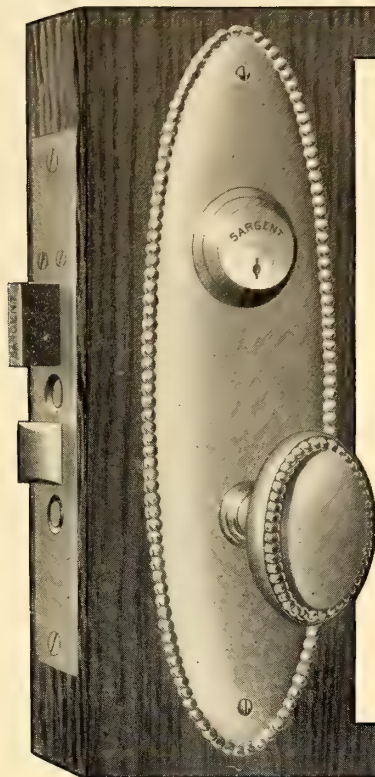
On this place, however, we expect to shut out the street by a privet hedge, and that will give us almost as much privacy as can be had on such a small lot. We should build a wall or a high fence, but fear to go against the popular taste so strongly in the beginning. The hedge is continued around the garden to screen it from the service court and to give it a strong boundary. The service court and road seemed necessary, not only because there must be some way to get to the garage, but because a drive to the kitchen and cellar doors is indispensable. The place is divided into three parts—front lawn, garden and shrubbery. The front lawn is, as it were, a convenient anteroom to the house, and will be little used. It is decorated with a few shrubs and vines on the house, and will be pleasant to look at from the parlor windows. The garden is well screened from the front of the house and the street by the two hedges and the shrubs, and will not be seen by anyone unasked.

From the dining-room one looks directly into the garden on two sides, a fortunate arrangement, since things are perhaps more enjoyed which can be seen while eating. The tea-house looks upon the garden and is the termination of the garden path. On the other side the view is toward the lawn of the shrubbery, with its background of shrubs and trees, which hide the surrounding houses. These flowering shrubs and trees are a garden in themselves and will be interesting the year round. In the turf of this sheltered lawn many spring bulbs will be planted; snowdrops, squills, crocuses, and many others will make of it a "spring garden." On one day in the week, however, its uses will be more practical, as the clothes dryer in the service court is small, and the lawn of the shrubbery will be a tempting place to spread linens to bleach.

The tea-house, with its seats and table, will be much used, we hope. It is just the place for light sewing, or for shelling peas, and the children will play there by the hour. Tea in the afternoon and after dinner a cigar and quiet talk in the moonlight complete its usefulness.

For the sundial there is to be a rough stone block. The dial is to be accurately made and set up, and will bear on its face the simple inscription "OMNIA FERT AETAS."

Planting such a small garden is difficult, because many of the ordinary garden plants are so large, and yet many of the large ones are not to be given up lightly. Then, too, in a place lived in the year round, as this is, it is an object to have as long a season of flowers as the climate will allow, which means that the variety must be great. It is also intended to be as simple to care for and as lasting as may be. Simple because the ladies of the house are to take care of it, and lasting because the owner does not want to spend much on it every year. For these reasons it is planted thickly with plants and bulbs that will need little coddling. Annuals are left out because they are easy to buy if one wants them, and they need much care every year and some expense for seeds.



Hardware as a Decorative Feature

Every home-builder should make the selection of hardware trimmings a personal matter. If the choice is left to someone else you are almost certain to be dissatisfied with the result. Make it a point to select the design and finish of the hardware *yourself*.

SARGENT'S Artistic Hardware

offers unusual possibilities for making the hardware a decorative feature of the new home.

Write for Sargent's Book of Designs—Sent FREE.

If you are building a new home or *even planning* one, you ought to have this book. It's invaluable to home builders—filled from cover to cover with illustrations and suggestions for making the new home attractive. Shows 68 patterns of artistic hardware and explains the Easy Spring Principle of Sargent's locks. It is a rather expensive book, but we willingly send it *free* to those interested.

A Postal request will bring a copy by return mail. If interested in the Colonial, ask us to enclose our Colonial Book.

SARGENT & CO., 156 Leonard Street, New York.

MONEY FOR WOMEN

**\$225.00
\$200.00
\$187.50
\$156.25
\$125.00**

THE above amounts represent the earnings for February of five of our *lady* agents. Many others earned from \$50.00 to \$125.00 during the same period.

We want energetic women in every community to represent the **House Beautiful Magazine**, published in Chicago for *eleven years*. Exceedingly liberal terms to agents. You can earn a *good* income during your spare time, and a *very large* income by putting in all of your time. *Write to-day* for sample copy and terms to agents.

Address:

Circulation Dep't.

HOUSE BEAUTIFUL
Republic Building, Chicago



Artistic Practical Houses, 1908

A NEW book for 1908 has been prepared, showing the latest designs of houses of modern cost. This volume contains practical and skilful arrangements of floor plans, and shows artistic exteriors equal to those of the most expensive work in the suburban architecture of America. If you want a house costing from \$5,000 to \$10,000, *complete and convenient* and yet unusual and the *opposite from the commonplace*, you will be interested in this new book. Price, \$2.00, by express prepaid.

MUNN & CO., 361 Broadway, New York

OVER DINING-ROOM AND LIBRARY TABLE

OTOKO DOMES

Exquisite creations of translucent white holly, rendered richly beautiful by the OTOKO WOOD FIRING PROCESS

and by hand painting.

The effect of the light radiating through the

fired wood is unique, beautiful and restful.

Frame and fittings in Brass, Bronze or Verde as desired.



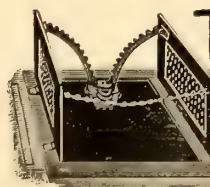
Each panel has a different fire effect and individuality of grain.

The designs are in great variety and will be colored to harmonize with the decorations of your room.

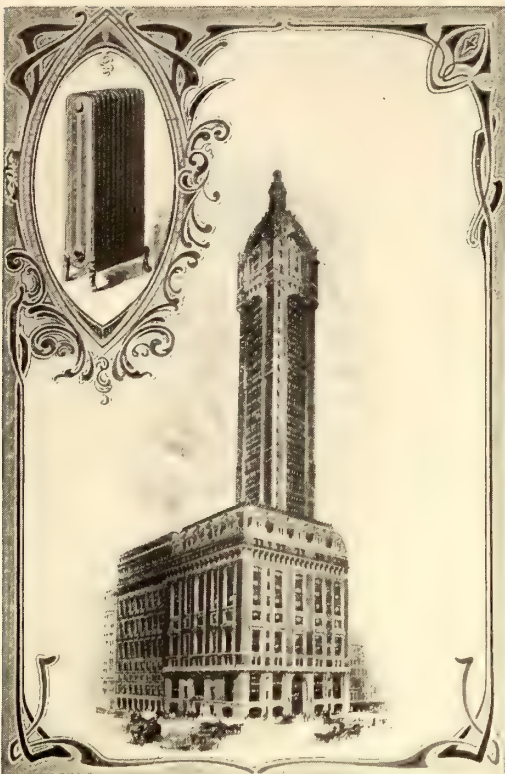
Dome shown here (diam. 24 in.) has 12 panels.

Price \$20.00, wired and equipped with 3-light cluster. Write for Catalogue showing shades for all styles of lamps and candles.

THE OTOKO COMPANY, Lamp Department, OLD SOUTH BUILDING, BOSTON, MASS.



T.H. BROOKS & CO. CLEVELAND, O.
FLOOR & SIDEWALK LIGHTS.
OF EVERY DESCRIPTION.
SEND FOR CATALOGUE.



Kinnear Pressed Radiators

Selected for
THE SINGER BUILDING, NEW YORK
 Ernest Flagg, Architect
THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

**On the Wall—Off the Floor
 Out of the Way**

If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.
 Write for Catalog "D" for any desired information.

**THE PRESSED RADIATOR CO.
 PITTSBURGH, PA.**



Clovers

We are the largest growers of Clovers and Timothy seed in the world. We make a great specialty of

**Timothy Medium Red Clover
 Mammoth Red Clover
 Alfalfa Clover Alsike Clover
 Blue and Red Top Grasses**

Salzer's 20th Century strain of above seed is positively the purest seed on earth.

SALZER'S Great Catalog

Contains a splendid array of pedigree seeds for the American Farmer. It's the only original seed book published—brim full of bristling seed facts. It is gladly mailed to you, also samples of clovers upon receipt of 10c to cover postage.

**John A. Salzer Seed Co.
 14 High St., LaCrosse, Wis.**



Two or three plants flowering at different seasons are planted in the same space, thus one space has English iris, which blooms in June, and tritoma, which blooms in September.

The earliest flower will be the snowdrop, which often blooms in February. Next will come the winter aconite and all the crocuses, grape hyacinths, chionodoxas, scillas, fritillaries, narcissi. The narcissi are represented by nine of the best varieties, which bloom successively for a considerable time, beginning with the incomparabilis section and ending with the poeticus and the sulphur and the orange phoenix. With these and later are the tulips, beginning with the Duc Von Tholl, Yellow Prince, L'Immaculée, and chrysolora. These are past in May when the gorgeous late tulips, like the red Gesneriana, the pale flushed Bridesmaid, the graceful yellow Retroflexa, and the tall greenish-yellow vetellina are ending the tulip season.

The earliest irises are I. histrioides and I. reticulata, low things of great beauty which bloom in February or March. In May the German iris is in its prime. Of these we have: "Her Majesty," rosy purple; "Flavescens," cream yellow; "Queen of May," lavender; "Mme. Chereau," white with blue veinings; "Graccus," with pale yellow standards and purple, yellow-striped falls; and the tall, delicate I. siberica, a pure blue.

The yellow alyssum (A. saxatile) or gold dust; cerastium, iberis, arabis, all white; Iceland poppy, yellow and white, are low ground covers which hide other bulbs. The blooming of paeonies marks the beginning of summer. They are closely followed by the bulbous iris, both English and Spanish, with orchid-like flowers of blue, yellow and white shades. Through the summer we have campanulas, daisies, day lilies (Hemerocallis), pinks, foxglove, lupins, heuchera (a charming flower that should be better known), coreopsis, gaillardia, Clematis recta, funkia, polemonium, phlox, platycodon, hollyhocks and larkspur. Planted among these, according to their season, are lilies: Lilium tenuifolium, the coral lily; L. candidum, the white Madonna lily; the golden banded auratum, and one or two others. The season ends with the autumn crocus: tritoma, the "red hot poker"; Japanese anemone; and chrysanthemums, which often last until Thanksgiving.

There are but few of each kind of plant because the garden would be overpowered by large masses of one color; but there will be enough of each to provide for the dining-table, and there should not be a day from the first of April to the first of November without flowers. The variety is very great for such a little garden.

Every two or three years, in the autumn, the garden should be worked over, digging in manure and separating the plants which are crowded.

The garden path is gravel. We prefer brick or stone, but the cost is too much at present.

P. T. D. asks about pruning shrubs.

Too much pruning is done on most places where there is a gardener. Gardeners seem to think that all shrubs must be pruned every winter, and their object appears to be to make them all the shape of a barrel without regard to their individual form or habit. This not only shows bad taste but usually destroys the flowers of the coming season.

The one thing to know when pruning is whether the flowers are borne on the wood of the current year or on that of the year before. The flowers of forsythia, for example, come before the leaves from buds developed the previous summer, so if one cares for the flowers the pruning should be done after they are past and not in the winter.

Hydrangea, on the other hand, blooms on



At Easter Tide

when custom decrees that men, and especially women, should look their best, the raw spring winds cause much damage to tender skins and complexions.

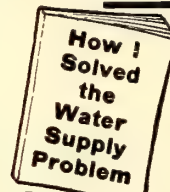
Mennen's Borated Talcum Toilet Powder

is then doubly necessary. It soothes and heals the skin, prevents Chapping, Chafing, Prickly Heat, Sunburn and all skin troubles of summer. After bathing and shaving it is delightful, and in the nursery indispensable.

For your protection the genuine is put up in non-refillable boxes—the "Box that Lox," with Mennen's face on top. Guaranteed under the Food and Drugs Act, June 30, 1906, Serial No. 1542. Sold everywhere, or by mail 25 cents. Sample free.

GERHARD MENNEN CO., Newark, N. J.

Try Mennen's Violet (Borated) Talcum Toilet Powder—it has the scent of fresh-cut Parma Violets.



How! Solved the Water Supply Problem

Send for this Book
 Plenty of running water everywhere, also fire protection, that's the

Leader

Water Supply System

For Country homes, Public buildings, towns.

Our specially designed, air-tight steel tank and pumping apparatus, placed anywhere, with ordinary air pressure does it. No attic tanks to leak or freeze. Satisfaction guaranteed.

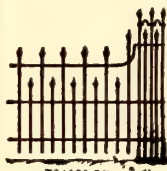
Let our engineers suggest a plan for you—Ask for FREE Book—TODAY

LEADER IRON WORKS

Factory and Main Offices, 2175 Jasper Street, DECATUR, ILLINOIS.
 Western Branch, Dept. T, 120 W. 11th Street, KANSAS CITY, MO.

Van Dorn Iron Works Co.

**PRISON, HOUSE &
 STABLE WORK**



**JOIST HANGERS
 LAWN FURNITURE
 FENCING, ETC.**

CLEVELAND, OHIO



Standing Seam ROOF IRONS

CLINCH right through the standing seam of metal roofs. No nails are needed unless desired. We make a similar one for slate roofs.

SEND FOR CIRCULAR

**BERGER BROS. CO.
 PHILADELPHIA**

Wall Papers and Wall Coverings *A Practical Handbook*

For Decorators, Paperhangers, Architects, Builders and House Owners, with many half-tone and other illustrations showing latest designs

By **ARTHUR SEYMOUR JENNINGS**

Includes characteristic designs in vogue to-day. Gives reliable information as to the choice of Wall Papers and describes the practical methods of applying them

One Large 8vo Volume. Cloth. Price \$2

MUNN & CO., 361 Broadway, NEW YORK



Summer Cottages

Why pay rent when you can build such delightful cottages for so little?

O. S. Lang Summer Cottage Specialist

Designer and Builder of Attractive and Artistic Cottages to Suit Every Purse and Every Location

Send six red stamps for book full of handsome designs and valuable information — the result of 22 years' experience. Address, O. S. LANG, 187 Richmond Ave., Buffalo, N. Y.



ZEROLENE
A NON-CARBONIZING OIL
For AUTOMOBILE LUBRICATION

ZERO COLD TEST
STANDARD OIL CO.

Keeps Your Spark Plugs Clean

ZEROLENE, the new non-carbonizing oil, ends all the troubles of carbon, frost and friction in gasoline engine lubrication. Gives perfect lubrication in any gasoline engine, regardless of type or temperature. This oil is produced in only one place.

ZEROLENE Auto-Lubricating OIL

leaves practically no carbon deposit, and "works" with absolute uniformity in zero weather or midsummer heat. Put up in sealed cans with patent spout that prevents can being refilled. Remember the label shown in cut, and the non-refilling feature which prevents substitution of inferior oils. ZEROLENE is also put up in barrels for the garage trade. Sold by dealers everywhere.

STANDARD OIL COMPANY
(Incorporated)



EVERYTHING IN GARDEN FURNITURE IN STONE AND MARBLE

The service of our Designing Department is offered in the laying out of grounds and selection of Garden Furnishings. Illustrations and Booklet on Sun-dials furnished free. New catalog of "Garden Furniture," containing over 400 illustrations of Italian and Classical Models, sent for 25c.

FOUNTAINS, STATUARY, COLUMNS, PERGOLAS, BALUSTRADES, STANDARDS, SUN-DIALS, PEDESTALS, BENCHES, TABLES, VASES, WELL HEADS, WALL FOUNTAINS, LIONS, SPHINXES, ETC., IN MARBLE, STONE, AND POMPEIAN STONE WHICH SUCCESSFULLY WITHSTANDS THE AMERICAN CLIMATE

THE ERKINS STUDIOS, 3 WEST 15th STREET, NEW YORK



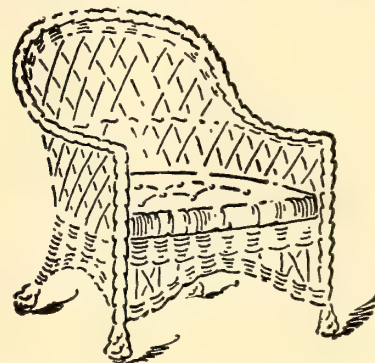
There Is No Place Like Home

especially if it has a "Cortright" Metal Shingle Roof. If it has "Cortright" embossed upon it you need have no fear of fire, water or storms, but can live with the proud knowledge that for durability and real artistic beauty your roof is far in the lead. Send for our booklet and figure the matter out for yourself.

**CORTRIGHT
METAL ROOFING CO.**

Philadelphia and Chicago

JOSEPH P. McHUGH & COMPANY
OF NEW YORK: ESTABLISHED 1878.
Will ship on receipt of \$5.00
(Money Order or N. Y. Draft)



THE BAR HARBOR CHAIR,
(Natural Willow, Floss Cushion)

Will mail for 25c. in Stamps
(to be allowed on first purchase)
THE PORTFOLIO OF 1000 SKETCHES,
Illustrating Quaint and Unusual
Willow, Mission and Upholstered
FURNITURE OF ORIGINAL DESIGN.

9 W. 42d St., Opposite Library.
(SIGN OF THE "POPULAR SHOP.")

Colonial Houses FOR MODERN HOMES

A collection of designs of Houses with Colonial (Georgian) details but arranged with modern comforts and with the completeness of the twentieth century.

Written and Illustrated by
E. S. CHILD, Architect

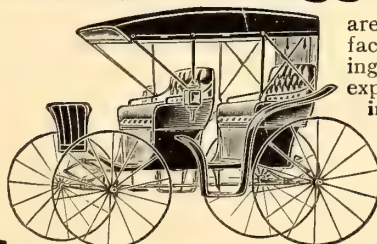
They show large, correctly drawn perspectives, full floor plans, and complete descriptions, with estimates of cost. The designs are new, original, unique, consistent, but not stiff nor constrained. Made, not by an artist, but by an architect. They combine beauty of exterior with complete and convenient interiors, with Kitchens, Laundries, Pantries and Closets carefully and skilfully considered.

If you are at all interested in the subject, you will enjoy this publication.

PRICE, Postpaid, TWO DOLLARS

MUNN & COMPANY
361 Broadway : : New York City

Elkhart Buggies and Harness



No. 315. Light Extension Top Surrey with Double Fenders. Price complete, \$78.00. As good as sells for \$85 more.

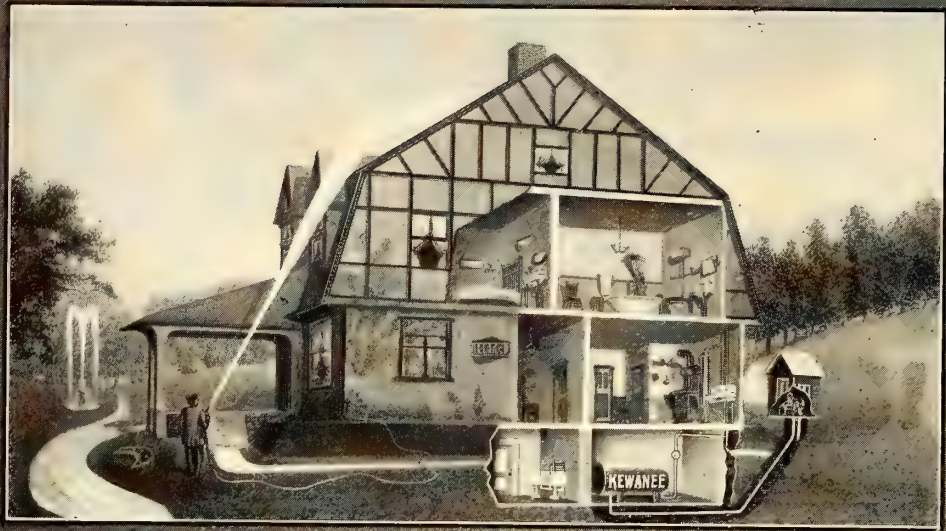
selling to the consumer exclusively. We ship for examination and approval, guaranteeing safe delivery. No cost to you if not satisfied as to style, quality and price. Over 200 styles of Vehicles and 65 styles of Harness. Send for new, free catalogue.

**Send For
New, Free
Catalogue**

**ELKHART CARRIAGE &
HARNESS MFG. CO.**
Elkhart, Ind.



No. 656. Combination Buggy with Stanhope style seat. Bike gear and extra spindle seat. Price complete, \$64.50. As good as sells for \$75 more.



Perfect Water Supply Service For Your Country or Suburban Home

YOU can have a thoroughly efficient water service in your home—service equal to that offered by the best city water supply. You can have an abundant supply of water delivered under strong pressure to the bathroom, kitchen, bedrooms, laundry, lawn, garden, barn—anywhere.

This service and first class fire protection will be yours, if you install

The Kewanee System of Water Supply

With the Kewanee System there is no elevated or attic tank to leak, freeze, overflow or collapse. Instead, a Kewanee Pneumatic Tank is placed in the cellar, buried in the ground or located in a special pump house.

The Kewanee Tank rests on solid ground where it can do no damage. It is protected from all extremes in weather, assuring a fresh, usable supply of water during all seasons. It is made of steel plates so that it will last almost indefinitely.

The water from your own well is pumped into the Kewanee Tank by means of hand pump, windmill, gas engine or other good method adapted to the local conditions. Pumping the water creates air pressure in the tank; and then the water is delivered

ed to all fixtures and hydrants. 40 pounds is a good average pressure in the Kewanee System, which is equal to the pressure from an elevated tank 93 feet high.

And we furnish complete water supply plants—tank, pumping outfit, valves, gauges, connections and all.

Over 8,000 Kewanee Systems in successful operation, providing water for country and suburban homes, clubs, hotels, schools, apartment buildings, public and private institutions and towns.

Our engineering service is free. No charge for specifications and estimates. Everything fully guaranteed—a guarantee that protects you.

Write for our 64-page illustrated catalog. Please mention this publication and ask for catalog No. 36.

Kewanee Water Supply Company, Kewanee, Illinois.

32 Broadway, New York City.

820 Marquette Building, Chicago.

404 Equitable Building, Baltimore.

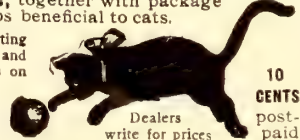
710 Diamond Bank Building, Pittsburgh.



CATNIP BALL (Pat'd) a toy for cats—they can't let it alone; ridiculously amusing; positively beneficial; will last for years. **Price 10 Cents**, together with package of catnip and other herbs beneficial to cats.

For sale by department, sporting goods, drug and bird stores, and news stands, or mailed by us on receipt of price.

National Cat Supplies Co.
Dept. A.H., East Boston, Mass.



10
CENTS
post-
paid

Dealers
write for prices

Holidays in England

Send 4 cents (postage) for illustrated book describing CATHEDRAL ROUTE. Pilgrim Fathers. Dickens and Tennyson Districts also HARWICH ROUTE. ENGLAND TO THE CONTINENT VIA HOOK OF HOLLAND OR ANTWERP. Address, H. J. KETCHAM Gen'l Agt

GREAT EASTERN RAILWAY OF ENGLAND

362 S Broadway, New York

Philosophy of Protective Paint

A practical treatise on the subject of protective paint by a practical paint man of long experience. Write for free copy No. 106 B.

—Joseph Dixon Crucible Co., Jersey City, N. J.—

Details of Building Construction

By CLARENCE A. MARTIN

Assistant Professor, College of Architecture, Cornell University

Price, \$2.00

For Sale by

MUNN & COMPANY, 361 Broadway, New York

A collection of 33 plates of scale drawings with introductory text.

This book is 10 by 12½ in. in size, and substantially bound in cloth.

wood of the current year, and should be cut back in the winter or spring. Cutting back increases the growth of new shoots and hence of flower buds.

On a small place the best way is to prune while the shrubs are in bloom and use the branches cut off for house decoration.

One should never hesitate to cut all the flowers one wants, as it is always good for the shrubs.

PLANTING RULES

Several correspondents have asked about the care of trees and shrubs between their arrival in the crate and the time of planting, and for the first few months afterward. It is an important question, because people are often disappointed when, at the end of the season, they find perhaps more than half of the things dead or only half alive. The blame for this is usually put on the nurseryman, or it is called hard luck; but it can be ascribed with more certainty to lack of care in handling before and soon after planting.

No rules can make one a good planter, because good planters do their work almost by instinct, but a few rules and suggestions for the care of shrubs and trees, from the time they arrive at the railroad station till they are well established, may be a help.

1. Place the boxes or bales in a cellar (where there is no furnace) or in a cool shed—or if neither can be used, under an evergreen tree. A cool cellar is the best place because it is moist and the low temperature retards growth.

2. Remove cover or open bale at once in order to see that the packing material is damp. It should feel quite wet to the hand. If it is moist but not wet a pailful or two of water can be poured over it.

3. If packing material is dry and branches shriveled (as may happen after being a month or so on the way) remove the plants from the case and bury root, stem and branch in moist earth for several days. This treatment will often save plants that seem hopelessly dry.

4. Do not heel the trees in, except in the autumn when it may be necessary to get them in the ground before it freezes. In the spring heeling-in is a waste of time, if carefully done, since it is nearly as much trouble as planting, and if not carefully done nothing could be worse, because the tops are in full air and sun and the roots are not in proper contact with the soil.

5. When planting take box to the spot to be planted and take out one kind at a time; or if that is not possible, keep the roots covered by the wet moss in a cart or barrow and the tops covered with burlap.

6. Before planting cut off loose pieces of root and broken or split ends with shears, and cut back the top as may be necessary.

7. Dip roots for several moments (until the earth clinging to them is soaked) in a tub full of water, or better, full of thin mud, and plant at once. Ordinarily no other watering will be necessary.

8. Dig a deeper and wider hole than the roots require, put the tree in it; then let one man hold it upright while two other men shovel in loose earth; the one who holds the tree meanwhile lifting it up and down and gradually raising it until it is but little deeper than it stood in the nursery. Then all three men are to press (not stamp) with their feet against the soft earth, forcing it into all the interstices, and into close contact with the roots. For further directions see Peter Henderson's essay "On the Use of the Feet in Sowing and Planting" in his book on "Garden and Farm Topics."

9. Remember that a short exposure to sun and wind (a strong wind is as bad as the sun) will dry out the roots and kill a coniferous tree. The roots of these are usually sewed in

burlap, at the nursery, and this should not be removed until ready to plant.

10. When planting is finished, smooth off the soil and give a heavy mulch of leaves, strawy manure, salt hay or pine needles. Mulching is usually better than cultivating and much easier.

In a long drought watering may be necessary the first year. The mulch should be removed from each tree or shrub; a shallow trench dug about it and filled with water several times. The water then soaks into the ground and does much good. After watering replace the mulch. Ordinary watering with a hose, when only the surface of the ground is wet, is useless.

ORNAMENTAL BEDDING PLANTS FOR HEDGES

By Ida D. Bennett

AN attractive feature of a garden or lawn is always found in a hedge of blossoming plants and it is rarely that a garden exists which does not afford an excuse for one. Usually one likes to separate the flower garden, the vegetable garden or the service part of the house from the lawn by the use of a hedge of blooming shrubbery, of evergreens or the like, but there are more exposed formal positions where something different seems required as the division line between city lots, or a hedge in a temporary home where it is not desirable to make permanent plantings, but rather to have for the one season something ornamental, unusual and fine.

Fortunately there are many fine bedding plants which may be used for this purpose. It is desirable, however, that plants used in this way should possess not only fine, attractive and striking blooms, but handsome foliage as well. Fortunately many of the plants of which I shall speak possess the qualifications in a high degree.

One of the most beautiful of bedding plants is found in the Chinese hibiscus in its various varieties. This is a hard wooded plant which in time attains considerable size. The foliage is exceedingly fine, being heavy, wavy, glossy and of a dark, rich green. The flowers, which are produced in various shades of shrimp pink, rose color, rosy scarlet, orange and a variegated blossom are rarely beautiful. *H. mineatus* is much the finest of the class, being a rosy-scarlet, double flower five inches or more in diameter. This variety has the added merit of being a very free bloomer. Peach Blossom is also a very attractive double variety of large size of a delicate peach color, as its name indicates. As grown in the greenhouse it is rather insipid, but in the open ground it takes on a deeper tone which is very pretty. The double blossoms are far more attractive than the single, though these are very handsome and the long, brush-like stamens and anthers add to the attractiveness of the flower. They are very easily grown. The best way to secure the plants is to purchase blooming plants of the florist and plant out in a sunny position in rich soil of leaf mold or muck well enriched, and to give liberal culture at all times. They are quite susceptible to frost, and must be wintered in a greenhouse or warm window.

Another wonderful plant for hedge purposes is found in the oleanders, the old-fashioned double pink, which is so well known, being one of the prettiest varieties. These make in time small trees, which, during summer, are a mass of flowers, and if not allowed to grow too tall or straggly are attractive in foliage at all times. They may be bedded out or grown in wooden pails or tubs sunk



MOST COMPLETE LINE OF ARTISTIC STEEL CEILINGS IN EXISTENCE

Have you the Catalog?
Write for it TO-DAY
Ask for D 64

The Berger Mfg. Co., Canton, Ohio

New York Philadelphia Boston Chicago St. Louis San Francisco Minneapolis Atlanta

SPECIALTIES: STEEL CEILINGS, ROOFING, VAULT AND SIDEWALK LIGHTS, FIREPROOFING, STEEL FURNITURE, ETC.

FAST TRAINS Day and Night on the



Best Service between

Chicago
La Fayette
Indianapolis
Cincinnati

West Baden and
French Lick Springs
Louisville

FRANK J. REED, Gen. Pass. Agt.
198 Custom House Place, Chicago

The HEART of the KERNEL

Because Kornlet comes in a can doesn't mean that it's canned corn. It is better, sweeter, more tender and more nutritious. It's the very heart of the kernel of the best green sweet corn in the height of its milk, free from husks and hulls.

Kornlet

has a much wider range of usefulness than canned corn, limited only by the ingenuity of the cook.

Look for recipes on every wrapper. Valuable book of recipes sent free on request.

If your grocer hasn't Kornlet, write us.

THE HASEROT CANNERS CO.,
CLEVELAND, OHIO.
U. S. A.

in the ground. Possibly, like the hibiscus, which, given too much root room, is apt to run to foliage, they will bloom better for having their root room rather restricted. There are several fine varieties of the oleander seldom seen at the North, but which may readily be secured of southern florists. Among these one should make a choice of one or more of the dark-red varieties such as *N. atropurpureum plenum*, or *N. DeBrun*, and with these combine the old-fashioned pink splendors, *Madame Peyre*, a double creamy-yellow variety with pink center, and *Madonna grandiflora*, the best double white. There are also several good single varieties, and if one chooses to make a collection of the various sorts it will well repay the time and money expended. Oleanders are easily propagated by rooting cuttings of the new wood in water in a sunny position or in wet sand with bottom heat, and the plants make a quick growth. They may be wintered in a dry, light and warm cellar and brought up in the spring in time to start into growth before they are to be planted out late in May. Any good, well enriched garden soil will grow them suc-

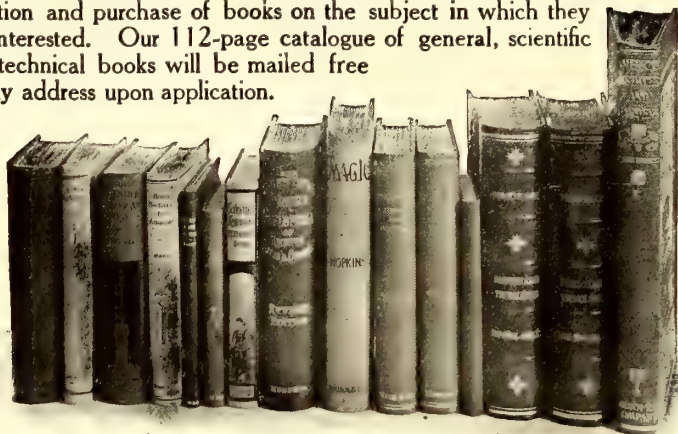
cessfully and a hedge of them in full bloom is a thing to rejoice and be proud over.

Less rare, but still highly ornamental, the lantanas have a claim to consideration for their freedom of growth and profusion of bloom. They make very symmetrical bushes, a well developed specimen being as broad as tall, and as they may be grown from small spring-set plants to bushes two and three feet in diameter by midsummer, their availability as an ornamental hedge-plant is obvious. The colors range from orange and red to pink, lemon and pure white and the individual flower, though small, is borne in large clusters which completely cover the plant, making it a most striking and handsome object. They should be set far enough apart in the row to assure perfect development, and any good rich soil will grow them well. They should be well watered, especially after coming into bud, and at this time should have liquid manure once or twice a week.

Where a low hedge, eighteen or twenty inches high, is desired the vincas are admirable. These plants make shapely, compact bushes nearly as wide as high, and the glossy green leaves are as ornamental almost as the

Our Book Department

WE OFFER our patrons and subscribers the advantages of a long established and widely experienced department, devoted to the publication and distribution of modern, up-to-date books pertaining to all branches of Engineering, Mechanics, Chemistry, Science, Industrial Arts, Trades and Manufactures. We shall be glad to aid our patrons in the proper selection and purchase of books on the subject in which they are interested. Our 112-page catalogue of general, scientific and technical books will be mailed free to any address upon application.



Some of the Scientific American Publications

The Scientific American Reference Book, compiled by A. A. Hopkins, 12mo, cloth, 516 pages, illustrated.....	\$1 50
The Scientific American Boy, by A. R. Bond, 12mo, cloth, 317 pages, 320 illustrations.....	2 00
Home Mechanics for Amateurs, by Geo. M. Hopkins, 12mo, cloth, 370 pages, 326 illus.....	1 50
Experimental Science, by Geo. M. Hopkins, 2 volumes, 1100 pages, 900 illustrations...	5 00
The Scientific American Cyclopedia of Receipts, Notes and Queries, edited and compiled by Albert A. Hopkins, revised edition, containing 15,000 selected formulas, 734 pages.....	5 00
Magic, Stage Illusions and Scientific Diversions, by A. A. Hopkins, 8vo, cloth, 556 pages, illustrated.....	2 50
The New Agriculture, by T. Byard Collins, 8vo, cloth, 374 pages, 106 illustrations...	2 00
Industrial Alcohol, Its Manufacture and Uses, by John K. Brachvogel, 8vo, cloth, 516 pages, 107 illustrations.....	4 00
Practical Pointers for Patentees, by F. A. Cresee, 12mo, cloth, 144 pages.....	1 00
American Estates and Gardens, by Barr Ferree, quarto, 11x13½ inches, 340 pages, 275 illustrations.....	10 00
The Design and Construction of Induction Coils, by A. Frederick Collins, 8vo, cloth, 400 pages, 125 illustrations.....	3 00
The Technological Dictionary, Spanish-English, } Vol. I, Ingles-Español, \$8.50 { Two English-Spanish, by N. Ponce De Leon, } Vol. II, Spanish-English, 7.50 { vols.	16 00

Full descriptive circulars of the above books will be mailed free upon application

MUNN & Co., Publishers, 361 Broadway, New York

flowers which cover the plants in great profusion. The flowers are waxy and of good substance, and occur in pure white, white with rose eye and rose colored. The plants are easily moved, and at the approach of cold weather may be lifted and grown in the house if desired. They are easily grown from spring-sown seed which should be sown in the house or hot-bed early in March to insure plants of a good size for bedding out about the last of May.

Any good garden soil, well enriched, will grow the vinca to perfection and they should be well watered throughout their season of growth.

Coleus may be used for low hedges and is always popular. Plants are so easily and cheaply obtainable of the florists that it hardly pays to bother to propagate them oneself, but they are one of the easiest plants to raise from cuttings, and may also be raised from seed. Leaf mold suits the coleus very well, but any good garden soil will grow them to perfection, and the sunnier the exposure the richer will be the color produced.

Coleus should never be allowed to bloom, but the tips of the branches should be kept nipped out and the plants encouraged to make

a stocky growth. Left to themselves they are a little inclined to grow straggly and the lower leaves to droop. For this reason they must be continually pruned and kept in subsection. If two or more tiers of leaves are nipped out each time these may be thrust in the ground about the base of the plant or around the edge of a bed it is desired to border, and they will quickly take root and go on growing as though nothing had happened.

Another attractive plant rarely seen at the North is the crape myrtle. These are considered indispensable at the South, and may be grown in the open ground at the North by lifting and storing them in a warm cellar in winter. They are not as handsome in foliage as the preceding plants, nor do they make as symmetrical growth, but need to be trimmed into shape; but the beautiful, crape-like flowers fully compensate for all shortcomings of foliage and symmetry. There are three colors—white, pink and crimson, and all are well worth cultivating. No especial treatment is demanded, any soil which will grow good dahlias will grow this plant satisfactorily. It should be supplied with sufficient water for its needs and given, when in bloom, a little manure water.

The bougainvillea is another fine plant which, when in bloom, is a wonderful mass of rosy-crimson. The flowers, themselves, are inconspicuous white tubes, but each flower is surrounded with large rosy bracts which have the effect of flowers. The plants, though straggly in growth, are so compact as to be easily kept in symmetrical shape. It is rather inclined to trail, and for that reason is a wonderful plant for the top of walls or embankments. I like a mixture of leaf mold or peat with warm sandy loam and old, well-decayed manure for this plant. It is a hard wooded plant, and in planting or potting the soil should be made very firm about the roots. It blooms from May to November, making it very desirable for bedding out. It should be lifted and stored in a warm cellar during winter.

The tender hydrangeas are among the most available plants for planting out in the summer. Unlike the hardy hydrangeas they show attractive shades of pink and rosy red as well as white, and one—*Hortensis Mariessii*—changes from the light pink of the newly opened flower to a pure mauve, the blue hydrangea as it is sometimes called.

Good garden culture is all this class of plants require. This means keeping the soil mellow and loose and not allowing the plants to suffer at any time for water.

The foliage of this class of plants is very handsome, being quite a distinct departure from that of the hardy varieties. They do somewhat better in partial shade, as too hot a sun is apt to burn the beautiful large leaves.

Then there are the brugmansias, single and double, whose beautiful, immense white flowers like fluted satin fill the evening air with perfume which reminds one somewhat of vanilla. In fact I heard one man say that they smell like cake, but, if cake, it is certainly a very delicate and delicious confection.

Cottage Designs

- No. 1. Cottage Designs**
Twenty-five designs, ranging in cost from \$600 to \$1,500
- No. 2. Low Cost Houses**
Upward of twenty-five selected designs, originally costing from \$750 to \$2,500
- No. 3. Modern Dwellings**
Twenty designs, at costs ranging from \$2,000 to \$5,000
- No. 4. Suburban Homes**
Twenty selected designs, ranging in cost from about \$3,000 upward

One Dollar Each, Postpaid. Sold Separately

Munn & Co., 361 Broadway, New York



A Hammock that's Right

The only Hammock made that combines quality, durability and beauty with comfort. Can be used indoors or out. For further particulars write

Queen Hammock Co.

184 Lake St., Muskegon, Mich. [Formerly Kalamazoo]

Sample and
Circular
Free.

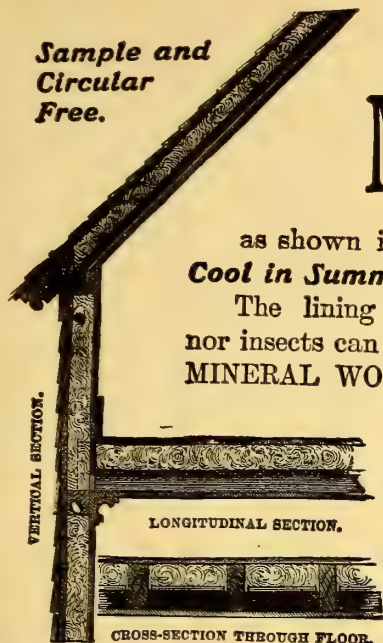
A House Lined with Mineral Wool

as shown in these sections, is *Warm in Winter,
Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice,
nor insects can make their way through or live in it.
MINERAL WOOL checks the spread of fire and keeps
out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.
140 Cedar St., NEW YORK CITY.



When the lighting
fixture is designed to
follow the lines of
some old, old Dutch
lamp—but to use the
more convenient illu-
minant, electricity—
besides furnishing
light for a Flemish
or Dutch room, it be-
comes an appropriate
and artistic addition to
its other decorations.

Our new catalogue, show-
ing lighting fixtures especially designed for the lighting
of homes, will be mailed on request.

For the protection of our clients, our trade-mark will
be found on each and every piece of work made by us.

The Enos Company

MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
San Francisco, 1748 California Street
Toronto, 94 King Street, West
Pittsburg, G. P. Norton, Penn at 4th St.
NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & Co., BOSTON



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER TILING

An Ideal Floor Covering for Court
Houses, Banking Institutions, Churches,
Hospitals, Libraries, Business Offices,
Restaurants, Vestibules, Elevators,
Kitchens, Laundries, Pantries, Bath-
rooms, Steamships and Floating Pro-
perty generally.

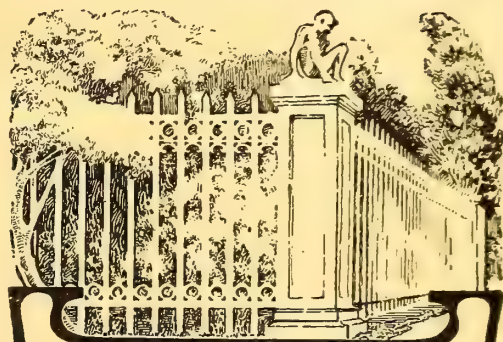
We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street



WROUGHT IRON FENCE And Entrance Gates WIRE FENCING

Ornamental Iron Work Tree-
Guards, Lawn Furniture, Etc

Tennis Court Enclosures A Special
FEATURE

THE F. E. CARPENTER CO
7 & 9 WARREN ST. NEW YORK



WRITE FOR OUR BOOK "PLANTS AND PLANS FOR BEAUTIFUL SURROUNDINGS"

It is full of invaluable informa-
tion, illustrations of flowers and
beautiful lawns.

It shows how the modest as well
as the most extensive grounds can
easily be made charming and at-
tractive. There is nothing more
pleasing and delightful to cultured
taste than artistic and properly
planted grounds.

We grow and import all of the
choicest hardy plants, shrubs,
trees, box and bay trees for creat-
ing beautiful landscape effects in
formal or natural landscape gar-
dening. Write now, lest you forget.

WAGNER PARK CONSERVATORIES
BOX 327
SIDNEY, OHIO

CRYSTAL Domino SUGAR



SOLD ONLY IN 5^{lb} SEALED BOXES!

Imagination could not conceive of a handier and prettier form than that which is presented in "CRYSTAL DOMINO SUGAR." Neither could the most particular people ask for more perfect purity, nor economical people for less waste.

BY GROCERS EVERYWHERE!

NA
7100
AS12
Hort.

Vol. V

MAY, 1908

No. 5

AMERICAN HOMES AND GARDENS



BUNGALOW NUMBER

\$3.00 A YEAR

MUNN & COMPANY, Publishers

PRICE, 50 CENTS



CHINESE CHIPPENDALE PAGODA CABINET.
THE BORGHESE OR CAMPANA VASE
BY WEDGWOOD ABOUT 1790

The A.J. Crawford Company

LONDON

NEW YORK

251-255 FIFTH AVENUE and
1 EAST 31st STREET

Choice Examples of Old English
Furniture and Decorations.

Jacobean, Charles II, Queen Anne,
Chippendale, Adam, Hepplewhite,
Sheraton.

Reproductions of exclusive models
in above periods at moderate prices.

"The Little Shop"



Bungalow Builders WILL DO WELL TO CONSULT The Furniture Shop



in regard to the decoration and furnishing of their summer places. Here may be found everything of practical service in fitting up the Bungalow.

Handcraft Furniture, strong, simple and beautiful—the ideal furniture for the country. The product of long experience in furniture making, it is recognized as the best of its type in design, upholstery and finish.

Furniture for the sleeping-room in white enamel, wood or iron

Original and graceful designs in handmade willow chairs, with cushions specially designed and stencilled, or covered with Homespun imported for our use in summer houses.

Hand wrought fixtures for gas and electricity, oil lamps and candle sticks.

Stencilled draperies and handmade fabrics in exclusive weaves and designs.

Suggestions for interior arrangements and color schemes submitted, and well executed at moderate cost.

Estimates furnished.

Freight prepaid to destination. Illustrated booklet sent upon request.

OLIVER A. OLSON THE FURNITURE SHOP

2273 & 2275 BROADWAY
Between 81st & 82nd Sts.

NEW YORK

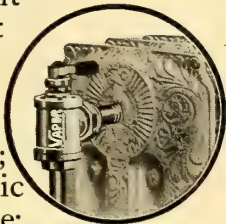


Heating your house

is one of the things, when you are building, you want to know all about *beforehand*. Write for book describing.

Broomell's Vapor System

—the improvement on steam and hot water: No air valves; no water nor pressure in pipes and radiators; no noise; automatic control of furnace; always plenty of heat—the supply regulated at the radiator valve.



May we send "The Vapor Book"?

Vapor Heating Company

Broomell's-patent Vapor System

121 S. Broad St., Philadelphia

Consider the Effect of Hardware

In planning a home do not overlook the decorative possibilities of the hardware, and do not neglect the opportunity to exercise your own judgment in its selection.

SARGENT'S ARTISTIC HARDWARE

offers the widest latitude of choice. Designs are made to harmonize with every style and period of architecture.

Sargent's Book of Designs Sent Free

will prove invaluable if you are building or remodeling. Shows 68 different patterns of artistic hardware. Filled with helpful suggestions. Sent free to anyone interested—a postal request will bring a copy by return mail. Address

SARGENT & CO.,
156 Leonard Street,
New York.

SMITHSONIAN
AUG 1 1908



Underberg

The World's Best

Bitters

Once known it is kept handy for use by all members of the family. Before a meal it creates a keen appetite, and as a final "liqueur" insures good digestion. "Always the same," after sixty years of merited and ever increasing success. Many substitutes are injurious, all are inferior.

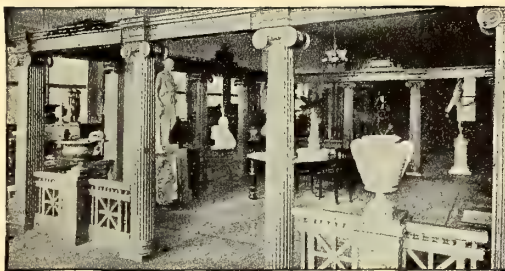
Enjoyable as a Cocktail and Better for You

Over 7,000,000 bottles imported to United States

At all Hotels, Clubs and Restaurants, or by the bottle at Wine Merchants and Grocers Ask for UNDERBERG. Booklet free

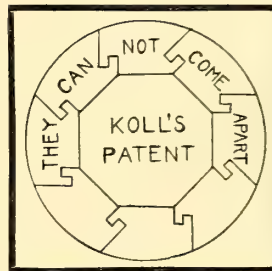
Bottled only by H. Underberg Albrecht, Rheinberg, Germany

LUYTIES BROTHERS, 204 William St., New York, Sole Agents



Entrance to
Showroom,
J. L. Mott
Co.

Columns
furnished
by us



60,000 columns at an average of \$5.00 each, or 6,000 at \$50.00 each, gives you an idea of the annual capacity of our plant.

We own the largest factory building in the world devoted exclusively to the manufacture of high-grade column and porch work. Send for Catalogue A 19 of *Columns* and A 29 of *Sun-dials and Pedestals*.

HARTMANN-SANDERS COMPANY

Sole Manufacturers of Koll's Patent Lock-Joint Columns

Elston and Webster Avenues, CHICAGO, ILL.

Eastern Office, 1123 Broadway, NEW YORK

The Best Columns for PORCHES, PERGOLAS OR INTERIOR USE

Artistic Mantels



MISSION MANTEL FOR DEN

OUR CATALOGUES contain 130 designs, including Mission, Colonial, White, Mahogany & Oak. Everything, from the very cheapest to the best.

Fireplace Hardware and Tiling of every description.

Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.

Unity Building
Chicago, Ill.

306 Main Street
Jacksonville, Fla.

Factory, Knoxville, Tenn.

BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont



The Metropolitan Magazine

for May

On Sale April 15

COMMON SENSE IN EXERCISE

By CHARLES H. COCHRANE

"THE LIGHTED CANDLES"

Begun in April; concluded in May By ROBERT HICHENS

THE IMPLEMENTS AND METHODS OF MODERN WARFARE

FIGHTING "THE SILVER KING"

An Article on Tarpon Fishing By LOUIS RHEAD

GARDENS AND THEIR CARE

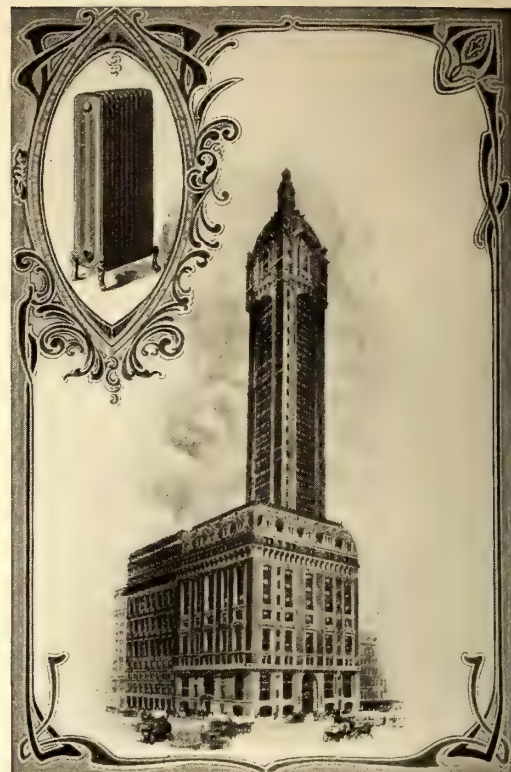
GOOD STORIES — THE BEST IN ART LIVE, UP-TO-DATE ARTICLES

ALL NEWSDEALERS

15 Cents a Copy

\$1.50 a Year

THE METROPOLITAN MAGAZINE,
3 West 29th Street, New York



Kinnear Pressed Radiators

Selected for

THE SINGER BUILDING, NEW YORK
Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

On the Wall — Off the Floor
Out of the Way

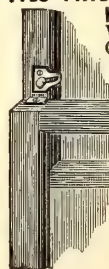
If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install. Write for Catalog "D" for any desired information.

THE PRESSED RADIATOR CO.
PITTSBURGH, PA.

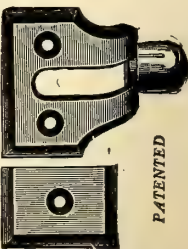
SPECIAL OFFER to Carpenters

BUILDERS AND OWNERS OF HOMES

IVES PATENT WINDOW VENTILATING LOCK. A Safeguard for Ventilating Rooms. Pure Air, Good Health and Rest Assured.



To introduce this article, Four Ventilating Locks in Genuine Bronze, Brass or Antique Copper Finish will be mailed to any address prepaid for One Dollar. Will include a forty page Hardware Catalogue and Working Model to carpenters who wish the agency to canvass for its sale. Address



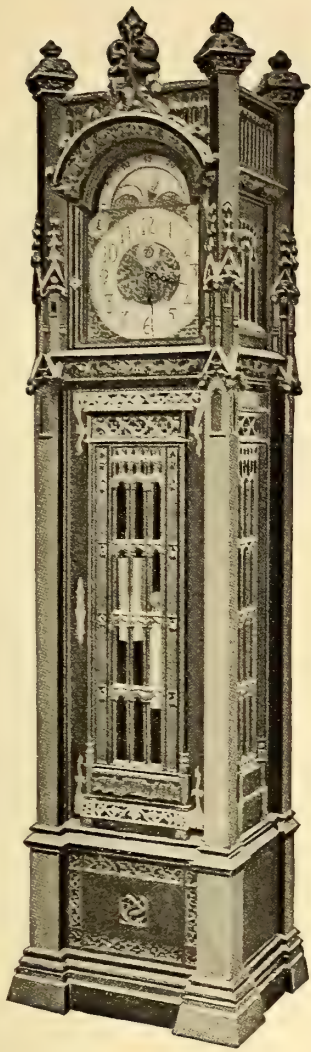
The H. B. Ives Co. NEW HAVEN, Conn., U.S.A.

2 H.P. Engine

14 FT. Launch

\$9450

Let us send you testimonials from people who are using them. 16-18-21-25 and 30 footers at proportionate prices. Boats and engines guaranteed one year. Shipments made the day we receive order. Motor the simplest made starts without cranking, anyone can operate them. We are the largest builders of pleasure boats in the world and sell direct to user. Free catalog. DETROIT BOAT CO., 1206 Jefferson Ave., Detroit, Mich.



HALL CLOCKS

The most useful and ornamental article you can have in your home is a fine HALL CLOCK. We make many styles and kinds, with or without chimes.

The "Banjo," which is so popular for dining-room and library, is a most satisfactory clock.

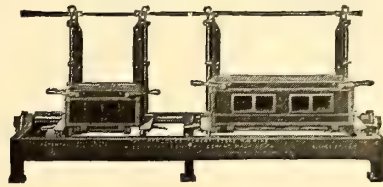
We also make a full line of Marble Clocks and Regulators.

If your local dealer does not sell our line, send direct for new illustrated catalogue.

Waltham Clock Company
Waltham, Mass.

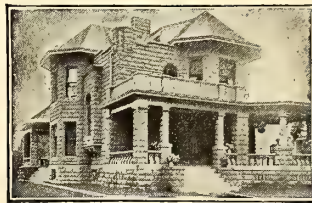
FREE THE STORY OF THE HERCULES

If you are at all interested in Concrete Machinery, you ought to send for our free 1908 catalog right now. This handsomely printed and superbly illustrated catalog is really a clear and concise text book on Concrete Construction.



Hercules Concrete Block Machine

If you really want a machine that will do all that all other machines will do—and some extra—and do everything better, then you want The Hercules. It is the face down, wet mixture machine, the only kind that will make a real coarse mixture block—a real concrete block. The Hercules is the strongest, fastest, simplest concrete block machine made and is adapted for any kind of work from an ordinary dwelling to a huge factory. You ought to send for The Hercules catalog to-day. You ought to know that The Hercules is the best—and why—and we can show you.



Made of Hercules Blocks

We are manufacturers of The Hercules Concrete Mixer, Curb and Gutter Outfits and Cement Tools. Ask for catalog.

Century Cement Machine Co.
180 W. Main St., ROCHESTER, N. Y.

The Beach Front Hotel *par excellence*

The Shelburne

ATLANTIC CITY, N.J.

COMMANDING an unobstructed view of the sea while offering the acme of equipment and service in hotel art. Enjoying a select clientele. American or European plan. Baths with suites. Private artesian well. 'Phones in apartments. Valet and maid service. Chef de cuisine from Hotel Ritz, Paris. Orchestral concerts daily. Coaches at trains.

The Famous
Shelburne Grill
French Service

JACOB WEIKEL, Manager

Do You Want Absolute Fire Protection

Do you want a window that will positively stand every test? Are you willing to spend two cents and five minutes to find out the positive truth about

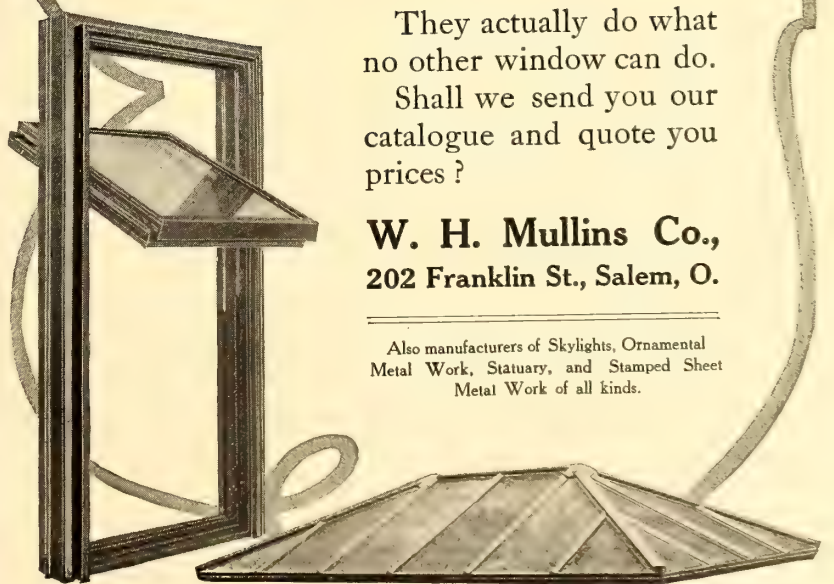
Mullins Fireproof Windows

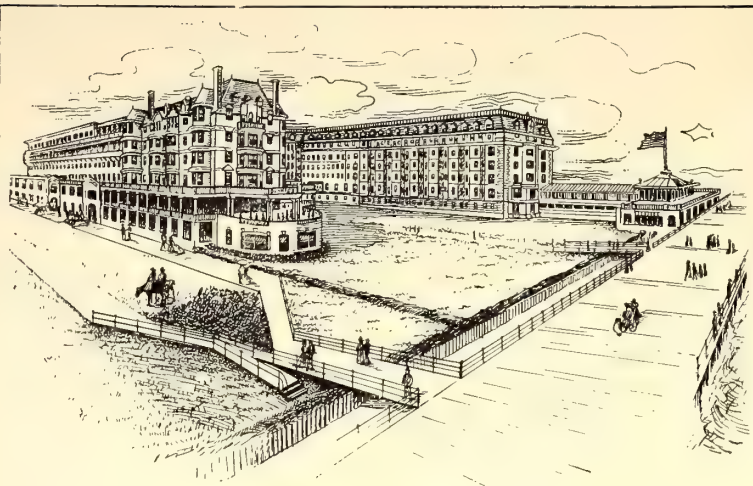
They actually do what no other window can do.

Shall we send you our catalogue and quote you prices?

W. H. Mullins Co.,
202 Franklin St., Salem, O.

Also manufacturers of Skylights, Ornamental Metal Work, Statuary, and Stamped Sheet Metal Work of all kinds.





HOTEL DENNIS

ATLANTIC CITY, N. J.

NOTED FOR THE LIBERALITY OF ITS APPOINTMENTS, ITS CHOICE LOCATION AND ITS LIBERAL SERVICE. FOR FORTY YEARS THIS HOTEL HAS BEEN THE STANDARD OF EXCELLENCE, AND BECOMES MORE POPULAR EACH YEAR.

NEW FIREPROOF ADDITION OF ONE HUNDRED ROOMS, WITH HOT AND COLD SEA WATER IN ALL PRIVATE BATHS.

WALTER J. BUZBY.

NEW YORK TO PHILADELPHIA in 2 Hours

EVERY HOUR ON THE HOUR

From 7 A. M. to 6 P. M., in addition to other trains



ATLANTIC CITY in 3 Hours

LAKEWOOD in 90 Minutes

NEW YORK TERMINALS

FOOT OF LIBERTY ST.

FOOT OF WEST 23d ST.

Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

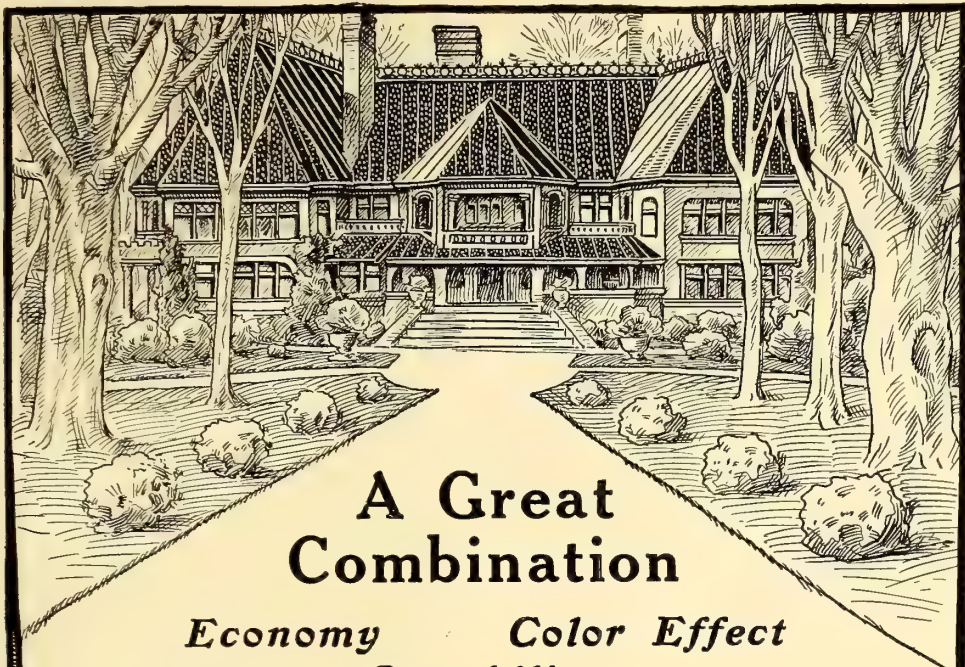
If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO



A Great Combination

*Economy Color Effect
Durability*

All these qualities are combined in

RUBEROID RED ROOFING

Trade Mark Reg. U. S. Pat. Off

ECONOMY—Because it is moderate in price, requires no skilled labor to lay, and costs little or nothing to keep in perfect condition.

COLOR EFFECT—Its richness of color lends an air of elegance and refinement to any building.

DURABILITY—Because it outlasts any other roofing made. Will not melt, rot or corrode like tar, shingles or metal roofs.

Fire Resisting and Weather-Proof

Made also in BROWN and GREEN

Write for Samples and Prices

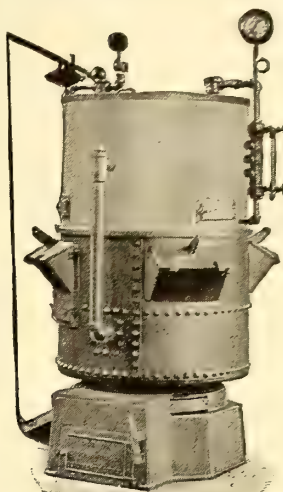
THE STANDARD PAINT COMPANY

100 William St., New York

Chicago St. Louis Kansas City Boston Philadelphia New Orleans

GORTON

SIDE FEED BOILERS SIDE FEED

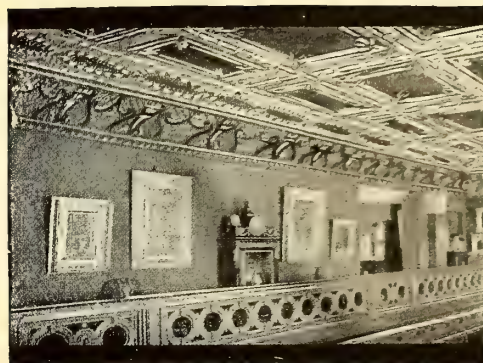


For Steam
and
Hot Water
Heating

Insure a
Warm
Building
Day
and Night in
Coldest
Weather

Send for
Catalog

GORTON & LIDGERWOOD CO.
96 LIBERTY STREET, NEW YORK
Old Colony Bldg., Chicago 77 Oliver St., Boston



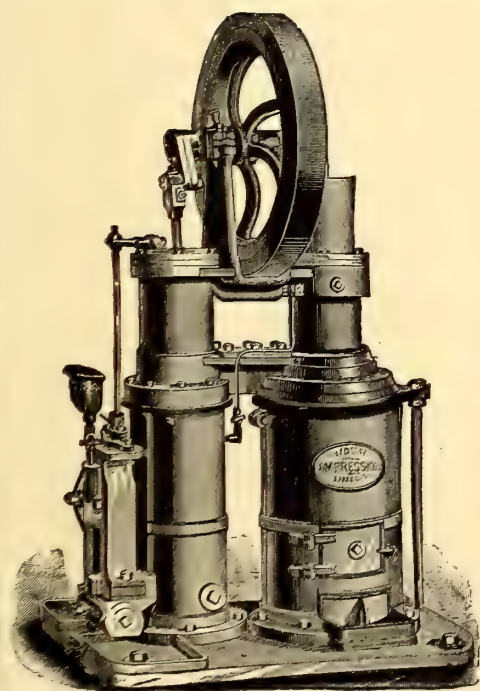
THE NEW CEILING AND SIDE WALL ON THAT ROOM

What shall it be? Steel, of course—because it is the most modern, sanitary and inexpensive, practically lasts forever.

Write to-day, giving dimensions and particulars. We will go into the matter with you thoroughly.

"When it has the ELLER trade-mark, it's the best in steel."

ELLER MFG. CO.
CANTON, OHIO



Improved Rider Hot Air Pumping Engine

AND

Improved Ericsson Hot Air Pumping Engine

PRICES GREATLY
REDUCED

Send for Catalog "E" to nearest office

Rider-Ericsson Engine Co.

35 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



Our remarkable recent inventions enable us to offer the public an intensely brilliant

Smokeless Gas

at much less cost than city gas, better, safer and cheaper than electricity, and costing but one-fourth as much as acetylene.

Most Durable and Least Expensive
Apparatus to Maintain

in effective perpetual operation. Gives services of lighting, cooking and heating. Fullest satisfaction guaranteed, and easy terms. The very apparatus for suburban homes, institutions, etc. We construct special apparatus also for fuel gas for manufacturing, producing gas equivalent to city gas at 50 cents per 1000 cubic feet, and made to respond to very large demands; also for lighting towns, etc.

C. M. Kemp Mfg. Co., Baltimore, Md.

Grow Your Flowers in Illinois Self-Watering Flower Boxes

YOU will have better, hardier, longer-lived plants with less time and trouble. It's the natural way of growing flowers. The roots absorb just the necessary amount of water from reservoir at bottom of box, which is filled about once in two weeks.

Boxes are neatly made of metal, rust-proof and leak-proof, beautifully finished, and will last for years. Inexpensive. Sold on 30 days' FREE trial.

Write us to-day for illustrated descriptive book with prices.

Manufactured and sold exclusively by

ILLINOIS HEATER & MFG. CO., 3953 Wentworth Ave., CHICAGO



"Masterpieces in Brass"

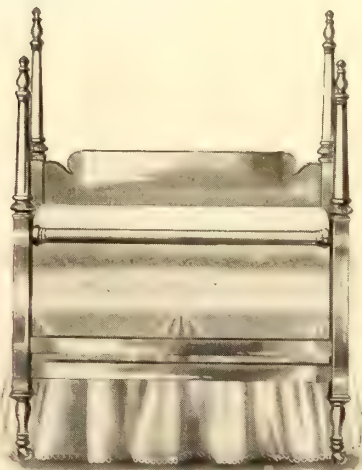
is the title of a beautiful book on **Art Beds**, superbly illustrated in colors on fine plate paper, and shows **Art Beds** in French, English, and Dutch Colonial, Italian and French Renaissance, Arts and Crafts, Louis XIV, New England, Queen Anne, and Empire designs, and gives complete information about them. Sent free for the name of your best furniture dealer.

Art Beds give comfort, tone, and character to the home. They are made especially for people who appreciate good things done in good taste and purity of style. **Art Beds** have wonderful durability—proof against denting—are made in velvet or bright gold finish which will last a lifetime, requiring no attention.

Art Beds will always shine—just dust them.

Ask your dealer to show you **Art Beds**.

As the edition of our interesting book is limited, send us your name and the name of your dealer now, and you will receive a copy by return mail. **Art Bedstead Co., 3705 Rockwell St., Chicago**



We will send

AMERICAN HOMES & GARDENS

and **Scientific American**

for one year to one address for

FIVE DOLLARS

Regular Price
Six Dollars



DETAIL WORKING DRAWINGS OF THE FIVE ORDERS OF ARCHITECTURE. By James T. Ball, architect. ("Portfolio Edition.") One large portfolio; 17 plates, with descriptive text; size, 14 x 21 inches. New York: William T. Comstock. Price, post paid, \$4.00.

This work, as far as we know, gives the Orders and their details on a larger scale than any other work on the orders heretofore published.

The unit of measurement used by the author, instead of the "moduli" adopted in Vignola and other works on the "Five Orders," is the "Diameter of the Column," to which all other parts are proportioned. To facilitate its use a plate is devoted to diagrams of scales for various column diameters. In addition to this, in the descriptive text will be found a table for the use of the ordinary architect's scale. To this matter of scales the author has given much attention, as will be seen by reference to the plates, where scale diagrams are shown for both columns and their details.

The drawings, as we have mentioned, are on a large scale. They are also drawn in bold, clear lines and clearly lettered so that every detail is fully explained.

In laying out these drawings the author has not only followed Vignola but Palladia and the other standard and accepted authorities on the Orders.

The work has been prepared with the utmost care to meet the requirements of the architectural draftsman in practical work and the student in the study of the Orders.

The manner in which the work is issued will be found to have many advantages, as each plate is on heavy paper and can be removed from the portfolio and placed before the draftsman or student when working on the drawing board.

In handling the subject the author has on the first plate grouped all the Orders together, thus giving at a glance a comparative view of the Orders and their proportions. He then takes up a plate of each Order followed by plates of their details on an enlarged scale.

The whole makes a very complete and explicit delineation of the Orders adapted to the needs of the architect, draftsman, stone cutter and student.

ARTISTIC PRACTICAL HOUSES. Homes of Moderate cost in an Original Style of Architecture. A Collection of Unique Houses with Sensible, Practical Floor Arrangements. Portfolio, paper bound. New York: E. S. Child. Price, \$2.00.

Far from seldom, when a house has been built, it is found that a design selected for its symmetry and grace lacks the convenience of arrangement that makes for livableness. While the parlor and the reception-room may be dainty and comfortable, the kitchen is apt to possess but few of the arrangements that the "pan-imperial one" demands as necessary to her comfort. Indeed, when it comes down to fundamental ideals, the kitchen and its adjuncts are the most to be considered parts of the home when choosing the plans.

Plans embodying such ideas are not easily obtained, at least for dwellings of lesser pretensions; so the appearance of a "collection of unique houses with sensible, practical floor arrangements" and with "closets, kitchens and pantries thought out first and the other rooms

TECO POTTERY

Is the Most
Admired of

Wedding Presents

because of a certain distinctness of individuality. It is not designed by paid artisans, but by those whose talents are not for hire.

Artists, architects, and designers, who dreamed beautiful things sent in their hints which we have **crystallized in clay.** And the result is

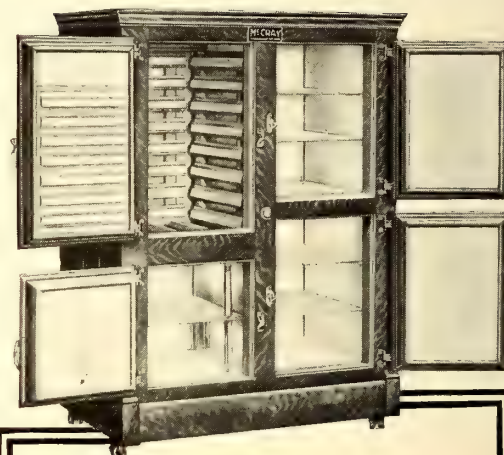
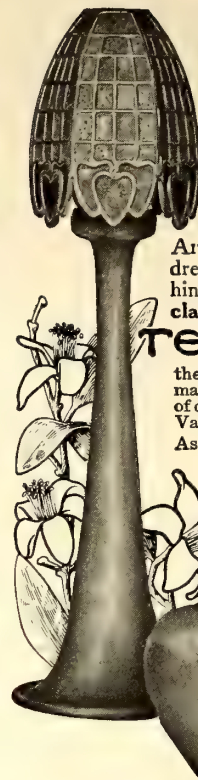
TECO POTTERY

the pottery of restful, peaceful green, remarkable for purity of line and originality of design. In various forms:—Candlesticks, Vases, Lamps, Jardinières, etc.

Ask your dealer or write for booklet. Our trade-mark is on each piece.

THE GATES POTTERIES
651 Chamber of Commerce Bldg.,
Chicago.

Exclusive art dealers not carrying
TECO should
write.



Cut Down Your Ice Bills

You buy a refrigerator once in a lifetime—you buy ice every day. The walls of McCray Refrigerators are scientifically built so that they will keep the cold air in and the hot air out. They therefore use much less ice than others, and soon pay for themselves, besides keeping all provisions pure and in fresh condition.

McCray Refrigerators

are thoroughly insulated with mineral wool, the best insulating material known, and have the McCray Patent System of Refrigeration which insures a perfect circulation of pure, dry, cold air. They are lined with White Opal Glass, Porcelain Tile, White Enamel or Odorless White Wood, and are the cleanest, sweetest, drier, most sanitary refrigerators made. No zinc is ever used in their construction, as zinc forms oxides that poison milk and other food and is very dangerous.

Let us tell you how easy it is to have a McCray arranged to be iced from the outside, thus keeping the iceman out of the house.

McCray Refrigerators are made in all sizes, ready for immediate shipment, and are **Built-to-Order** for all purposes. Every refrigerator is positively guaranteed to give lasting satisfaction.

Send Us This Coupon

Ask for catalog No. 83 for Residences; No. 47 for Hotels, Clubs, Restaurants; No. 65 for Grocers; No. 58 for Meat Markets or No. 71 for Florists—They are the best refrigerator catalogs published.

McCray Refrigerator Co.

687 Mill Street,
Kendallville, Ind.

Branches in all
principal
cities.

**McCray
Refrigerator
Company,**

687 Mill Street,
Kendallville, Indiana.

Gentlemen:—Please send
me your free Catalog of
McCray Refrigerators No.

Name.....

Street.....

City.....State.....

and the exteriors made to fit them," deserves more than fleeting mention. In this collection there are twenty-three sheets, each one having an elevation of a house of type distinct from the others, floor plans and a short description of the spirit and salient features of the style and interior arrangements set forth.

THE GRAPHIC ARTS AND CRAFTS YEAR BOOK, 1908. The American Annual Review of the Engraving, Printing and Allied Industries. Joseph Meador, Editor. Octavo, leather bound, 385 pages. Hamilton, Ohio: The Republican Publishing Co. Price, \$5.00.

It is human nature to have more or less contempt for the things that are most familiar to us. For that reason we are apt to have no very high regard for printing as an art. The "art of printing" means to most of us the method by means of which the morning newspaper is made possible; a way of spreading information, not a medium for the permanent embodying of ideals of workmanship.

The various methods of color reproduction also seem to us shoddy and flashy. The term lithograph, or "cheap lithograph" is one of the highest reproach when applied to a painting.

When, however, printing and the allied arts cease to merely bring to our notice facts or fancies that have no real importance or permanence, and become the vehicle for stamping upon the history of the race the effect of man's striving for perfection in his chosen craft, another aspect is put upon the case. It is printing in this aspect that the "Graphic Arts and Crafts Year Book, 1908" portrays.

Illustrated expositions of the various methods and processes used in printing and in color work are fully given, but it is not in the mere mechanical procedure that the charm of the work lies. The most attractive portion is the section devoted to the evolution of wood engraving where one may find reproductions of the work of Albrecht Dürer, Lucas Van Leyden, Marcantonio Raimondi, and others of equal note. These reproductions, while often rather crude in conception, are full of a virile strength that is not to be found in the present day work.

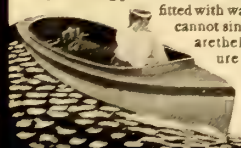
FRENCH FURNITURE. By Andre Saglio. London: Imported by Charles Scribner's Son, New York. Pp. 11+193. Price, \$2.50 net.

Mr. Saglio's careful volume on French furniture is a welcome addition to Newnes' Library of the Applied Arts. It traces the study of this important subject from its beginnings, but is fullest in its treatment of the furniture of the seventeenth and eighteenth centuries. Unlike most books on furniture, this is a thoroughly readable account of the most interesting phases of furniture making. Like the other volumes of the series it is beautifully illustrated, and the student and collector who wishes some accurate information on this important subject will find it in this volume and served up in a charming manner.

(Continued on page xxiii)

16 Ft. Steel Launch with

18-21-25 foot launches at proportionate prices. All launches fitted with two-cycle reversing engines with speed controlling lever; simplest engine made; starts without cranking, has only 3 moving parts.



2H.P. Engine complete \$96
fitted with water-tight compartments: cannot sink, need no boat house. We are the largest manufacturers of pleasure boats in the world. Orders filled the day they are received. We sell direct to user, cutting out all middlemen's profits. Free catalogue. MICHIGAN STEEL BOAT CO. 1206 Jefferson Ave. Detroit, Mich.

A Sanitary Bathroom means a Healthy Home

NOT one householder in ten realizes the health-importance of a sanitary bathroom. But when you consider for a minute that the health-barometer of the entire home is governed absolutely by domestic sanitary conditions, and that its rise or fall is largely regulated by the sanitary or unsanitary condition of the bathroom, you can readily see the extreme necessity for equipping your bathroom with only the most sanitary fixtures.

"Standard" Porcelain Enameled Ware is the standard of sanitary equipments for the home.

"Standard" "Green & Gold" Label Fixtures, because of their smooth, non-absorbent surfaces without joint or crevice, their one-piece construction, and the indestructibility of their snowy enameling, are sanitary to the highest degree and safe-guard the health of your home as no other fixtures can. Genuine "Standard" Ware lasts longer, is more beautiful, and gives greater satisfaction in use than any other plumbing system in the world. You can equip your home throughout with "Standard" "Green & Gold" Label Fixtures for the same price you would pay for unguaranteed and unsanitary equipment.

There is but one way to solve your sanitary problem—satisfactorily—economically—and for all time. Equip with genuine "Standard" Porcelain Enameled Ware and look for the label to make sure you are getting what you specify.

Send for our free 100 page book—"Modern Bathrooms"—the most complete and beautiful book ever issued on the sanitary subject. Write today, enclosing 6c postage, giving name of your architect and plumber if selected.

Address, Standard Sanitary Mfg. Co., Dept. 23, Pittsburgh, Pa., U. S. A.

Offices and Showrooms in New York: "Standard" Building, 35-37 West 31st Street.

London, Eng.: 22 Holborn Viaduct, E. C. New Orleans: Cor. Baronne & St. Joseph Sts.
Louisville: 325-329 West Main Street. Pittsburgh Showroom, 949 Penn Ave. Cleveland: 648-652 Huron Road, S.E.

THIS INEXPENSIVE BUNGALOW

is one of our several styles of Portable Houses. Each building is substantially constructed in sections of high-grade materials, painted any colors desired. Erected complete in every detail at our factory and taken apart for shipment; the only labor necessary to erect building being to bolt sections together, taking two men a few hours. These Bungalows are as substantial and durable as though built by your local contractor, and cost much less.

We build Portable Houses of all kinds, such as Garages, Summer Cottages, Camps, Children's Playhouses, Stables, Boathouses, etc. Write for our illustrated catalogue, stating in what you are interested.

WYCKOFF LUMBER & MFG. CO. Dept. 5, ITHACA, N. Y.

ANCHOR POST IRON GATES FENCES and WOVEN WIRE FENCES



ANCHOR POST IRON FENCES are practical—sightly and cleanly—made of the best materials—known to be longest lasting. The posts are anchored by our patented anchoring irons which insure rigidity and make perfect and lasting a true alignment.

We design, build and erect when desired, Fences, Entrance Gates, Iron Railings, etc., for Estates, Lawns, Gardens and Farms, each fencing especially adapted to its purpose. Illustrated catalogue upon request.

ANCHOR POST IRON WORKS, 147 Nassau St., New York

HOTEL "WAWA"

GRAND TRUNK RAILWAY SYSTEM

LAKE of BAYS

This handsome new Hotel is situated at Norway Point, Lake of Bays, with accommodation for 150 guests.

Modern in every respect. Delightfully Situated. Electric Lighted throughout. Pure Mountain Spring Water. Hot and Cold Water in every room. 1000 feet above sea level. Hay Fever unknown. Good fishing. Boating for all kinds of craft. Fine Bathing Beaches. Good Steamboat Service.

Write for copy of handsome booklet descriptive of the territory, to any of the following:

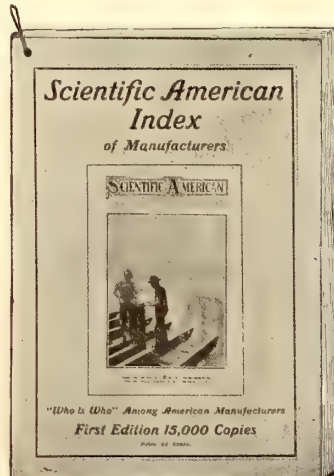
G. W. Vaux, 917 Merchants Loan and Trust Building, Chicago, Ill.
 F. P. Dwyer, 290 Broadway, New York, N. Y.
 E. H. Boynton, 360 Washington St., Boston, Mass.
 W. Robinson, 506 Park Building, Pittsburg, Pa.

W. E. DAVIS, P.T.M., Montreal. G. T. BELL, G.P.T.A., Montreal

SCIENTIFIC AMERICAN INDEX OF MANUFACTURERS

NEWLY EDITED
EDITION OF 1908

64 PAGES 2500 ENTRIES FREE



SOME TEN YEARS AGO the publishers of the SCIENTIFIC AMERICAN issued an index of leading manufacturers. This book has proved so popular that the demand has warranted an entire new edition. The invaluable list tells where to buy almost any article, and buyers who fail to find the information they desire can have their wants specially looked up without charge, and if necessary we will advertise their wants in our inquiry column without expense. The first edition of this index is only 15,000 copies, so that early application is necessary.

MUNN & CO., Publishers Scientific American, 361 Broadway, New York

BUILD IT
YOURSELF



SUMMER COTTAGE

Easy to Build with Our Perfect Sawed and Fitted Knocked-Down House

and no tool but a hammer needed. An amateur—in fact, anyone who can hit a nail with a hammer—can put up our perfectly-sawed-out, complete

"Aladdin" Knocked-Down House

Aladdin Summer Cottages are made in four styles—from \$98 to \$298. The above is a five-room cottage: sitting-room, 10 x 16 feet, and four 8 x 10 rooms.

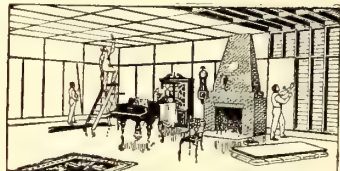
Aladdin Auto Garages.....\$69 to \$230
 Aladdin Boat Houses.....\$49 to 129

Aladdin Dwelling House, six rooms complete, including patent lath and plaster, windows, doors, paint and hardware..... 492

SAVE CONTRACTOR AND LABOR BILLS

These houses are sawed out complete; every stick cut to right length and dressed—best clear lumber—and fitted in our mill, then knocked down ready to be erected. Sent anywhere with complete instructions and blue prints of every step. Cost, erected, 30 per cent. less than contractor charges.

Send to-day for Catalog 11. Please enclose stamp.
 NORTH AMERICAN CONSTRUCTION CO. BAY CITY, MICH.



Beaver Boards

The Modern
Wall and Ceiling
Material

Takes Place of Both Lath and Plaster

Nails direct to studding. Susceptible to finest decoration. Practical. Economical. Durable. Sample free. Our handsome booklet tells all about the six kinds. Write for it to-day—lest you forget.

Beaver Manufacturing Co., 235 Perry St., Buffalo, N. Y.

St. Louis, Mo. Baltimore, Md.

F. Weber & Co.

1125 Chestnut St., Philadelphia, Pa.

Architects' and Engineers' Supplies



"FABRIANO" Hand-Made Drawing Papers
 Superior to any other hand-made paper
 F. Weber & Co.'s Illustration Boards, Air Brushes
 and Materials

Build with Concrete Blocks



Make them yourself and save half the cost. Experience unnecessary. A

Pettyjohn Machine

and equipment for only

\$33.25

Every machine guaranteed. Sent on trial. Sand, water and cement only materials required. Buildings handsome and durable. Big money making blocks to sell. Beautiful booklet FREE.

THE PETTYJOHN CO., 617 N. Sixth St., Terre Haute, Ind.



NO HOME OR HOTHOUSE

complete without

Bristol's Recording Thermometers

They register continuously in ink on a paper chart the indoor or outdoor temperatures.

Ask for Catalog B

THE BRISTOL CO. Waterbury, Conn.
 New York, 114 Liberty St. Chicago, 753 Monadnock Bldg.



AMERICAN HOMES AND GARDENS

\$3.00 a Year



CONTENTS FOR MAY, 1908

THE ENTRANCE FRONT OF "ROSS-FENTON LODGE" AT DEAL LAKE, NEW JERSEY.....	Cover
"CHUCKLES," THE HOUSE IN THE WOODS.....	162
MONTHLY COMMENT	164
"ROSS-FENTON LODGE"	<i>By Francis Durando Nichols</i> 165
TWO NEW ENGLAND BUNGALOWS.....	<i>By Mary H. Northend</i> 169
GARDEN GATES FOR THE BUNGALOW.....	174
RUGS AND DRAPERIES FOR THE BUNGALOW.....	<i>By Alice M. Kellogg</i> 176
THE SUMMER CAMP AT ARDEN—Being an Experiment in Henry George Principles.	
	<i>By Mabel Tuke Priestman</i> 180
PLUMBING AND DRAINAGE PROBLEMS OF THE BUNGALOW.....	<i>By John A. Gade</i> 184
"THE BUNKER"—A Bungalow Built for George Towle, Esq., on Misery Island, Massachusetts	<i>By Walter Williams</i> 187
SOME CALIFORNIA BUNGALOWS.....	<i>By Helen Lukens Gaut</i> 190
A BUNGALOW AT BRYN MAWR PARK, NEW YORK, Costing Thirty-two Hundred Dollars.	
	<i>By Ellis A. Linden</i> 196
TYPES OF BUNGALOWS	<i>By Roy M. Smith</i> 198
HOW I BUILT MY LOG BUNGALOW—"Anoatok," the "Home of Wind."	
	<i>By Edward Fesser</i> 199
A BUNGALOW MADE FROM RAILWAY TIES.....	<i>By Mary Truman</i> 202
FURNITURE FOR THE BUNGALOW.....	<i>By Esther Singleton</i> 204
A GARDEN ROOM	<i>By Carine Cadby</i> 211
CORRESPONDENCE:	
PROBLEMS IN HOME FURNISHING.....	<i>By Alice M. Kellogg</i> 214
GARDEN WORK ABOUT THE HOME.....	<i>By Charles Downing Lay</i> 214

How to Line the Walk to a Summer Home with Flowers.

The Utility of the Bungalow.

Currants and Gooseberries.

New Books.

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada, \$3.50 a year

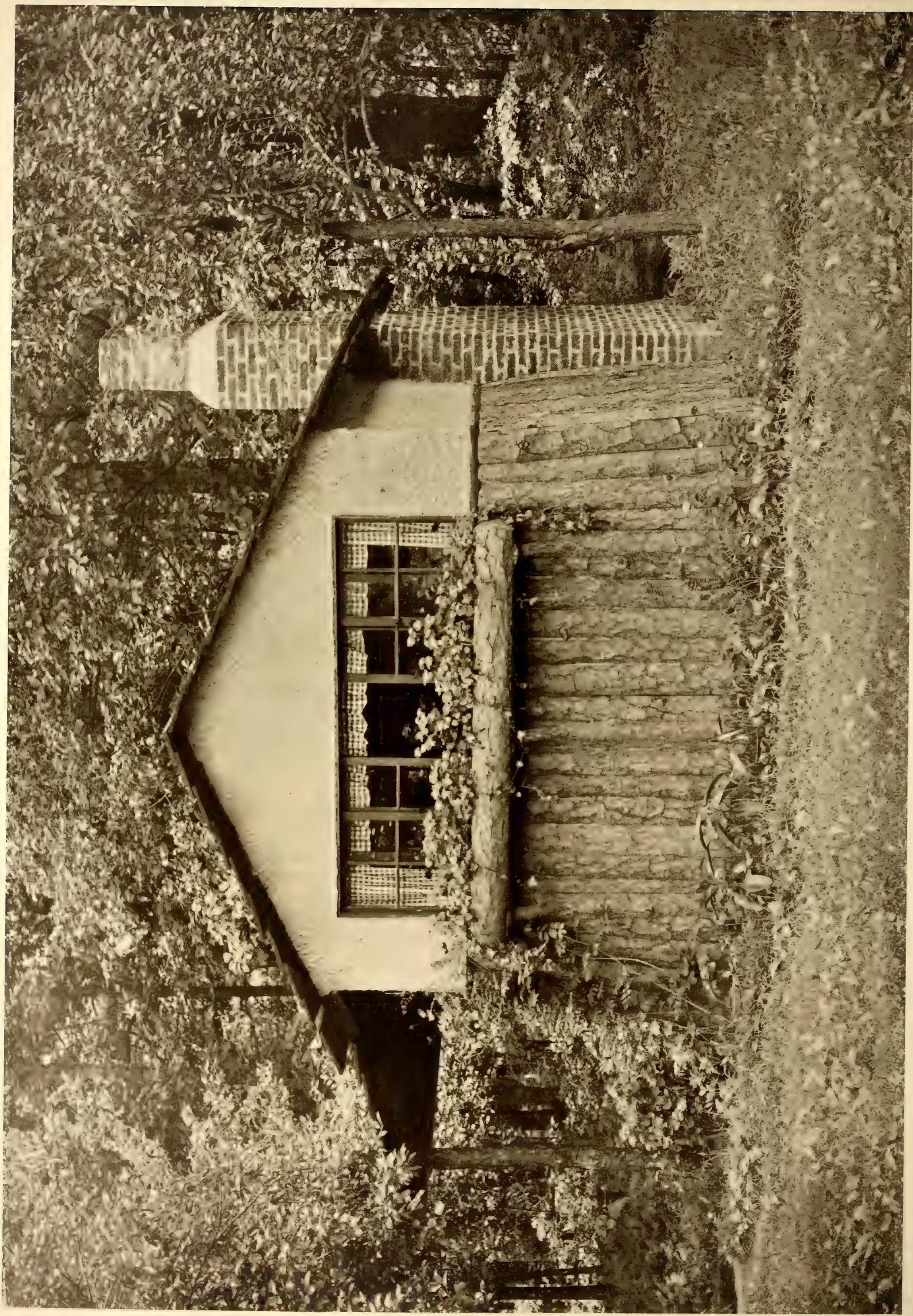
Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



"Chuckles," the House in the Woods

AMERICAN HOMES AND GARDENS



The Pergola with Square Stucco Columns and Vine Covered Roof Is an Outdoor Dining-room at
"Ross Fenton Lodge," Deal Lake, New Jersey

Monthly Comment



CERTAIN general understanding concerning the meaning and nature of the bungalow may be supposed to be tolerably prevalent. As a matter of fact, like many words originally applied in a definite manner to a definite object, it is frequently used in an indefinite way and without any real relationship to precision of significance. That it is a one-storied house will be agreed to on all hands; but in the common employment of the word in American usage its primitive meaning is somewhat lost sight of, and it is more generally applied to a type of house rather than to a particular kind. Surely there can be no great harm in this, for the typical bungalow of English India, from which the American bungalow is derived, is a quite different structure from the native bungalow which, to all intents and purposes, is the original bungalow of all bungalows. Fortunately we do not have to return to that primitive structure to be precise; nor need we, if there be a common agreement as to general terminology, discuss at further length the dictionary aspect of the word.

IN a general sense, therefore, a bungalow, as is told many times and as amply illustrated in the following pages of this magazine, is a dwelling of one story; that is to say, a house in which all the rooms are on one floor. In a strict sense this alone is not sufficient to constitute a bungalow, but with the one-story plan must go—or should go—a definite simplicity of treatment that is at once characteristic of houses of this class, and which can not be obtained in so direct a way in dwellings of any other type. It is on these two points that the definite character of the bungalow depends and it is exactly on these aspects that the best work in bungalow design is being done in America. It is true there are bungalows and bungalows, some very expensive and costly structures, in which everything that savors of simplicity is overlooked save the one-floor principle, and even that is sometimes forgotten in certain parts of the great structure. But these buildings stand apart, exactly as the colossal mansion stands apart, and those intent on comfort and convenience, on simplicity and economy, may still have their bungalows without burdening themselves with undue or large expense.

BUT the question of expense should not be ignored in building the bungalow any more than it can be passed over in erecting any sort of a dwelling. The days for cheap building are, apparently, at an end, for the present at least, and perhaps permanently. It is needless to inquire into reasons, the facts are apparent to everyone who sets out to build, and are particularly evident to those who must pay the bill. Labor and building materials are costly enough, and sometimes the skill of the all but essential architect adds to the total amount, so that the person who desires a cheap and inexpensive home is very apt to find he is looking for something that does not exist. The bungalow, however, offers certain economic advantages which many builders will hail with delight. It is never necessary to boast of expense in building a bungalow, and many makeshifts in construction and arrangement which would be intolerable in houses of other types are hailed with delight in the bungalow.

OTHER economies are dependent in large measure upon the mode of living practised within the bungalow. Some families dispense with domestic help altogether in such structures, and the bungalow readily lends itself to that mode of housekeep-

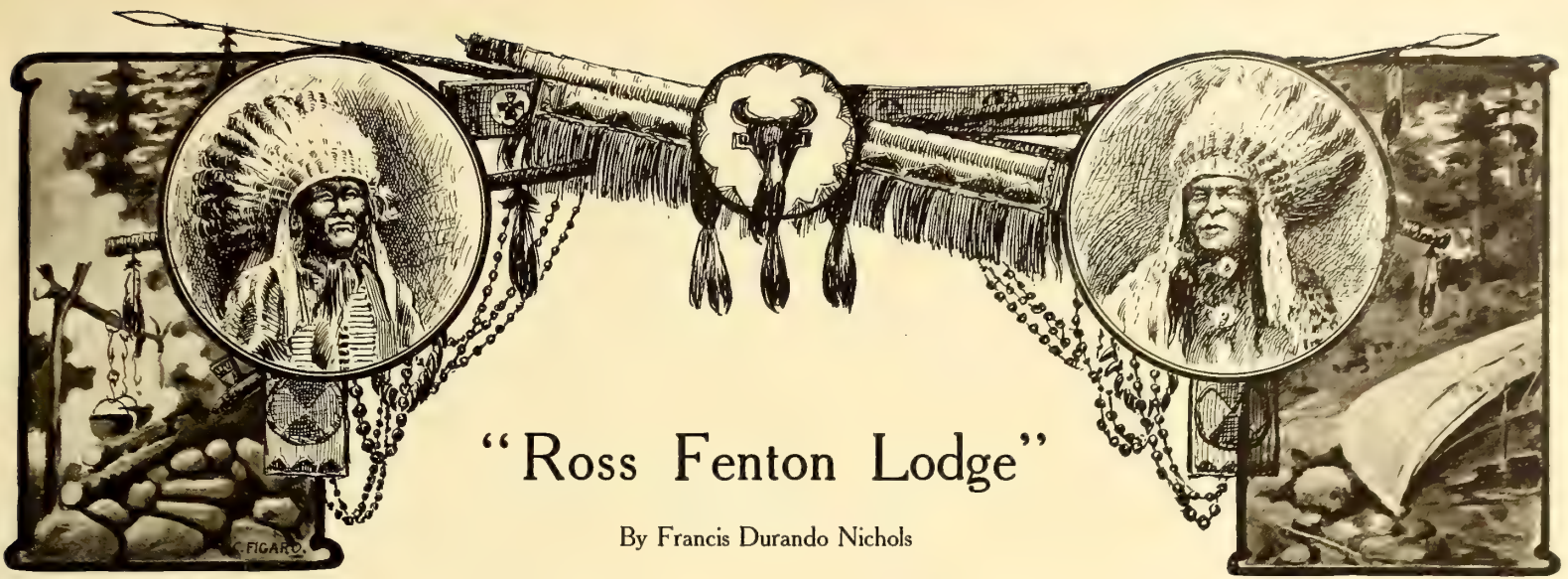
ing. This method will not, of course, do for every one; for housekeeping is often hard work, and the most zealous interest in this direction is apt to yield at times to a desire for a more restful existence. There may, also, be economies in furnishings, which are often a welcome help, for the bungalow frequently implies an informal style of living in which many luxuries can be dispensed with without any hint of criticism.

To build a bungalow implies ownership or possession of a certain amount of land. Naturally it is a type of house that covers considerable space. This is true whether the bungalow be large or small; for a house with all the rooms on a single floor obviously requires more floor area than one in which the rooms are superimposed one above the other. Moreover, the bungalow seems, by its very nature, to require space around it, space enough to give it individuality, space enough to form a setting for it, space enough for trees and shrubs and flowers to grow and bloom beside it and effect a real relationship between it and the landscape.

THE bungalow is a true country house; the city has no place for it; the suburbs scarcely know it; the open country alone, the hillside, the shady spots beneath the forest trees, the sloping rock above the waters of the sea—here is its natural place, and here it may be looked for and found. Whether it bears any relationship to its East Indian prototype is something quite immaterial: it is much more to the point that here is a distinct type of dwelling that many persons consider especially adapted to their living requirements; which may be fitted up in a more or less informal manner; that is eminently suited to quiet country living; and which in completely satisfying the owner may, perhaps, please the passerby fortunate enough to catch a glimpse of it. It is difficult to find fault with a structure that affords so many advantages.

THE bungalow is not only a true country house, but it is a true summer house. Save in California and the far South, it is not adapted to use throughout the cruel months of winter. This, so far from being a drawback, is a distinct advantage, since it serves but the more to heighten the individuality of the bungalow and impress more definitely the special uses for which it is intended. Almost any kind of a country house is a distinct type of building; but it is perhaps well to remember that while many kinds of country houses can be lived in during the winter, the light construction of the bungalow, the absence of cellars and foundations, which is characteristic of many of these structures, renders it impossible to use them save in the warm season. As, however, those who build these dwellings do so for precisely this period of the year, their definite value is not lessened by this circumstance.

ACCEPTING the single-story dwelling as the American type of bungalow it is apparent that it has come to stay. It is not very long since when the bungalow was confined to the warm sections of America, to which it not only seemed especially adapted but where it met a real and pressing need. This limitation no longer obtains to-day. The bungalow type has penetrated to all parts of our country, and the end is not yet. It is a building that may be designed by a skilled architect or, if his ingenuity is sufficient, by the owner himself, with no more accomplished aid than an intelligent builder. It may be a house of large cost or one of quite moderate expense.



“Ross Fenton Lodge”

By Francis Durando Nichols



THE fact that the urban dweller is turning his attention to the possession of a simple summer home is best demonstrated by the lively interest shown in the vast number of bungalows which are now being built throughout the country.

The tendency of the past few years has been toward simple country houses, and the architects have fortunately cut loose from the conventional, to meet the re-

quirements of the home builder, and have designed a summer home which can be easily constructed and easily maintained.

The little bungalow, while usually the creation of an architect, is frequently the genuine expression of what the ordinary layman can design and likes in the way of a house, and it is the kind of a house the ordinary builder knows how to construct. It is an art, however, to build a bungalow which may contain all the features of sim-



A Batten Wainscoting Stained Brown and Yellowish Brown Tinted Walls Above Is the Treatment of the Music Room



The Bungalow Is a Good Adaptation

of the Spanish Adobe House

plicity, and at the same time have incorporated in it some of the appointments which go to make "simple living" comfortable.

"Ross Fenton Lodge," a bungalow built at the head of Deal Lake, in New Jersey, is a true adaptation of the bungalow, for it is a one-story structure with all the rooms placed on one floor. The exterior is built after the style of the old Spanish adobe houses, for it has a stucco wall from the grade to the roof of the house—of which the latter is covered with shingles and stained a moss-green, blending well with the trees which surround it and with the creamy-yellow tone of its stucco walls.

A touch of color is given to its front by the rustic porch formed by the hewn trees which form the columns and the cross beams which support the shed roof. The porch floor is laid with Welsh tile of a reddish color, and is ornamented on either side by composition vases.

The entrance is into the living-room, from which access is obtained to the music-room. Opposite the front entrance a door opens into a small hall leading to the sleeping-rooms and bath, and to the dining-room and kitchen beyond.

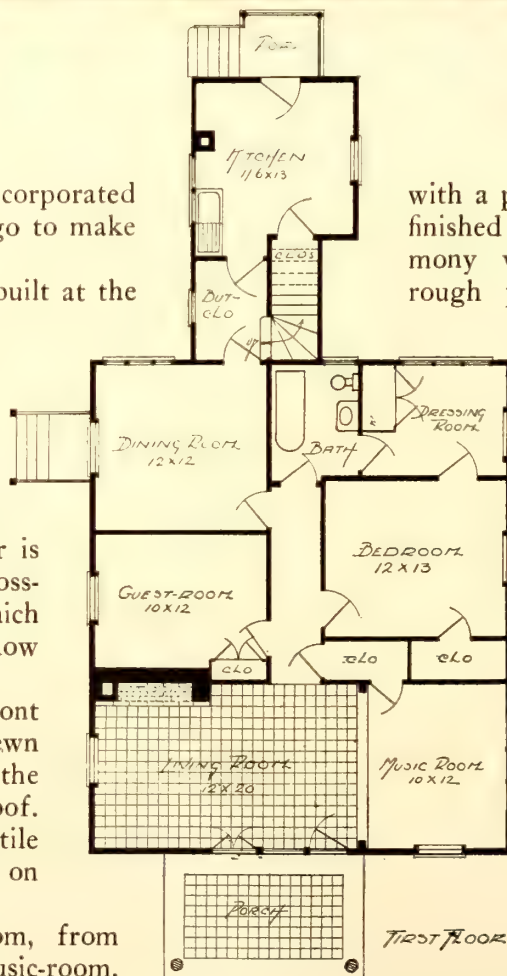
The living and music-rooms are practically one room, though they are separated by a beamed arch and a rise of two steps which places the music-room on a higher level than the living-room. The walls of both have a wainscoting of chestnut battens to the height of seven feet finished

with a plate rack. This wainscoting is stained and finished in a soft brown color, and is in harmony with the yellowish brown tone of the rough plastered walls above. The roof beams in the living-room are exposed to view and the space between them is covered with rough plaster and stained a mustard-yellow color. The unique feature of the living-room is the fireplace and the manner in which it is built—the old klinker brick with their black headers, laid with wide white mortar joints. The back of the fireplace at one side is faced with Welsh tile, and the mantelshelf is composed of an oaken beam supported on brackets. The furnishings of the room are appropriate. The Mission furniture of Flemish brown upholstered in brown leather, the cream yellow muslin curtains hung at the windows, through which a soft, pleasant light enters the room, the green portieres with a brown medallion design, and a Persian rug in blue, red and green coloring laid on a floor of Welsh tile completes a

most harmonious effect.

The hall leading from the living-room opens to a guest room at the left of it, with its walls paneled, the division being made with strips of Nile green paper, while the panels are of old rose. The trim is painted a French gray.

Opposite this room, and across the hall, is the owner's suite, consisting of one large bedroom, dressing-room and a





The Living-room Has a Fireplace Built of Klinker Brick and Welsh Tile

bath; access to this bathroom, however, may be obtained from the hall. The bedroom and dressing-room are finished with French gray paint. The furniture, including bed, dressing-table, chairs and table, are of Circassian walnut in the Empire style. This treatment harmonizes well with the sea-green panels of the walls outlined with coral pink borders in the form of wreaths, with a medallion effect for the border at the top. The dressing-room has a large wardrobe extending across the entire width of the room. The bathroom connecting has a tiled wainscoting with blue and white borders, and is furnished with porcelain fixtures and exposed nickelplated plumbing.

The dining-room has a batten wainscoting to the height of seven feet finished with a molded rack, on which is placed some old blue and white plates. The wall space above is tinted a soft Delft tint. The woodwork is stained a bluish-green color, and the Mission furniture is stained a similar tone, both of which is most harmonious in its effect.

Beyond the dining-room is the butler's pantry and kitchen, both of which are

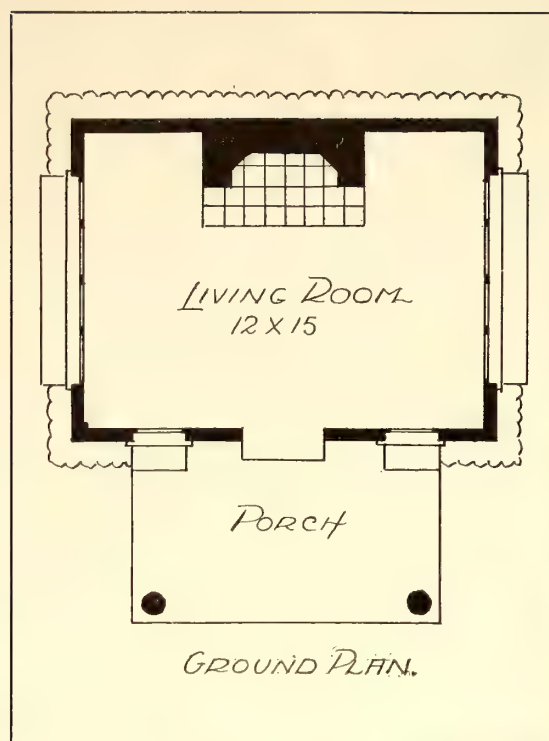
fitted with all the best modern equipments. A small staircase from the kitchen leads to the servants' room placed over the kitchen.

Stairs from the kitchen lead to the cellar, which extends under the entire building and which has a cemented bottom. This cellar is partitioned off with compartments, consisting of a furnace room, fuel room, wine cellar, cold storage and a store room.

From the dining-room a French window opens on to a rustic porch, from which steps lead down to the walk extending to the pergola formed of square stucco columns supporting cross beams on which there is placed branches of pines forming a shelter. The pergola has a floor laid with concrete ornamented with blue and red tile, and in the center of the space there is placed a marble table supported on columns. This pergola is used in summer for dining uses, for it is conveniently accessible on account of its being in close touch with both the dining-room and kitchen. A feature of the place is the approach to the house, which has a concrete walk extending in from the roadway to the front entrance and around the



The Dining-room Has a High Wood Wainscot Stained Bluish Green, with Delft-tinted Walls Above



Plan of "Chuckles"



A Stone Fireplace Is the Feature of "Chuckles," the House in the Woods

house. It is ornamented by having an eight by eight blue and red tile, alternating one with the other and creating an individuality to the usual composition of a concrete walk. The walk extends past the bungalow to the garden, at the end of which there is built a little "House in the Woods," which Mr. Ross uses for a study and calls "Chuckles." It is a unique little building, with slab sides and stucco above, covered with a shingled roof which slopes down and furnishes a covering for the porch at the front door. A Dutch door

opened by a secret latch permits one to enter. It contains just one large living-room, provided with a fireplace, book-cases and paneled seats. The interior is stained with attractive colors, and gingham draperies of a check pattern are hung at the windows. The ornaments of the room are composed of a collection of trophies and souvenirs. Mr. William Gardner Massarene, of New York, was the architect of both the bungalow and the little "House in the Woods," two most interesting structures—finely adapted to their environments.



Rustic Steps from the Dining-room Porch Lead to the Pergola



A Rustic Porch Is Built at the Front of the Bungalow



Two New England Bungalows

By
Mary H. Northend

Photographs by the Author



THE two bungalows, one built for Mr. C. W. Parker at Marblehead Neck, and the other built for Mr. John Hays Hammond at Gloucester, Mass., present examples of what can be accomplished in the designing and building of a bungalow which will, in every respect, be appropriate for the site upon which it is to be built.

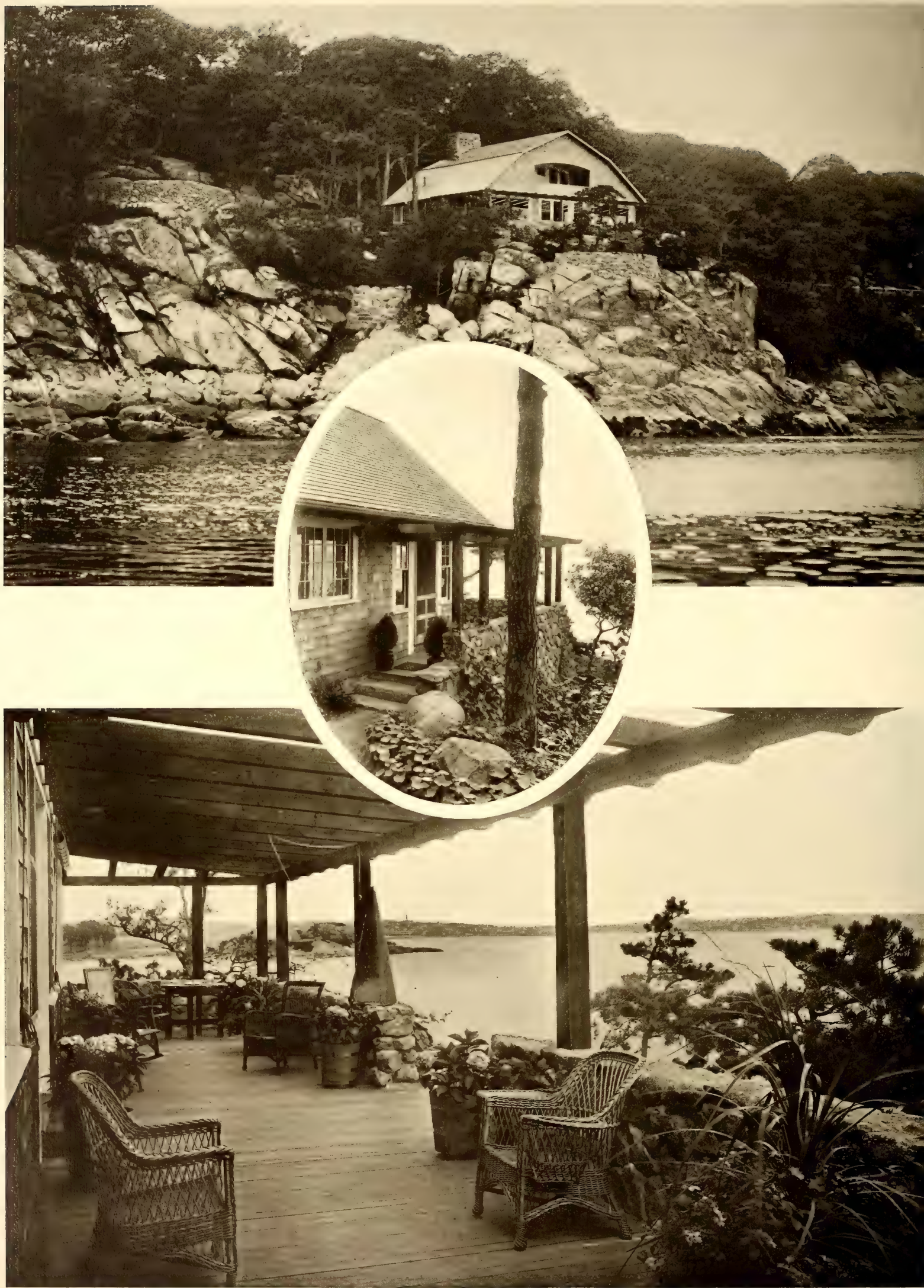
Mr. Parker's bungalow, nestling among the brambles of a

pasture lot, and Mr. Hammond's, perched high among the tops of the trees which surround its site, and overlooking the sea, carry out the character of this idea.

Mr. Parker's bungalow, which is the second of the two to be illustrated herewith, is no more obtrusive than the lichens on the pasture lot on which it is built. Mr. Parker has succeeded admirably in placing an artistic two-roomed bungalow upon a prominent and sightly location, and this is an architectural feat of no small merit.



The Massive Fireplace of the Hammond Bungalow



A New England Bungalow on a Rocky Seacoast: Mr. John Hays Hammond's Cottage at Gloucester, Massachusetts

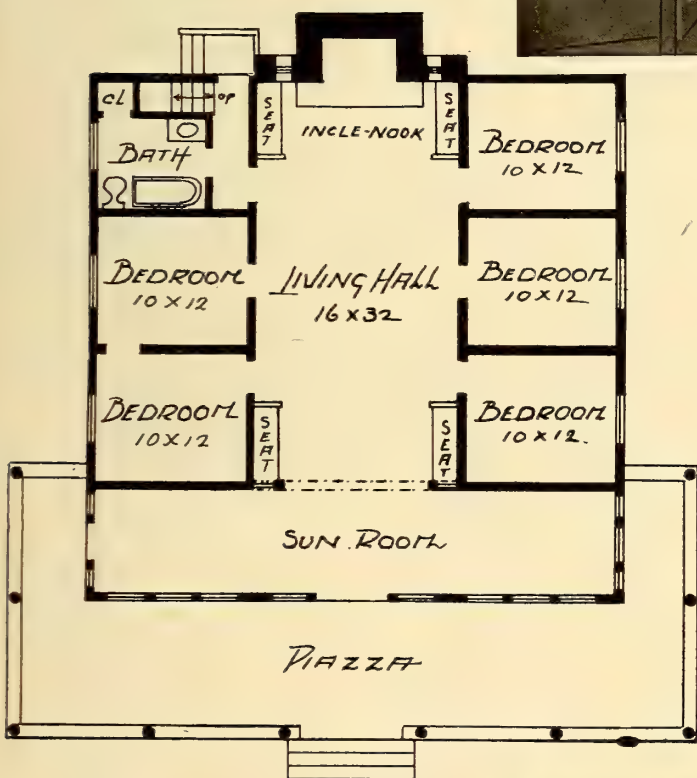
The bungalow stands upon a rocky ledge, not far from the Causeway, in what was formerly a bit of rough pasture land, covered with a tangle of briars and savins, and it has been transformed into a delightful garden, preserving all its natural beauties, while substituting crimson rambler roses for the riotous brambles, and contrasting the brilliancy of garden flowers with the stern severity of the dark rock-savins.

The house clings to its cliff like a swallow's nest to the eaves, with its overhanging roof thickly set with electric



Bedroom in the Hammond Bungalow

The living-room is at the front, facing the ocean, with windows looking southeast and southwest, and with Dutch doors opening from each of three sides. It is open to the rafters, and has a floor of hard pine, polished and covered by a large rug, on which stands a table for books and magazines. All the furniture is either Mission or Colonial. The comfortable couch serves as a bed by night, thus doing away with the necessity of a separate bedroom. Mirrors set into the side of the room increase its apparent length. The balcony at the end is reached by a ladder, and is used for storage. The windowseat in the chimney corner furnishes storage room for bedding, and a large closet is concealed behind the draperies at the right of the door leading into the hallway. The fireplace is handsomely constructed of fieldstone. It has anchors for andirons, and shows decorations of old shells and sea-urchins. Shelves fitted between the timbers of the framing make handy receptacles for books or bric-a-brac. Over door and window frames stand choice bits of china or pottery, while vases of flowers add a finishing touch to the interior. In the hallway steps lead down to the bathroom, which has a western outlook. This is fitted up with a shower-bath,



Plan of the Hammond Bungalow

lights. The two chimneys are of fieldstone from the adjoining land, and its foundation is the solid rock of the ledge upon which it is built. The cellar is deep enough and large enough to accommodate a bountiful supply of coal and wood. It is entered from the kitchen by means of a trap-door in the floor and a short flight of wooden steps. This saves the discomfort of going outside for fuel.

The house is fully equipped, on a diminutive scale, for housekeeping for a family of two. It contains but two rooms and a bath. The exterior finish is of shingle, painted white for the walls and red for the roof. The inside finish is of cypress, selected, planed and shellacked. There is no sheathing used.



In the Hammond Bungalow the Sun-room Opens from the Living-room



A Bungalow for Two ; Mr. C. W. Parker's Summer Home at Marblehead Neck

and has a floor of white tiles, sloping toward the center, to allow the water to run off through the outlet which is provided.

The walls and ceiling are painted with white enamel. Bathroom, passage, kitchen and china closet are all situated two feet below the level of the living-room. The kitchen is completely equipped. The heating apparatus is a ship stove, which connects with the boiler to supply abundant hot water.

This house cost twenty-five hundred dollars. A similar bungalow could easily be built for fifteen hundred by using less expensive materials.

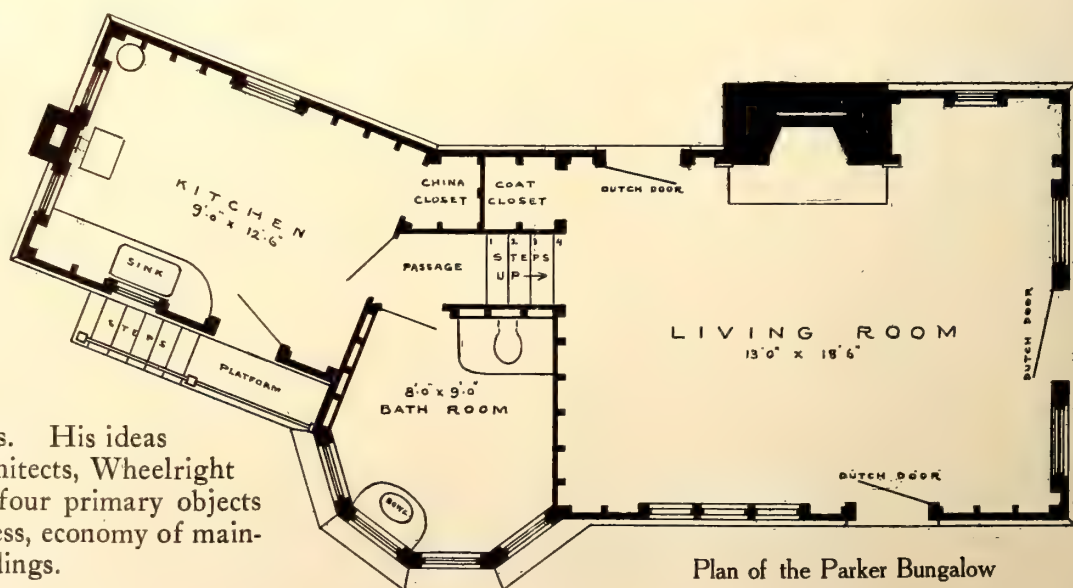
The estimates are as follows:

Cellar	\$100.00
Lumber	750.00
Carpenter work	675.00
Plumbing	300.00
Painting	100.00
Electric wiring	300.00
Chimneys	175.00
Hardware	100.00
	\$2,500.00

Mr. John Hays Hammond's bungalow at Lookout Hill, Gloucester, Mass., was intended by his eldest son, Mr. Harris Hammond, for the use of himself, his brothers, and their guests. His ideas were successfully carried out by the architects, Wheelright & Haven, and in laying the plans the four primary objects borne in mind were comfort, attractiveness, economy of maintenance, and harmony with the surroundings.

The setting of this bungalow is extremely picturesque, as it is built upon a rocky promontory, at a height of forty feet above the water. At the western end, and at the south side of the house, are fine trees—birch, pine, oak and ash. On the north side, and at the front, which faces the east, the building overlooks the harbor of Gloucester, and commands a magnificent view of that quaint old city, as well as of Eastern Point and the sea beyond.

The bungalow is approached from its western end by a woodland path, through whose thick-set trees may be caught glimpses of the water below. Its low, hipped roof, covered with weather-stained shingles, and the great chimney of rough gray fieldstone, at the base of which is planted a



Plan of the Parker Bungalow

large clump of rhododendrons, form some of the exterior features. On each side of the chimney, at about ten feet from the ground, are two narrow leaded windows; eight feet above each of these are two larger windows built directly under the eaves.

At the right of the chimney is the main entrance, over which hangs an old wrought-iron lantern. Each of the two sides of the building has three low, broad, small-paned windows, which furnish light to the bedrooms, and which are protected from sun and storm by the deep overhang of the roof.

The main entrance to the bungalow is from the roadway, while the eastern end faces the sea. The whole length of this front is crossed by a broad veranda, with a low balustrade built from the same kind of fieldstone used in the chimney and in the foundation of the house. Shading the veranda is a rustic pergola, formed of heavy, dark-brown, hewn timbers, over which twine luxuriant and fragrant creepers, such as woodbine, honeysuckle, sweet peas and crimson ramblers. A flight of steps leads down from the veranda to a small green lawn, inclosed by a stone wall, built upon the very edge of the cliff which rises perpendicularly from the water. On each side of the steps in front of the veranda, and also overhanging this sea-



The Overhanging Roof Is Thickly Set with Electric Lights



The Living-room Fills Most of the Floor Space



The Kitchen Occupies a Wing at One End

THE PARKER BUNGALOW

wall, are beautiful cypress trees which break the uniformity of the view and afford abundant shade. The veranda is furnished with Gloucester hammocks, comfortable green willow chairs, and tables to match. Large plate-glass windows lead from it to the sun-parlor, which is a part of the house. The whole exterior finish is of weather-stained shingles, which harmonize with the surrounding cliffs as completely as the lichen harmonizes with the rock.

The attractive interior is of North Carolina pine, stained moss-green. The living-room is the main feature of the house. It is forty feet long by twenty feet wide, and is open to the rafters to a height of twenty-five feet. The floor is of polished hard wood.

Around three sides of this hall, about ten feet from the floor, runs a gallery, over the balustrade of which are draped Navajo blankets, Indian baskets, Zulu shields and other trophies of far-off lands. Occupying the entire western end of the room is the massive fireplace built of seventy-five tons of hewn rock, and carried up to the roof. The fireplace proper is six feet broad, four and one-half feet deep and four feet eight inches high. The stones composing it are two feet thick, and the chimney has never been known to smoke. The splendid draught of this fireplace is its most

(Concluded on page 179)



Vine-laden Rustic Arches



A Shrub-embowered Gate



Nature's



OBVIOUSLY the bungalow being a type of dwelling available only for the country, its

garden surroundings have a special claim for consideration. Obviously also, the bungalow being a simple structure in itself, a certain simplicity may naturally be looked for in the garden treatment. But simplicity in garden design is close to nature, and hence the garden problem of the bungalow is reduced to comparatively few requirements.

There is but one essential requirement to be observed, and that is to treat the near-by grounds, and as much of the land adjacent to the house as may be available, in a natural and beautiful way. That this does not imply expensiveness in design and planting is apparent from the photographs reproduced on this page. Glimpses of various garden plantings are here given of a considerable variety of types, ranging from a simple massing of shrubbery to gateways of quite elaborateness of design. Varied as these

Garden Gates f



The Gate Beneath the Arch



An Ambitious and Successful Entrance



n Way



Simple and Effective



A Glory of Bloom at the Steps

the Bungalow

when placed in precisely that way. Garden design is quite as essential for the bungalow as for the most pretentious dwelling. It adds to every house, the most simple as well as the most ornate. It is a mistake to suppose that because the bungalow especially appeals to the simple life, it is a dwelling to be built in the woods or on the seacoast and left without thought of its surroundings. No successful bungalow is treated in that manner; but the adjoining grounds receive as much care, as much thought, and perhaps cost as much as is the case with more expensive structures. It is cost that pays, however, as everything pays that tends to produce the home beautiful. And surely if one lives in the country because one loves it, one must have one's own house lot a special source of gratification and delight in its adornment, and especially in the arrangement of its grounds.

pictures are they establish the cardinal fact in all planting, that good taste is the fundamental element in all outdoor decoration. A simple little picket gate, set in a vine-covered wall, may not be beautiful in itself, but it is beautiful



A Suggestion of the Japanese



A Simple Picket Gate



Vine-laden Rustic Arches



A Shrub-embowered Gate



Nature's Own Way



Simple and Effective



A Glory of Bloom at the Steps



OBVIOUSLY the bungalow being a type of dwelling available only for the country, its

garden surroundings have a special claim for consideration. Obviously also, the bungalow being a simple structure in itself, a certain simplicity may naturally be looked for in the garden treatment. But simplicity in garden design is close to nature, and hence the garden problem of the bungalow is reduced to comparatively few requirements.

There is but one essential requirement to be observed, and that is to treat the near-by grounds, and as much of the land adjacent to the house as may be available, in a natural and beautiful way. That this does not imply expensiveness in design and planting is apparent from the photographs reproduced on this page. Glances of various garden plantings are here given of a considerable variety of types, ranging from a simple massing of shrubbery to gateways of quite elaborateness of design. Varied as these

Garden Gates for the Bungalow

pictures are they establish the cardinal fact in all planting, that good taste is the fundamental element in all outdoor decoration. A simple little picket gate, set in a vine-covered wall, may not be beautiful in itself, but it is beautiful

when placed in precisely that way. Garden design is quite as essential for the bungalow as for the most pretentious dwelling. It adds to every house, the most simple as well as the most ornate. It is a mistake to suppose that because the bungalow especially appeals to the simple life, it is a dwelling to be built in the woods or on the seacoast and left without thought of its surroundings. No successful bungalow is treated in that manner; but the adjoining grounds receive as much care, as much thought, and perhaps cost as much as is the case with more expensive structures. It is cost that pays, however, as everything pays that tends to produce the home beautiful. And surely if one lives in the country because one loves it, one must have one's own house lot a special source of gratification and delight in its adornment, and especially in the arrangement of its grounds.



The Gate Beneath the Arch



An Ambitious and Successful Entrance



A Suggestion of the Japanese



A Simple Picket Gate



Rugs and Draperies for the Bungalow

By Alice M. Kellogg



IN THE interior equipment of the bungalow certain essentials for comfort are of quite as much importance as the furniture. The floors require suitable coverings; the windows demand appropriate curtaining; the doorways often need the protection of a hanging. Coverings for the lounge and its pillows may also be numbered among the objects that are indispensable for a home of this kind. Table spreads, too, can not be omitted without relinquishing one of those minor decorative utilities that has a distinctive share in completing the outfit for the summer dwelling.

Two very common mistakes in bungalow furnishing are significant of inexperience or ignorance in this field. One is the selection of objects that are interesting in themselves, without reference to the position they are to occupy. Another is a disregard of the bungalow as a place of retreat in stormy weather.

The homemaker who is capable of avoiding these two errors places herself in favorable relations with the various offerings of manufacturers and crafts people, and is assured a successful outcome in her efforts to render the vacation shelter livable, hospitable and individually attractive.

When a bungalow is situated at inconvenient distances



The Furnished Bungalow



Navajo Rugs, or Blankets, Grouped in a Corner



A Doorway often Needs the Protection of a Hanging

from cabinetmakers, upholsterers and wall decorators, the expenses of repairing and replacements can be lessened by the purchase of articles that are well made and of durable materials. The advantage of adhering to simplicity of form and the absence of ornament in this location is too obvious to call for discussion.

In the choice of rugs for the bungalow size is often as

important a matter as either the texture or design. By covering the main part of the living-room floor with one large rug a greater sense of comfort will be attained than if small rugs were distributed, leaving much uncovered areas of floor visible. In some places one may use several rugs of one kind, laying them so closely together that they have the appearance of a single large rug.



A Favorite Navajo Pattern



Coverings for Pillows

The Scotch rug is a reversible woolen product that is excellently adapted for the living-room of a bungalow. The cost, in nine by twelve feet, is thirty-six dollars. A plain brown rug of this make, with the border diversified by a mixture of brown and yellow, will give a substantial setting



A Window Treated in Dutch Fashion

for furniture on Mission lines. To relieve the dark tones of the lower part of the room, the windows may be curtained with a semi-transparent, cream-white muslin printed with blue flowers and green leaves.

A wool rug that is made in a thick tufting in a plain color is well suited for Mission furniture. In size it is varied, from the small three-by-six-foot to the regular nine-by-twelve-foot size, the latter costing thirty-five dollars. The body color is relieved by a plain border in a darker tone.

For a floor covering at a minimum cost, the grass matting rug makes the strongest appeal by reason of its plain color and light weight. In the fiber matting rugs a pattern is woven with the background, at the price of ten dollars and fifty cents in the nine-by-twelve size.

If small rugs are to be adopted and brilliant color tones are sought for, there is nothing to surpass the work of the Navajo Indians. As wall hangings, too, these rugs are distinctively decorative, and they may also be put up in doorways or thrown over a lounge. In the illustration one corner of a room is treated entirely with these Indian rugs, or, as they are known in the West, Indian blankets.

A drugget made in India from hemp in the natural color is a good choice for the bungalow floor. The border, and sometimes the center, is enlivened by the introduction of green, red or blue in a zig-zag pattern. The size three feet by six may be bought for eight dollars.

Small cotton rugs woven by hand are well suited for the bedrooms of the bungalow. They may be laid on either side of the bed and in front of the bureau and washstand. The color variations that are produced in this primitive weaving is quite remarkable. Material by the yard is torn into strips for the weaving, and when the colors are not of the right tone a white cloth is dyed, and sometimes the warp also. The old-fashioned hit-and-miss style is not by any means given up for the more esthetic combinations of our own day. The former is still usable as a runner in the halls and passageways of the bungalow.

In curtaining the windows of the bungalow the complicated

draperies of the city home would, naturally, not be attempted. One set of hangings may be the rule in the former, excluding even the window shade when there are shutters with movable slats. A short curtain that hangs to the sill without touching the wood looks well when it is placed between the casing. If the rod is fastened to the outside of the casing the curtain may hang below the sill as far as the woodwork extends.

Casement windows that open into the room may have the curtain material fastened at the top and bottom of each window, or, if preferred, only at the top. For casement windows that open outward a single rod may be carried across the framework at the top of the casement, and a length of the material hung at each side. For a very wide span a short valance may be added at the top, between the side length, in the Dutch fashion, as shown in the illustration.

The opportunity for introducing color effect in the curtains in the bungalow can be met with plain materials, linen, linen taffeta, jute, or mercerized cottons, or, this same list will afford a choice in figured effects. If a semi-transparent material is desired without the conventional daintiness of white lace or muslin, there are coarse-meshed nets in plain and fancy weaves, colored madras and crete cloth.

At the seashore, or wherever the windows receive the full blaze of the summer sun, some of the new materials that are guaranteed unfadable will be welcomed. For narrow windows the ordinary wash goods for summer dresses—gingham, chambray, percale or dimity—may be chosen.

The new field for the amateur decorator, that of stenciling a design upon a textile fabric, can be turned to good account in giving an individual touch to the windows of the bungalow. A pattern may be applied to the curtain material, either as a trimming for the sides and bottom, or it may be repeated on the entire surface in an all-over design.

With another phase of handwork, that of weaving, the bungalow fittings have an especial affinity. In making up



In the Seashore Bungalow Old Fishnets May Be Looped Against the Bare Walls

curtains the white or ecru linen thread may be woven in an open mesh-like scrim, or a closer weaving will produce as firm a substance as one of our great-grandmother's linen sheets. The pattern may be woven of different harmonizing

colors at the same time as the fabric. The illustration gives a curtain that has been designed and executed by the Misses Glantzberg in this manner.

Portieres should not be discarded in the bungalow from too strenuous motives for simplifying the furnishings. In making a cozy inclosure for the living-room on windy days or stormy evenings, the door hangings are always helpful.

One of the new materials that may be bought by the yard for this purpose is an arras cloth that gives a wide width, a double-faced texture, and a variety of colors at the moderate price of one dollar and ten cents. Untrimmed or decorated with needlework, applique, tapestry borders or stenciling, the arras cloth has a unique fitness for its service in the doorways of the bungalow.

Portieres woven by hand of colored thread in the Swedish way are now being made in this country by the Misses Glantzberg. The rag-weaving of Colonial times is also being adapted to hangings by the pliable materials and skilful dyeing used by Miss Little, who was one of the first to capture the popular attention with a revival of this work.

An original trimming for a door hanging is illustrated in the bungalow interior. Narrow strips of brown leather were applied on soft-finished green burlap as a fringe at the top, and as a lacing on the sides, top and bottom.

At the seaside the old fish nets are much in evidence for door drapery. A graceful looping of the nets against the side walls will take away the bareness of rough boards or plaster.

With such lesser features as lounge and pillow covers and the mats or spreads for tables, one may give accent to the general color scheme of the bungalow interior. In these articles a repetition of some color already in evidence on the walls or in the rugs, window or door hangings, is advisable; if contrast is desired, it should not be introduced at any loss of harmony.

The Bagdad couch cover of five narrow strips of as many colors of woolen goods which, by sewing together, make the necessary width, has been imitated in so many cheap forms that it has become very commonplace. A better choice is the Bagdad in a plain color upon which a mosque is outlined with crewels in an exceedingly effective way.

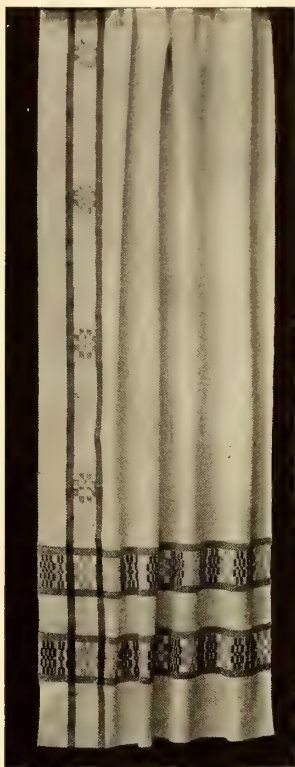
Kelim rugs are one of the most durable couch covers, and their purchase is a good investment. Both the modern and the antique Kelims are offered for sale, but a regard for sanitary ideas will give the modern the preference, when it is to be laid on the bungalow couch.

An old-time blue-and-white bedspead was given a new lease of life as a sofa cover in a living-room where blues and browns were the predominating colors, and no figured pillow covers were allowed to compete with its quaint design.

In selecting the coverings for the pillows one needs to exercise considerable restraint to prevent a confused mingling of colors and patterns. An easy rule to follow is to use plain materials for the pillows when the couch cover is figured, and vice versa.

Ready-made table covers are not easily obtained, although one is occasionally so fortunate as to combine the right size, color, pattern and texture without having the article made to order. For a small table a square of linen in the natural color may be woven with the design incorporated with the weaving. Or a stencil border may be painted upon a piece of cloth that suits the purpose. Leather mats in round, oval or square may be ornamented with metal or other paints, or an undecorated

skin of irregular size may be laid on the top of the table. Squares of printed linen taffeta, such as are sold in the dry goods and upholstery shops for pillow tops, may be turned to another use by finishing the edges with chintz braid and laying them on the tables.



A Scrim Curtain Designed and Executed by the Misses Glantzberg

Two New England Bungalows

(Concluded from page 173)

remarkable feature. No andirons are used, and great logs burn cheerfully, when simply thrown upon the hearth. This hearth, in front of the fireplace, is five feet wide, laid with red Dutch tiles, one of which can be removed in order that the ashes may be brushed down into an iron barrel.

Two feet above the fireplace is a large stone shelf made of granite blocks, upon which stand many cups and trophies won in boat races by the Hammond brothers. Half-way up the chimney-breast, above the mantel, is a magnificent moose head, and the fireplace is flanked by two heavy, red-cushioned settles, above which bookcases have been built into the wall. The rib of some old ship, wrecked off the rocky coast of Gloucester, makes a fine footrest, and in front of the fireplace lies the pelt of a splendid polar bear made into a rug which is copper-bottomed and riveted throughout.

Overhead are heavy 6 x 8 hewn rafters, from the central one of which, upon an iron chain, hangs a large electric lamp, appropriate to the room in both shape and detail. The furniture is of the Mission type, with comfortable chairs

and low reading tables, equipped with electric reading lamps. Doors lead off at each side to the five bedrooms, the lavatory and the entrance hall.

Running across the whole seaward side of the house, and forming a part of this charming living-room, is the sun-parlor. The entire front of this room and the ends, including the doors which directly face the fireplace, have plate-glass windows. This sun-parlor is forty feet long by twelve feet wide. Along each side, and facing the sea, run long moss-green settles, fitted up with red leather cushions and red pillows. Nothing more delightful can be conceived for a stormy day than to sit comfortably in this room and watch the waves break into surf upon the rocks, and the famous Gloucester fishing fleet, deeply laden, stagger home under full canvas.

The bungalow has a gas burner in the basement, connected with the coil, which supplies hot water at all hours of the day or night, and is fully equipped with electricity and telephone to the main house and stable.

The Summer Camp at Arden

Being an Experiment in Henry George Principles

By Mabel Tuke Priestman



AN INTERESTING experiment is being made at the summer camp at Arden, which is situated at the top of a hill, and consists of a beautiful common partly surrounded by forest, some thirteen miles from Wilmington, Del. Its purpose is to furnish for boys between eight and fifteen years of age a holiday during the summer months under simple and wholesome conditions, and in the companionship of those who will enter into their sports, study or work.

The camp is, however, by no means restricted to boys, as entire families live in the bungalows, enjoying a primitive life

the hand of good fellowship extended to him and a hearty invitation to come again. One of these men was making a tour of inspection when we visited the camp, and plied us with questions as to our reasons for taking photographs. He thoroughly appreciated Arden, and exclaimed, "If only my sister could come to a place like this with her children. They live in the poorest part of Philadelphia, and never a ray of sunshine enters the house, as a high brick wall is built in front of the windows, keeping out every breath of air. The children are pale and delicate, and the only chance they have of playing on grass is when they come to my little lot on a Sunday, and they enjoy to their heart's content having a swing and gathering flowers. It is not much of a lot, as I am only a poor working man, but it is the best I can give them."

I was glad to notice after dinner that some of the trustees sat and talked in friendly conversation with him, glad to welcome him to Arden.

On the outskirts of the common or in the woods the most primitive cabin or artistic bungalows can be erected at a moderate cost. The people at Arden have a very practical way of reducing the cost of labor for building, for here the dignity of labor is at a high premium, and most of the work is carried on by the community. The older boys fell the trees and work in the saw mills, and do



The Red House, Containing the Club Rooms

free from the cares of housekeeping, and living close to nature—a healthy, open-air life, and yet near enough to civilization to enable the business man to quickly reach Philadelphia or Wilmington. Sometimes the parents come down for a few days, leaving their boys behind to spend the whole summer there. All those who gather at Arden have a purpose in life, and it is very interesting to hear the views expressed on the questions of the day. Here may be found doctors, literary socialists and employers of labor hobnobbing in the most friendly way with the working man, who brings his children to spend a Sunday, knowing that he will have



The Inn at Arden



Mr. Frank Stephen's Bungalow

any building that is within their power, but as they are not expected to do this without payment, their hours of labor are credited to them and deducted from the cost of their board. They also work in the vegetable gardens on the same arrangement. Their work is in no way compulsory, and only those do it who prefer working to a holiday of play all the time. Such is the force of example that when they see older men doing manual labor purely from the joy of work, it fills them with ambition to do successful work themselves.

Well cooked and wholesome meals are provided at the Arden Inn if the campers do not want to bother with the preparation of meals. The Inn is the only bungalow that boasts of a staircase, which reaches to the sleeping quarters of the matron and her helpers.

The land consists of one hundred and sixty-two acres, of which seventy are heavily wooded. Beyond the wood is a creek just big enough for bathing. This flows through the forest, tumbling over rough crags and boulders, and then winding in narrow streams and still pools at the foot of deep ravines. A more beautiful place can hardly be imagined.

When the visitor arrives at the colony, the team stops in front of the Club, a charming bungalow known as the "Red House." This is the meeting place for the young people on rainy days and chilly evenings. In the larger room dances and games are often enjoyed. This room also contains work benches, and many pleasant hours are spent by the young people in making pottery, and other useful crafts, plenty of occupation being thought essential for the full enjoyment of a vacation. The boys gather in this room

and devote themselves to study or music, spending a good part of the morning in working with their hands. There is also a carpenter shop, which is much enjoyed by them.

Work is followed by a swim in the creek before the mid-day meal. After this meal they enjoy tramps about the country, and tennis or baseball games.

The land is held in common by trustees, but anyone can lease it for a short or long term, paying from six dollars to nine dollars a year per acre.

The bungalows can either be erected by the tenant of the land, or can be built by the trustees and rented for a short or long period. They vary considerably in price. Some cabins have been put up for as little as sixty dollars. Naturally these are little more than sleeping quarters, but as much as two thousand dollars is being spent on some of the bungalows which are now being erected. Two New York girls built a sixty dollar cabin this summer and are thoroughly enjoying their holiday. They do

not attempt any housekeeping, enjoying most thoroughly the meals served in the attractive Inn.

The green walls of stained timber and the banks of ferns above the fireplace give the dining-room of this Inn a cool and pleasant appearance. There is no attempt at style in the serving of the meals, each table consisting of white boards on rustic supports. All the vegetables are placed on the table at once, and people help themselves in the most informal manner. The spirits of the young people and the excellent food make up for any lack of dainty service.

At one side of the common is the beautiful little Grecian outdoor theater, where, every Saturday evening, parts from Shakespeare's plays are acted, usually at twilight, the theater being lit up later by artificial light. Much interest is taken by old and young in the getting up of these plays, and the costumes are always artistic and effective. We were fortunate enough to witness one of these plays, which happened to



The "Owl's Nest," a Japanese Bungalow



Bungalow with Grape-vine Arbor



A Simple Bungalow

be "The Merchant of Venice," in which Mr. Frank Stephens, the founder of Arden, took the part of Shylock. The scene in daylight was one long to be remembered, the brilliant color of the costumes standing out in strong relief again the beautiful background of the forest. One could not help realizing the charm of pastoral plays with such an environment.

Situated just behind the theater is the bungalow belonging to Mr. Frank Stephens, while on the left is the attractive little bungalow belonging to his son and daughter. The entrance through the grape arbor is most inviting, while the rustic fence adds a finishing touch which is most decorative.

In looking at our illustration of Mr. Frank Stephens' bungalow it will be noticed that the bedroom is without a door, so that to all intents and purposes the inmates sleep in the open air, but the slanting roof is a protection in case of a storm. The main part of the bungalow is quite roomy, and has an ample stone fireplace with swinging crane and andirons. Comfortable rocking chairs and low settees ornamented with Batik drapery makes an attractive interior; the room also contains an old-fashioned spinnet.

Mr. William Irwin's bungalow is built somewhat after the Japanese style, and is very attractive not only in outline but in color-



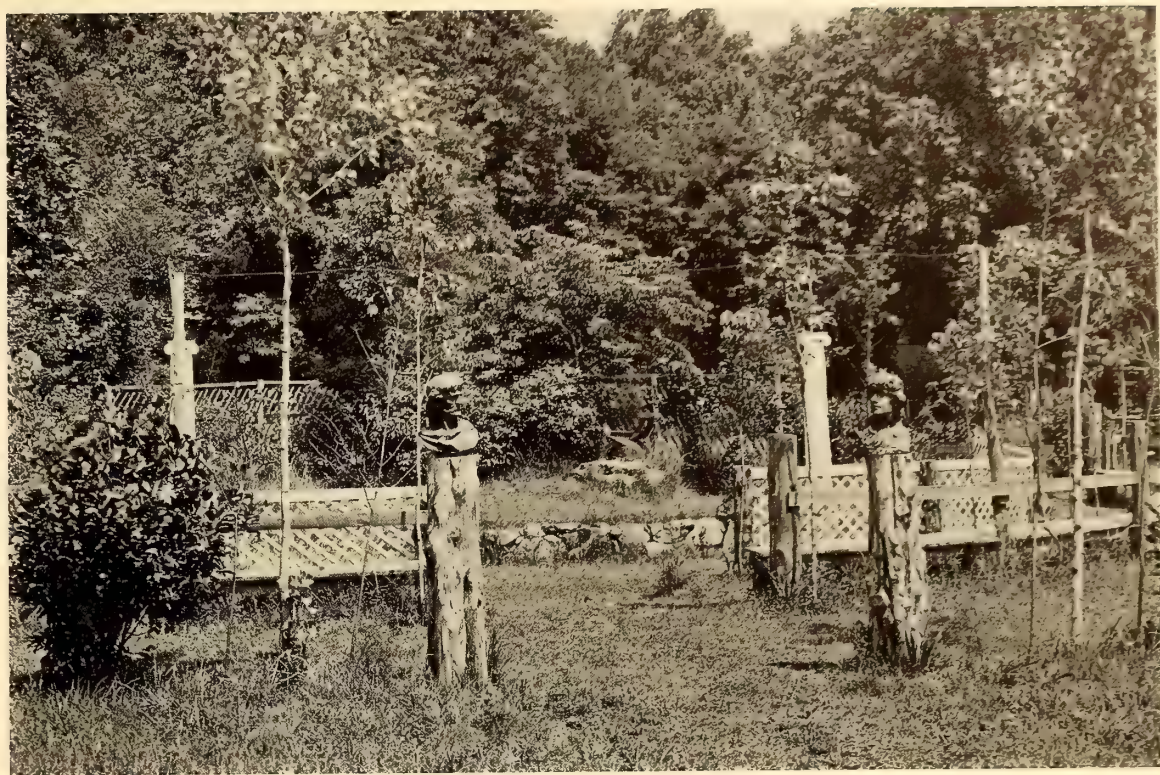
The Interior of Mr. William Irwin's Bungalow



The Pump



Beneath the Trees



The Greek Theater

ing. Green paint with touches of peacock blue, with the window frames in white, give it a somewhat unusual appearance. The view from the window opposite the doorway looks into the dense wood, with a peep beyond at the rough boulders below. At one side of the structure a carved owl is perched on the trunk of a tree. The bungalow received its name of "Owl's Nest" because of the owls that nested there, but when the artificial owl was put in place it unfortunately acted as a scarecrow, for the original inhabitants never again visited the place. There are now thirty bungalows on the estate, and about sixty people. The boys who come alone sleep in the bungalows allotted to them, which can be seen beyond the "Red House."

While all the inhabitants live like one happy family, unhampered by rules and regulations, there are, however, a few restrictions to which all who rent the land conform. They are as follows: No hunting or fishing is allowed. No animals can be raised to be afterward sold to the abattoir. Each tenant must keep his place tidy, so that it is not an eyesore. A bungalow can be given up whenever liked. Tenants pay no taxes. All the money taken for the board is spent on improving the property for the public good.

All those who spend their summer at Arden and own the land in common feel they are carrying out the teaching of Henry George



The Roadside



The Dining-room of the Inn



Bungalow with Grape-vine Arbor



A Simple Bungalow Beneath the Trees



The Greek Theater

be "The Merchant of Venice," in which Mr. Frank Stephens, the founder of Arden, took the part of Shylock. The scene in daylight was one long to be remembered, the brilliant color of the costumes standing out in strong relief again the beautiful background of the forest. One could not help realizing the charm of pastoral plays with such an environment.

Situated just behind the theater is the bungalow belonging to Mr. Frank Stephens, while on the left is the attractive little bungalow belonging to his son and daughter. The entrance through the grape arbor is most inviting, while the rustic fence adds a finishing touch which is most decorative.

In looking at our illustration of Mr. Frank Stephens' bungalow it will be noticed that the bedroom is without a door, so that to all intents and purposes the inmates sleep in the open air, but the slanting roof is a protection in case of a storm. The main part of the bungalow is quite roomy, and has an ample stone fireplace with swinging crane and andirons. Comfortable rocking chairs and low settees ornamented with Batik drapery makes an attractive interior; the room also contains an old-fashioned spinnet.

Mr. William Irwin's bungalow is built somewhat after the Japanese style, and is very attractive not only in outline but in color-

ing. Green paint with touches of peacock blue, with the window frames in white, give it a somewhat unusual appearance. The view from the window opposite the doorway looks into the dense wood, with a peep beyond at the rough boulders below. At one side of the structure a carved owl is perched on the trunk of a tree. The bungalow received its name of "Owl's Nest" because of the owls that nested there, but when the artificial owl was put in place it unfortunately acted as a scarecrow, for the original inhabitants never again visited the place. There are now thirty bungalows on the estate, and about sixty people. The boys who come alone sleep in the bungalows allotted to them, which can be seen beyond the "Red House."

While all the inhabitants live like one happy family, unhampered by rules and regulations, there are, however, a few restrictions to which all who rent the land conform. They are as follows: No hunting or fishing is allowed. No animals can be raised to be afterward sold to the abattoir. Each tenant must keep his place tidy, so that it is not an eyesore. A bungalow can be given up whenever liked. Tenants pay no taxes. All the money taken for the board is spent on improving the property for the public good.

All those who spend their summer at Arden and own the land in common feel they are carrying out the teaching of Henry George



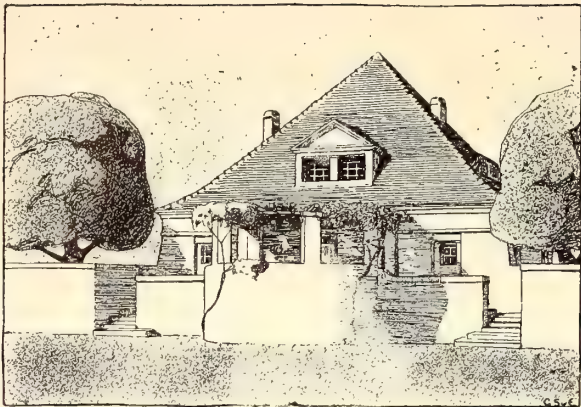
The Interior of Mr. William Irwin's Bungalow



The Pump at the Roadside



The Dining-room of the Inn



Plumbing and Drainage Problems of the Bungalow

By John A. Gade



THE selection of the best location and site is, in the case of a bungalow, of even greater importance than in that of the ordinary country house. Conveniences are fewer and distances from assistance or supplies generally greater. The governing factor in constructing a bungalow is economy; in living in it, that such a practical necessity as the plumbing does not "go wrong."

If possible the bungalow should be placed near a stream or within easy reach of it. A good spring will in all probability be found near at hand, and nature supplies you with water free and plenty. Locate the building on sandy soil on account of better natural drainage. If you place it on rock, as you are tempted to by the natural solidity of the foundations, stagnant water is very liable to lodge in pools under the house.

You are unable to telephone to the plumber from your bungalow, or to procure any skilled assistance, and the careful consideration of the original expenditure on the plumbing, as well as a personal comprehension of it, are well worth while.

The plumbing and drainage ought to cost about one-quarter of your total outlay. Most bungalows have no bathroom fixtures at all; the old-fashioned outhouse is used as a closet, the river or pond is bathed in and the water piped to the kitchen. One bathroom, however, is of tremendous comfort to the establishment. Even the installation of merely a cold-water shower makes a world of difference. It can be put in for about twenty-five dollars. This will consist of piping, valve, shower-head, lead, or, better, cement tray, and the drain pipe to the outside of the house. As nothing but comparatively clean water comes out of it, no special sewage disposal system is necessary in connection with it. Such a shower, in connection with an earth closet (Fig. 1) in a separate little old-fashioned outhouse, is the best "cheap" combination for a small camp. Installing, however, a single bathroom in connec-

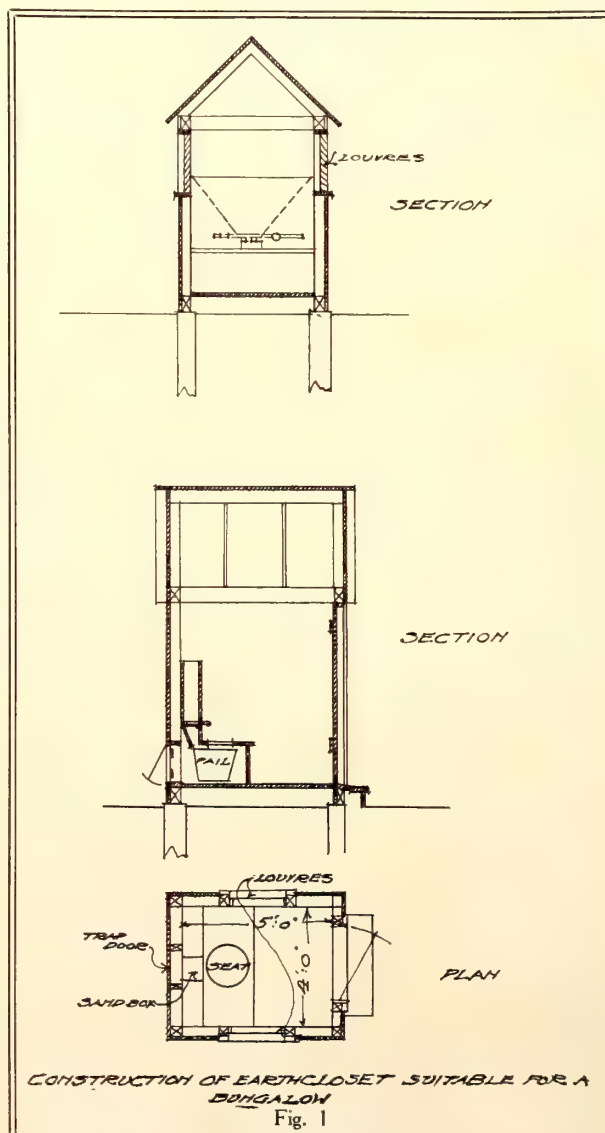
tion with the necessary kitchen fixtures is the most usually considered problem. A tub, a basin and a watercloset, with the necessary drainage connection, not including any sewage disposal system, will cost about two hundred dollars. In selecting the fixtures the layman is naturally confused. Both the small local plumber and the larger manufacturer or his agent produce catalogues with hundreds of fixtures of different types. Select a tub four feet six inches or five feet long, standing sufficiently high to enable cleaning and dusting under it, and a lavatory about thirty inches wide. Enameled iron is the best ware for the purpose in question. It is less expensive than porcelain-lined fixtures and easier to transport without breakage than the ordinary marble slab of the washbasin. The feet of the basin should also be enameled, so as neither to collect rust nor to need polishing. You can not afford a douch or rubber curtain, for they cost, if well

made and durable, about ten dollars. Placing your shower as shown on Fig 2 obviates this, for the water will practically only splash against the walls and floor of the shower compartment.

Place the bowl of the watercloset upon a piece of slate or marble. Do not place it directly upon the wooden floor, for this shrinks, breaks the joint, and the fixture commences to leak.

In the kitchen there will, of course, be a range, a boiler, a sink, and probably also a couple of laundry tubs. The range should, for protection against fire, be set on a cement hearth, and be of the "portable" type, procured in the cities for twenty-five dollars.

The hot-water boiler can either be of galvanized iron or copper. Copper is preferable, because in the case of a camp the boiler is very liable to be left empty for months, and the galvanized iron boiler will become rusty when not constantly used, and thus render the water unfit for laundry purposes. A forty gallon boiler is sufficient for a bungalow having a single bathroom. The galvanized iron one of this size costs about sixteen or eighteen dollars, the copper one about thirty-two dollars. Purchase a plain galvanized iron sink about eighteen by thirty-



six inches, and two wash-tubs. The drainage system inside the house should all be of cast iron. The type known in the trade as "extra heavy" is best. Wrought iron should not be considered, for its handling requires heavy tools and skilled mechanics. The branches of the pipes under the house should be carried in iron, as close to the fixtures as possible. The fixture traps are best made of lead. Heavy lead will expand under the influence of frost, and may save the fixture if the water in it is about to freeze. The brass trap is more liable to split. The pipe from the watercloset should be four inches in diameter; from the kitchen sink, laundry tubs and bathtubs, two; and from the washbasin, one and a half. If a shower is installed, this should have a three-inch waste.

With the installation of a bathroom some kind of a sewage disposal system becomes necessary. The cheapest and worst of all is where the sewage is led to a cesspool. In sandy soil this will for a time give satisfactory results, but it is apt to need frequent cleaning and to become a nuisance. It should at least be forty feet from the house, and on lower ground, and placed so that it will not contaminate streams.

The best system, if the nature of the soil is sandy and open, is an underground sewage disposal system. The sewage is here discharged through the sewer pipe into a "settling" chamber. The sewer pipe is of earthenware. It is cheap and durable, and can be purchased near any little railroad station or from the smallest village material dealer. It comes in two foot lengths, costing for the customary four-inch pipe about six or eight cents a foot. The four-inch pipe should be large enough for the ordinary bungalow containing a bathroom, and if the pipe can be laid with a fall of one-third of an inch per foot. If rock or the character of the ground does not allow this fall, a five-inch or six-inch pipe should be used, but no grade less than one-quarter inch to the foot is good practise. The joints of the pipe should be laid in Portland cement mortar. The interior of each joint should be cleaned before the pipes are

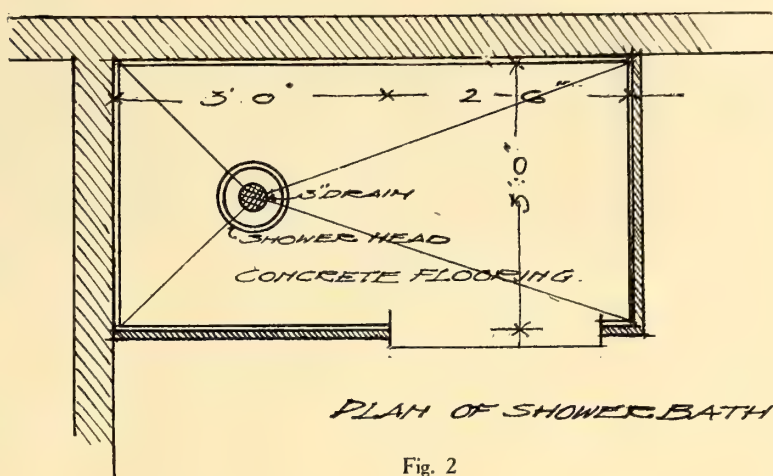


Fig. 2

and cleaning. This should be extended to above the surface if the location is not objectionable. If it is buried its position should be marked.

After the sewer pipe has carried the sewage into the settling chamber, it collects there until it overflows into a flush tank chamber, in the bottom of which is set an automatic syphon which discharges the liquors into a flush tank whenever the tank is filled. The discharge of the syphon should be a four-inch earthenware drain pipe with two-inch tee branches on each side, laid so that there is a branch on each side every four feet. From these lateral tee lines two-inch earthenware pipes are laid with open-joint collars. These pipes should be laid fourteen inches underground and covered with five or six inches of clean gravel or broken stone, then above with top soil. From two hundred and fifty to five hundred feet of this two-inch pipe will be required to take care of the drainage of a camp with one bathroom. If the soil the sewage drains into is clean sand and gravel two hundred and fifty lineal feet of piping will be sufficient.

If the ground upon which the sewage must be disposed is rocky or of a clay formation, filtration beds will be needed. Naturally they are not as good as where nature has prepared them ready for you. The same flush tank and settling basin are used as has been described for the subsurface irrigation system. The discharge from the flush tank instead of going into underground drain pipes goes on top of the filtration beds (Fig. 3), which are prepared as follows: A space of about twelve feet by twenty-five feet is cleared and leveled. Five lines of open-joint drain pipe are laid on its bottom, connected together and discharged at some convenient point. Over these pipes are laid twelve inches of coarse gravel and broken stone; then a layer of twelve inches of coarse gravel and sand, eight inches of finer gravel and sand, and the whole finally finished with three or four inches of sand. A low curb of wooden planking or stone should be built around the edges of the filter beds to protect the surface of sand and keep it from washing away. The whole filter bed should also be subdivided by an intermediate curb, so that one part may be working while the other is resting. The sewage is discharged on the surface of these beds, the outlet of the

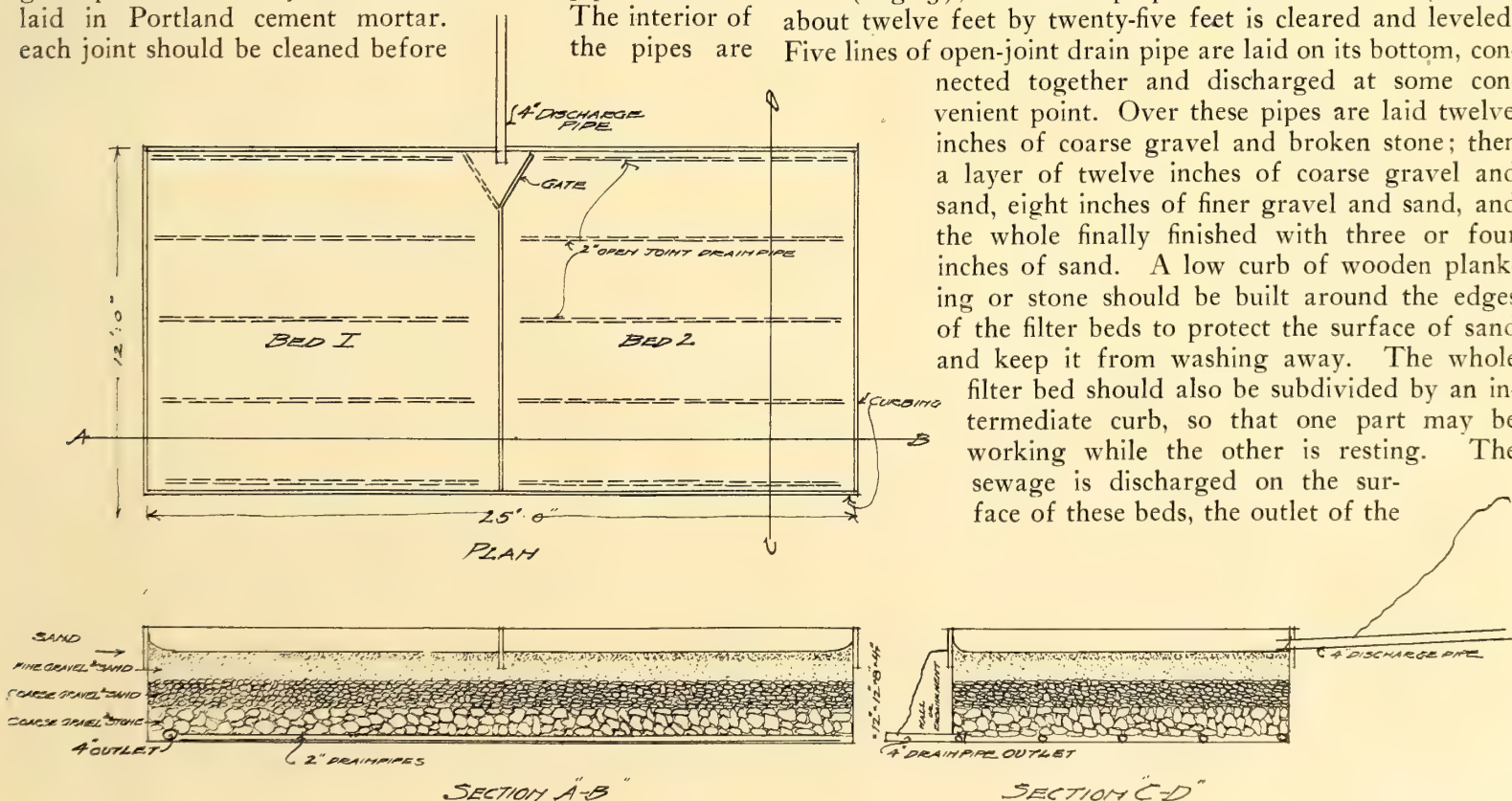


Fig. 3—Plans and Sections of Filtration Beds

sewer pipe being arranged with a switch, which may be of wood, so placed that the sewage may be diverted at alternate intervals of four or five days on to either filter bed. From time to time, as conditions show, the surface of the bed, when it is dry, should be scraped with a hoe, and if necessary a little fresh sand added. No care is required except in laying the surface almost level. The two beds should be built for fifty dollars.

The cost of installing either of the alternate sewage systems, inclusive of filter beds, and requisite for the needs of a single bathroom, will be about one hundred and fifty dollars over and above the cost of the plumbing fixtures and pipes in the house.

No main house trap is necessary in a small self-contained building with an efficient sewage disposal system of its own. The pipe, if left open from the disposal fields and extended above the roof of the house makes a very efficient vent for the drain pipe system.

The sewer pipes and sewage system are one side of the question; the water with its pipes and storage is the other.

The water is generally supplied from a well or stream, lying at a sufficiently higher level than the house to give requisite pressure without a pump. A line of piping one and one-quarter or one and one-half inches in diameter should supply the requisite water. Whether or not the bungalow is placed conveniently near a stream, rainwater may be very necessary, and it

may be advisable to collect and store it. The spring or well, or other available water supply, may be so hard (impregnated with mineral or earthen matters, such as iron or lime) that rainwater may be of great advantage for washing and laundry purposes. If it is to be stored it may either be carried through earthenware pipes to an underground brick or cement cistern, located near the house, or collected in wooden tanks or water-butts raised above the surface of the ground. If the water from the roofs is destined for drinking purposes it is better to cover the roofs with "back-slabs" (the four waste segments of the sawn log) or unstained shingles, and to use wooden (cypress) gutters and leaders. The water is, by this procedure, kept free from the impurities of lead, paint and rust.

The rainwater should not be connected with the sewage system, as this makes an increasingly large quantity of impure water to be treated and cared for. The rainwater is not objectionable. If collected underground it is gathered in a cistern and carried to this in earthenware pipe, similar to the sewage pipe, and laid in the same manner, only at a depth below whatever the frost level may be in the location in which the bungalow is built.

A cistern is built differently, according to the soil which it is in. Any intelligent mason properly instructed can build it. If the ground is of firm gravel, sand or clay, a circular chamber should be dug about nine feet in diameter and nine feet deep (Fig. 4). The loose sand is brushed off the sides and they are plastered with one and one-half inches of Portland cement mortar. The bottom is covered with two inches

of cement concrete. The rainwater pipe is brought into the bottom of the cistern, and around the end of the pipe is built a brick chamber about two feet square and high, of soft bricks, and covered with a piece of flagstone. This acts as an efficient filter for the rainwater. At a distance of about four feet six inches below the ground a shelf is cut in the gravel bank and a brick dome is started and gradually drawn in, until an aperture of about twenty inches in diameter is left.

This may be covered by either a flagstone or iron cover. An overflow pipe should be taken from the cistern at the spring of the arch.

This is perfectly sound construction, and at the same time the cheapest manner of building a cistern. It can, however, only be used when the earth is of such a nature that it can stand up of itself.

If the cistern is built in poor ground an eight-inch brick or rubble wall must be built in place of the one-and-one-half-inch cement lining to support the adjoining earth banks and hold

the water and support the dome. Sometimes the location may be such that a flat roof may be built over the

cistern, which may cheaply be made of old railroad iron laid about three feet apart and with close wire cloth stretched on the under side and above the top. Five or six inches of concrete is filled in between.

Of course, an aperture for access must be left in the center of the covering for ready access and for cleaning.

Such are the principles of construction and the problems involved in providing for the plumbing for a bungalow. None of them are beyond the purse and the intelligence of the average builder. I have dwelt at some length on these details, not only because it was the specific purpose of this article to treat of them, but because, in consider-

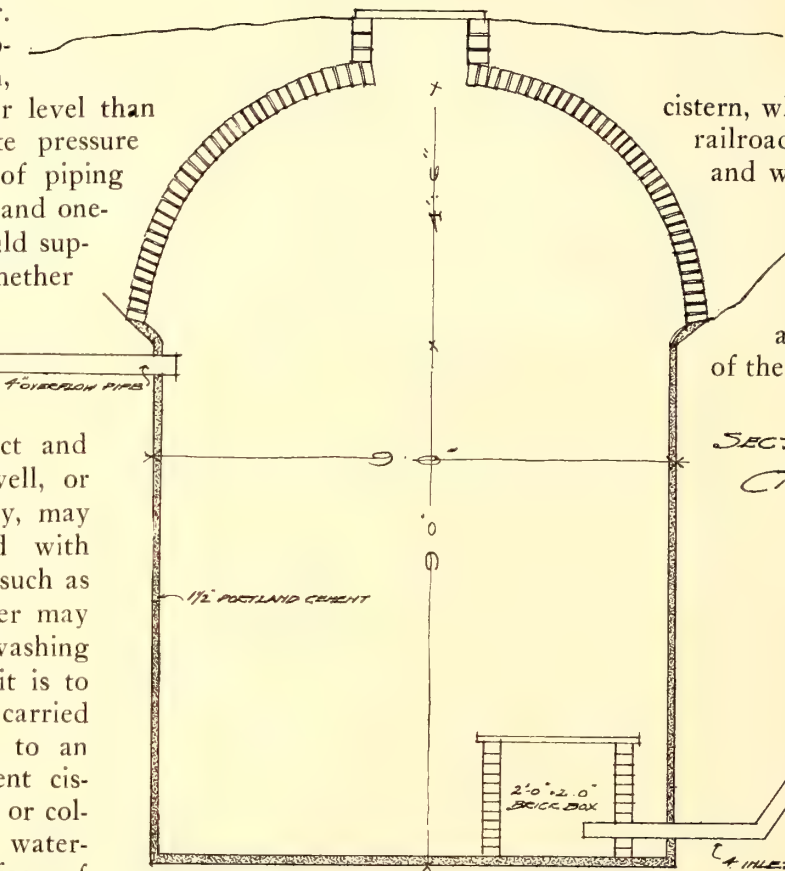


Fig. 4

ing the question of the design and erection of the house such matters are too often viewed as of comparative unimportance. There are many structural economies that can be introduced in building a bungalow, but the plumbing and drainage problems are quite as important in dwellings of this type as in those of higher cost. It is true that even in this department, as I have shown in a somewhat hasty manner, there is ample room for economies of detail that would not be practised in houses of a more permanent style; but this is one aspect of building that is so supremely important that economies should not be pushed to the danger point, or anything left undone that would add to the health and safety of the building. After all, these matters are much more important than questions of taste or even cost of construction. The bungalow may be erected in as hasty a manner as you please, and with as many economies of cost as may be permitted, but the sanitary departments should invariably be the best than can be afforded. The money will always be found to have been well spent and an actual source of profit, since it increases the livability and usefulness of the bungalow.



“THE BUNKER”

A Bungalow Built for George Towle, Esq., on Misery Island, Massachusetts

By Walter Williams



R. TOWLE'S bungalow, which he built for his summer home, has a charm about it that is delightful, and especially so on account of its situation, which is filled with historic and romantic associations.

Misery Island, upon which it is built, is just off the coast of Beverly Cove, Mass., and it has been a family place of abode during the summer months since Colonial days. An interesting fact connected with the island is the lease made for one thousand years to

Captain George Curwin, one of the leading men of Salem. It is probably one of the longest leases ever executed, and much ceremony was attached to its making, after which Captain Curwin built a house on the island and entertained the “quality” of the ancient town.

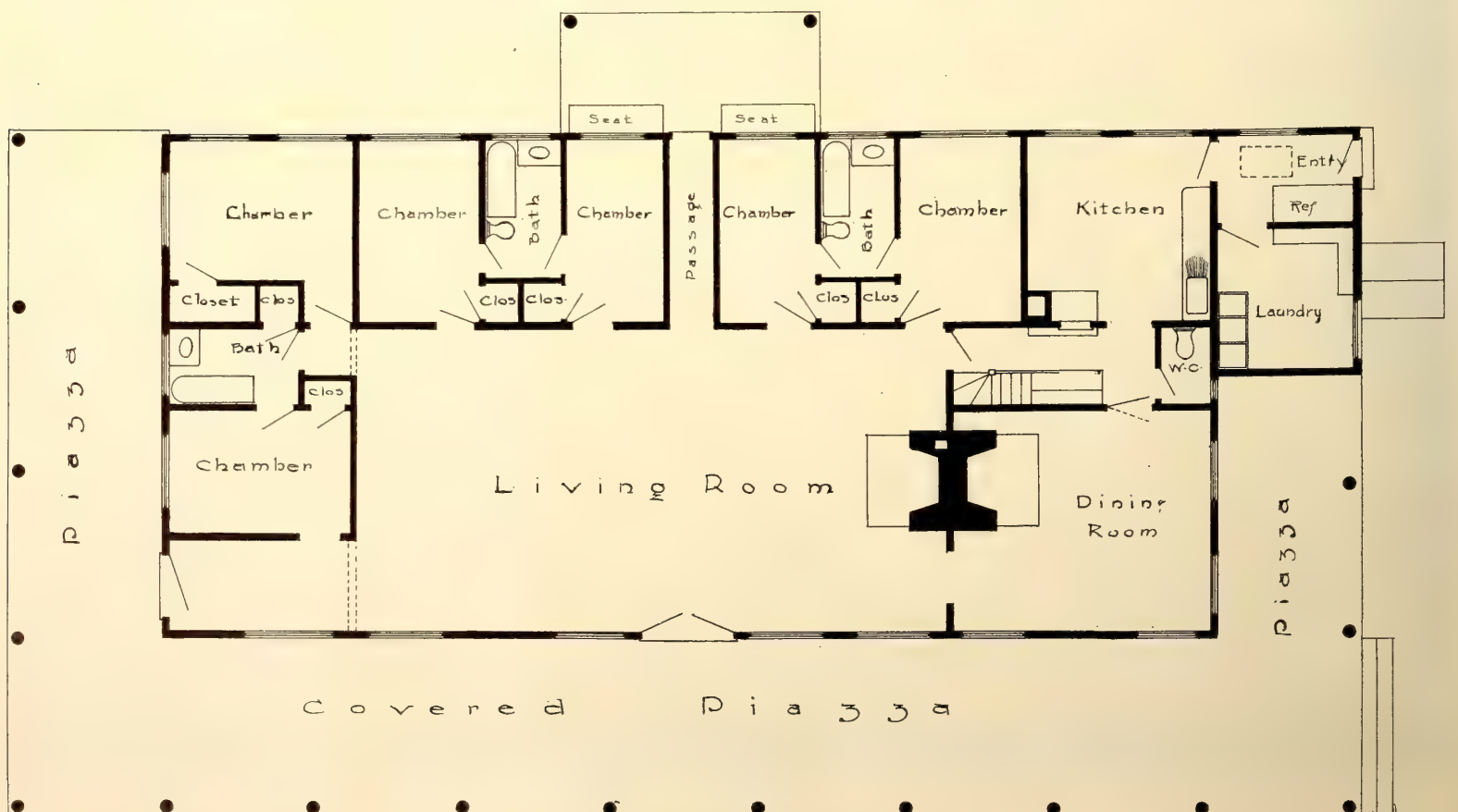
The “Bunker” is built under the lee of the rocks, close to the water's edge and overlooking Salem Harbor on the one hand and the Atlantic Ocean on the other. A study of its plan will show that it is a true type of a bungalow, with all of its rooms placed on one floor.



The Great Living-room Is Comfortably Furnished and Lighted with Many Lamps



The "Bunker" Is Built Close to the Water's Edge Overlooking the Sea





The Piazza Is the Feature of the Bungalow, and Forms an Outdoor Living-room

The main approach is from the shore side of the house, on which side the sleeping-rooms are built, while the great living-room, twenty by forty feet, is built on the water side facing the sea. A piazza extends around three sides of the building. The entire building is of frame construction, with exterior covered with shingles left to finish a silvery gray color. The roof is built as flat as is possible for a shingle roof to shed water, in order to bring the whole scheme in close touch with the ground.

The living-room is trimmed with natural yellow pine; and the rough plaster walls are tinted a mustard yellow. A fireplace, built of red brick with the facings, hearth



A Red Brick Fireplace, Arts and Crafts Furniture, and Rag Rugs Complete the Dining-room



Willow and Mission Furniture Give a Summer Effect to the Interior

and mantel of similar brick, is at one end of the room, extending to the ceiling, with the chimney piercing the roof. The room is appropriately furnished for summer use with willow and Mission furniture, in which are included the chairs, tables and ornaments. The effective lighting by numerous lamps is a striking feature. Numerous French windows of good width on one side of the room open on to the piazza, which is also furnished with appropriate summer furniture. A stairway at the end extends to the balcony, from which access is obtained to Mr. Towle's den.

The dining-room, off the living-room, is trimmed with hard wood, and has an open fireplace built entirely of brick and extending to the ceiling. The room is furnished harmoniously with Mission furniture in Flemish brown. The pantry, kitchen, laundry and shed are fitted up with all the appointments of a well regulated house. A

private staircase from the pantry ascends to the servants' rooms placed over the kitchen. A rustic fence, constructed of poles about twenty feet high, surrounds the service end of the house.

The sleeping-rooms are built in suites, with a bathroom in between each bedroom. There are six bedrooms and three bathrooms. The walls of the bedrooms are tinted and the trim is finished natural. The bathrooms are furnished with porcelain fixtures and exposed nickelplated plumbing. The late Ernest M. A. Machado, of Boston, Mass., was the architect. A private boat landing is built on the lea side of the house, from which a launch gives connection with the main land.



Some California Bungalows

By Helen Lukens Gaut

THE chief characteristics of the true bungalow are wide, low spreading roofs, which often sweep down and form covering for porches; large healthy stone or brick chimneys, patios with fountains, spacious verandas, and large living and dining-rooms, so arranged that by using portable wood screens they can be partitioned off, or thrown into one spacious apartment. Bungalows are invariably unostentatious on the outside, concentrating all beauties and elegancies for the interior. Their appearance bespeaks a blithesome, informal hospitality. The approaching guest is never seized with panic of diffidence, any more than is a bird affrighted when winging its way to some leafy branch, for a bungalow is closely akin to Nature, and is kindly and uncritical.

In India bungalows are frequently hoisted on stilts from eight to twelve feet high, an architectural maneuver intended possibly to secure the resident against creeping things. Here, however, where we have more birds than snakes, and where people have plenty to do without climbing into their houses, the Americanized bungalow can not nestle too close to the ground. Wide cemented porches are frequently laid flat on the sur-

and outdoors join hands. These porches are usually low-walled with cobblestones or klinker brick, above which is swung many a rustic basket filled with trailing vines. Porch furniture, that it may harmonize with the Japanese motif so frequently expressed in roof lines, often consists of wicker-work chairs and couches, Japanese lanterns, vases and rugs.

Sometimes a court is placed at the front of a house, as in the attractive Mission home shown in our illustrations,

or in the shingled bungalow pictured in another. Most builders, however, find it preferable, because of greater privacy and quiet, to give the court a place at the rear. These courts usually have their tiny fountain with sportive gold fish, abundance of vines and flowers and rustic seats. The beauty and restfulness of these little sun-parlors caress tired nerves and make new men out of old. Window boxes, gay with bright-hued geraniums and delicate greenery, are like smiles on the face of a bungalow. These boxes, often of rustic design, are popular, for they add greatly to the appearance of a home. The bungalow, by rights, demands a happy, riotous untrimmed garden of ferns, grasses, papyrus, clambering roses and wide-spreading trees, but instead of always having what it should, it is often embarrassed by a closely shaved lawn, symmetrical borders,

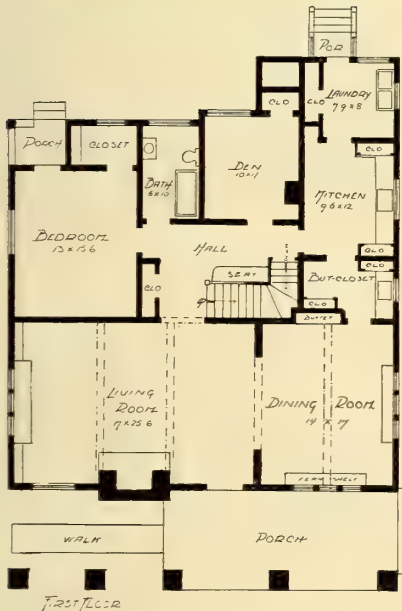


The Spacious Veranda Has Cemented Floor and Steps, and Roof of Heavy Rough Timbers, Supported by Posts on Cobblestone Foundations



The Bungalow Gives Inspiration for the "Simple Life"

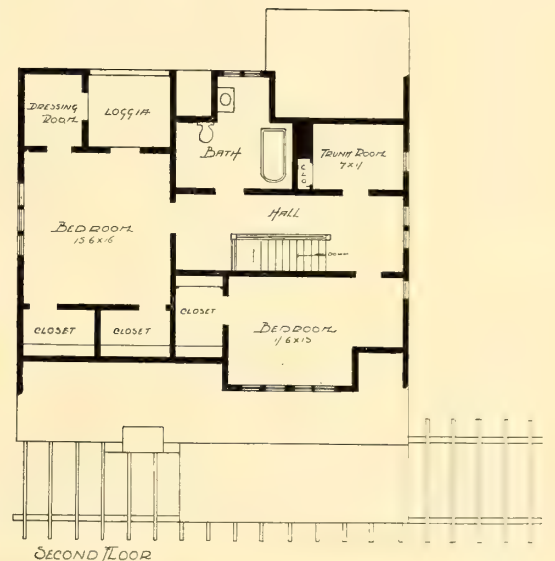
holding the plaster. To get a rough effect like that of the old Missions, the plaster should be dashed on recklessly. If the builder attempts to reduce the cost by dispensing with the vertical boards and putting his plaster lath on the studding, he will have poor results, for in time, plaster so applied will crack and come off. To be strictly concordant a plastered house should have a tiled roof. A shingled roof on a Mission house is as unnatural as a rooster without



prim shrubs, and roses so tight-laced they haven't breath for one full blossom.

There are various ways of finishing exteriors. Walls are shingled, covered with split redwood shakes, clapboarded, boxed and plastered, according to the ideas of the builder. Rough lumber is used exclusively for outside work for bungalows. Clapboarding and boxed sidings are least expensive, for they require less labor, and the mate-

tail feathers. The square Mission cottage shown here would be charming if roofed with terra cotta tiles, or metal shingles in the shape of tiles. As it is, it looks as if it had lost its best friend. This style of cottage is better suited for a shingled exterior than a plastered one, and would make an ideal little



rials are cheaper. Shingled and shaked sidings are pleasing, and plaster is always attractive, though the latter is not as appropriate for small houses, as for the larger, more pretentious two-story Mission homes. The historic Missions, from which the idea for plastered homes originated, are large, grand and imposing, and the very small plastered house looks like a youngster in kilts aping his grandfather.

A plastered house, to be satisfactory, must be well constructed. Rough, foot-wide boards should first be nailed vertically to the studding. These should be stripped with lath from twelve to fifteen inches apart, and on these should be nailed metal lath for



The Huge Chimney Bespeaks Hospitality, and Many Hanging Baskets Filled with Trailing Vines Make a Happy Porch Trim



A Pleasing Combination of Cement, Crimson Roof Tiles and Cobblestones
Cost \$5,500



An Artistic Hillside Bungalow with Shingled Exterior and Paneled Interior
Cost \$5,000



Elegance and Dignity Characterize this Home. The Interior Finish Is of Solid Oak. Cost \$6,000



The Flower-wreathed Entrance Court Is the Soul of this Bungalow
Cost \$3,000



The Charm of this Bungalow Lies within, in Its Wide Stone Fireplace and Richly Paneled Walls. Cost \$3,000



An Unpretentious Bungalow Full of Good Nature and Conveniences
Cost \$4,000



The Typical Bungalow with Wide Spreading Eaves and Spacious Veranda
Cost \$3,500



An Individual Type, Artistic, Roomy and Pleasing. Showing How Shingles Can be Used with Good Effect. Cost \$4,000



A Striking Bungalow Design, in which the Massive Stone Chimney Bespeaks Warmth and Cheer. Cost \$6,000



Admirable Design for One-story Mission Home. Entrance Court with Fountain and Flowers Is Charming. Cost \$3,500



An Attractive Little Shingled Bungalow, in which Comfort and Convenience Are Embodied. Cost \$1,800



Attractive Ten-room Shingled House with Porch and Supporting Pillars of Fieldstones



A Pleasing Street Approach Gives Style to this Modest Bungalow Cost \$4,000



Cottage of Cement with Shingled Roof and Wide Eaves Cost \$2,500



Charming Simplicity. Wide Plate Windows Admit Abundant Sunshine Oaks Form Perfect Setting. Cost \$4,000



Great Stone Chimneys, Plate Glass Windows and Elegance of Construction Cost \$6,500



Straight Lines, Simple yet Comfortable Furnishings, and the Wide Brick Fireplace Make the Living-room an Ideal Resting Place

home if duplicated in wood. The price of tiles varies in different localities, but averages from 50 per cent to 75 per cent. more than the price of shingles, so it can readily be seen why builders of moderate means try to get on without them.

An admirable scheme to get rid of this roof expense is to build a Mission home with rambling fire walls, as shown in the illustrations. The walls, rising as they do above the roof line, permit a flat roof of tin or rubberoid. This building is one of the most winning examples of the small Mission home. Its lines are all frankly simple and modestly picturesque, and there are no foreign discordant elements to tease the eye. The plastered house shown in another illustration is strikingly elaborate—in fact, it might be called a trifle sporty. The passerby invariably turns about and gives it a second glance, just as he would glance at a stunningly gowned woman, but though it is extremely attractive, it lacks the expression of quiet, reposeful domesticity, so apparent in the plastered house already referred to as excellent. In moderate climates plastered houses give perfect satisfaction, but in localities where heavy frosts are rampant, this style of building is a disappointment, for if the walls become damp and freeze, the plaster cracks and drops off, and the house is left unpetticoated and ashamed.

It seems to be the general supposition that the rustic bungalow is not adapted for use in cold climates, that because of its thin walls and general light construction, it is exclusively a tropical or semi-tropical

belonging. If one likes the type, however, there is no reason why he can not have a bungalow, even though he lives next door neighbor to the North Pole. By using heavy studding for the framework, clapboards for sidings, and plastering the inside walls, he may have a house that is both warm and substantial, yet in outward appearance an exact duplicate of the bungalow.

A bungalow is scarce worthy the name unless it possesses a huge brick or stone chimney with a fireplace. An illustration shows a chimney arrangement that gives both dignity and character to the face of the bungalow. It is a climax in the architectural scheme. To the prospective guest it is an indi-

cation of hospitality, of warmth and cheer within. This fashion of building a chimney at the front, instead of at one side, or through the center of the bungalow, is fast gaining in popularity. The advantage of running the chimney through the center is in being enabled to have two or three fireplaces by using the one flue.

Lattice windows on swinging sashes are principally used in small houses, but it is astonishing the amount of light the lattice keeps out, and one who has had experience with both lattice and plain glass windows will ostracise the lattice for a nuisance and sunlight exterminator, and substitute for it a broad open-faced window that reflects glories of landscape and sky. True, lattice windows help in making a charming exterior, and a good effect is obtained by placing them at the top and on either side of the large glass. French glass



Looking from the Living-room Into the Dining-room. Showing Paneling, Block Supports for Plate Rail, and China Cabinet

doors are preferable to those of wood, for opening into the court—in case a bungalow boasts such a luxury. There is wide scope for originality in designing the front door, which is, in many homes, an expression of the personality of the builder.

A bungalow is not necessarily small. It may have an immense number of rooms connected in rambling fashion around a court, so that one can get up an appetite for breakfast by strolling through corridors and courtyard, for a quarter of a mile or so—the space between bed-chamber and dining-room. In one of these larger bungalows, the rooms of which surround a patio, segregation of rooms to be used during the day, and those to be used at night, should be considered. Dining-room, living-room, den, music-room, kitchen, maid's room, etc., ought to be connected, while bedrooms and baths should take up the other side of the house.

The methods of interior finish are many. Beamed ceilings and wainscoted walls are extensively used. Beams of every dimension, from small planed strips that barely cover the joints between the ceiling boards, to great rough logs from the forest. If one admires the extreme in rustic, unplanned beams, two by ten inches, can be hacked, hit and miss with an ax, then scorched and blackened. To correspond with such a ceiling, walls should have paneling of boards and battens five or six feet high, finished at the top with a six-inch plate rail. Above this, and extending to the ceiling, either dark red or olive-green burlap adds a pleasing bit of color. Such a room must—to be well mannered—have a wide stone mantel with cozy grate, also two or three couches made inviting with gay pillows, wide cushioned chairs and foot stools. Plenty of windows with hangings of yellow or red silk over sheer white swiss, a mirror or two set panel-like into the walls with dark wood frames, a few oil paintings—engravings are not enlivening enough—and a number of bright rugs, turn the bungalow living-room into a haven of rest.

For paneling interiors it is well to select boards with showy grain, for after the wood stain is applied this grain shows prominently, and if good, gives character to the rooms in which it appears. In bungalows of lightest construction, boards one inch in thickness, rough on the outside and planed on the inside, are nailed vertically from floor to roof line, the joints being covered both inside and out with battens. This forms a rough paneled exterior and a finished interior. In such a bungalow, which is designated as "box house" style, studding is seldom used. The floor has its foundation, and the roof is supported by the boards that form the walls. Many house builders who can not quite acquire a liking for what they call the "new-fangled backwoods" rusticity, taken into their parlors, and yet who like bungalow exteriors, compromise by having their "insides" plastered and their ceilings boxed. By doing this they are relieved of the fear of being punctured by red-wood slivers when they hurriedly turn a sharp corner when going from one room to another. A striking result can be obtained by tinting the plaster a deep cream, and having all the woodwork, including a ceiling

beamed with two by tens, stained black. A beamed ceiling makes a small room stuffy. Battens only are suitable for covering ceiling joints in small apartments.

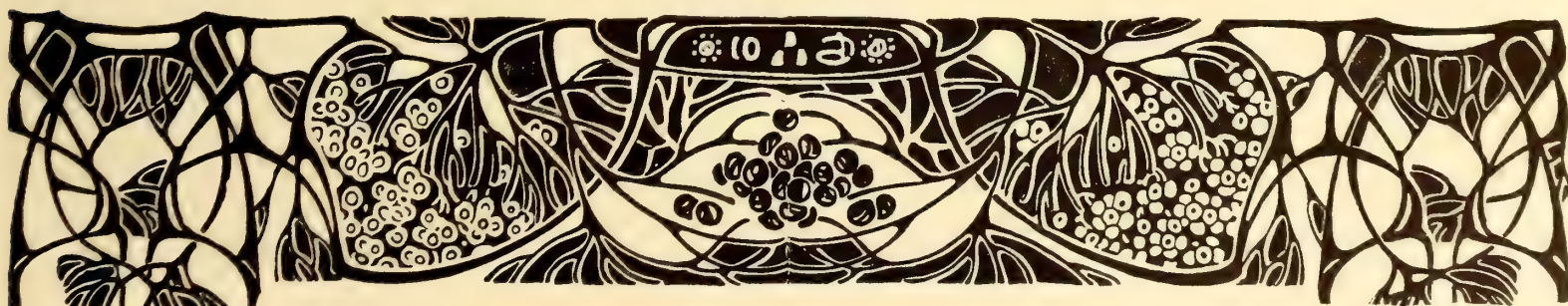
It is well to have the attic floored and a gable window or two put in the roof. A narrow stairway can lead up from the kitchen or back hall. This attic room will afford a convenient place for storing trunks and boxes, and will give the housewife a space for sewing, which, being out of the way, need not be tidied up after each "setting."

Like the modest violet, the bungalow is modest and retiring. It does not parade the landscape in a gay coat of paint, but is garbed to correspond in color with the deeper greens and browns of woods and fields. Mission homes, both large and small, wear either the natural gray of the cement, or are tinted a delicate cream. They, too, agree and blend with nature, and form an admirable background for trailing vines and fragrant, rollicking roses.

Most every man has his own idea of a home, and as scarce two men have identical notions, there is startling variety of architectural expressions, in fact they are acrobatic, twisting and leading and turning back-somersaults, until even the liveliest observer fails to get hold of any definite line. They are just a mixed up jumble, but, like the kaleidoscope, this jumble is often fascinating.

If the "shades" of the original bungalows of India should make a tour of California and see thousands of their representatives scattered about cities, towns and fields, they might justly show surprise, vindictiveness and perhaps horror, for nowadays everything from a shanty to an elaborate and expensive two-and-a-half-story house is specified as "bungalow." There is no more legal relationship between many of these houses and the true bungalow than there is between a zebra and a tadpole. It sounds nicely to call a shanty a bungalow, just as it is more pleasing to call a rat a rodent or a louse an anoplurous insect.

The accompanying illustrations represent a few true bungalows, also some pleasing types of cottage homes, in which, as in the Christmas plum pudding, one finds a pleasing bit of this and that, mixed and molded into a harmonious whole. A cottage can accommodate itself comfortably anywhere, but a bungalow, to be correct, should have bungalow environment. It is as out of place on a narrow city lot as is a prairie dog on a church spire. It appears at its best when nested on oak-strewn acres, or in quiet woodsy glens, where sunlight filters through foliage, and some near-by stream sings restful lullabys. But bungalows, like many other things, have a faculty for getting out of place, and their type is in greatest evidence on crowded residence streets, where quite unabashed they cuddle among more stately imposing homes. The effect of this architectural mixture is a trifle incongruous, and interferes somewhat with civic symmetry. Everyone, however, can not possess an oak grove or a cañon, and as all love the unpretentious modest bungalow with its plain face and warm heart, it is built anywhere and everywhere, the owners erecting about it a wall of happiness so wide and high they are unable to see discrepancies on either side.





Fieldstone and Natural Shingle Form the Exterior Walls of the House

A Bungalow at Bryn Mawr Park, New York

Costing Thirty-two Hundred Dollars

By Ellis A. Linden



THE bungalow at Bryn Mawr Park, N. Y., for Sullivan W. Jones, Esq., an architect of New York, is perhaps one of the most attractive buildings of its class in that vicinity. To build a bungalow in the country, and have it depend upon the effectiveness of its surroundings in the conformation of its layout with the serviceable adaptation of its plan and those features in the immediately surroundings of the build-

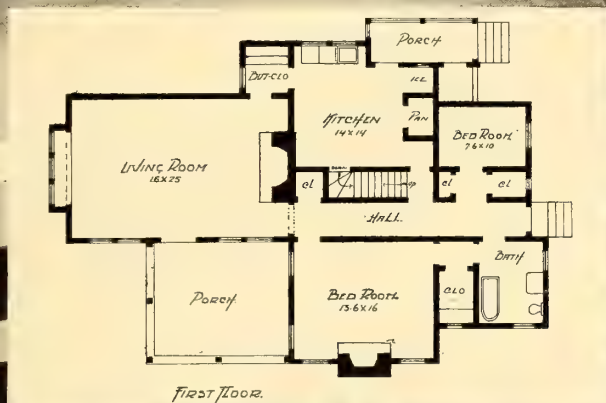
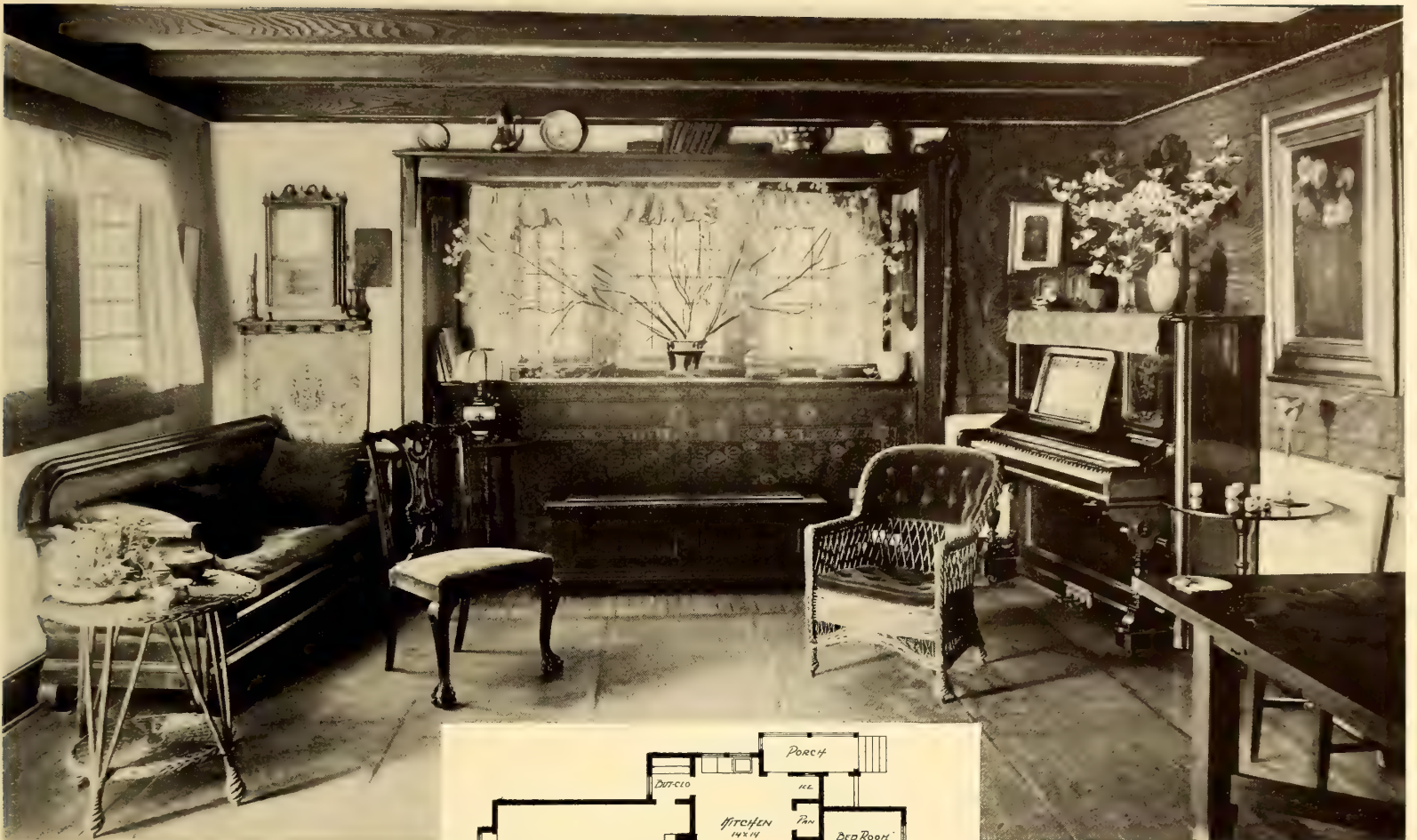
ing which are of most practical and esthetic interest, is wherein the beauty lies in the designing of a bungalow of this character.

Mr. Jones has demonstrated his ability in designing a most unique bungalow of no small moment.

There is a fieldstone foundation which incircles the cellar built under the entire house. Above this foundation there is a structure which is kept quite close to the grade, thereby enhancing the value of its elongated effect. This structure



The Stone Chimney Is the Architectural Feature of the Exterior



A Flower Window at the End of the Living-room Is Unique in Its Effect
A Great Stone Fireplace Is Built in the Living-room

is covered on the exterior framework with matched sheathing, good building paper, and then white cedar shingles left to weather finish while the trimmings are painted white. The quaint small-lighted windows and the stone chimneys are features of importance for a bungalow.

The porch, one step up from the grade, has a floor of red brick laid in herringbone fashion.

A Dutch door opens into a large living-room, which is used both for living and dining purposes, thereby carrying out the original characteristic of the New England living-room, which, like its prototype, its kitchen, was where the family life centered, where the dining table was spread, and the large cranes hung in the large open fireplace from which steaming pots swung over the blazing coals. This living-room is more modern, however, for it has its large stone fireplace, built of selected fieldstone taken from the local stone wall fences, with two cobblestones protruding from the face and supporting a wooden shelf. At the opposite end of the room there is an attractive bay window with flower shelf, above which the wall is pierced with three small-

lighted windows. The trim of this room is chestnut stained a soft brown. The ceiling is beamed with a similar chestnut. The walls in the living-room and elsewhere are of two-coat work, finishing in a brown coat.

A small butler's pantry, well fitted up, forms the connecting link between the living-room and kitchen; the latter is trimmed with whitewood finished natural. It contains a range placed against a red brick chimney breast, sink, laundry tubs, ice box, pantry, rear porch, and stairs to the cellar.

The remainder of this floor is trimmed with whitewood painted, and it contains the owner's room furnished with an open fireplace, large closet, a bathroom furnished with porcelain fixtures and exposed nickelplated plumbing, a large store closet, a linen closet and a servants' bedroom. A stairway leads up to the second floor, which contains two extra bedrooms and storage space. The house has oak floors, except those which are in the bathroom. It is heated with hot-water system, with the boiler and fuel room placed in the cellar. This house cost \$3,200 to build in the year 1903, including all the materials and labor complete.

Types of Bungalows

By Roy M. Smith



SO MUCH has been said elsewhere in this magazine anent the bungalow, its building, its furnishing, its adaptability, its usefulness, that almost every aspect of this most interesting type of house may seem to have been adequately treated. But I have been told that the final word on this subject has not been uttered, and have been requested to present a brief note on various types of bungalows. Many of them are shown in the illustrations printed in this issue; yet there has been no attempt to list these bungalows in a formal way, nor, indeed, as I understand it, to present every possible bungalow type.

How difficult this would have been is amply evidenced in the many sorts of bungalows shown. They cover a great range in size, cost, style and situation, yet the great central fact that is brought out clearly and distinctly is that every one of these pictures represents a bungalow. The very obvious conclusion, therefore, may at once be drawn that the bungalow, while a type of dwelling in itself, is a most varied type, lending itself to a great variety of needs and requirements, both of convenience and of cost. In this, I think, lies one of the strongest claims the bungalow has on the consideration of home builders. It may be taken as likely, I think, that the bungalow will not answer the requirements of every house owner, and will not meet the conditions imposed by every housekeeper. This, however, does not detract from the general value of the bungalow as a thoroughly adaptable type of dwelling. It is, in truth, so generally available that it may well be termed the home universal.

Like every other sort of dwelling the bungalow naturally ranges itself in the ranks of houses of great, considerable, moderate and small cost. Surely these terms may be used to describe every sort of a dwelling now built for human needs. The bungalow of great cost is, of course, a rare structure, and is chiefly used for the mountain homes of rich men. Such dwellings stand apart by themselves, exactly as the dwellings of such fortunate folk elsewhere stand apart and in a class by themselves. It would be truer to describe them as mansions built on bungalow lines rather than as large bungalows, since in construction and in furnishings they violate many of the strict requirements of the bungalow type.

There are many less costly bungalows which constitute a

class by themselves as bungalows of high grade, which may be truer bungalows in style and in construction than the more splendid play-places of the rich. But the larger, and in some respects the most important, class of bungalows are dwellings of comparatively moderate cost, many of which, from their type, are actually of lesser cost and of much simpler equipment than dwellings of corresponding use built in another way. These houses are much more apt to be the true bungalow than the more expensive and costly varieties.

I need not here rehearse the definition of a bungalow, nor trace its development from the summer homes of distant India to its adaptation to the cold climates of America. A detailed study of the changes and transformations presented by this evolution would not be brief. It is quite sufficient for our present purpose to remember that the evolution has been accomplished, and that the bungalow to-day is a dwelling of a definite type that has been adapted to almost every possible climatic condition and almost every need. This is really the important thing; the steps by which this end was reached belonging more to the archeology of building than containing any facts of present useful availability.

But because the bungalow has moved away from its primitive form does not destroy the integrity of the modern bungalow. Word-purists may, indeed, argue to the contrary, although the point is of quite unimportant consequence. The great fact is that we have a bungalow type, a type almost invariably recognizable at a glance. It is true that the temptation to move away from the simplicity of the primitive type is sometimes too great to be put to one side; and in this lies the greatest danger of our modern bungalow building; or that an ornate structure be designed to take the place of the dwelling whose primitive conception is simplicity of the simplest.

The most dangerous factor in modern bungalow building is the tendency to over-ornamentation. It is the old story of overdoing a good thing, and is a tendency that seems almost unavoidable in building. It is always so much easier to string ornaments on to a building than to take them off; yet the solution of the problem—if it be a problem—is not to put them on in the first place! A bungalow practically ceases to be a bungalow when over-ornamented and enriched with costly trimmings, for its very essence is simplicity in and out.

How I Built My Log Bungalow

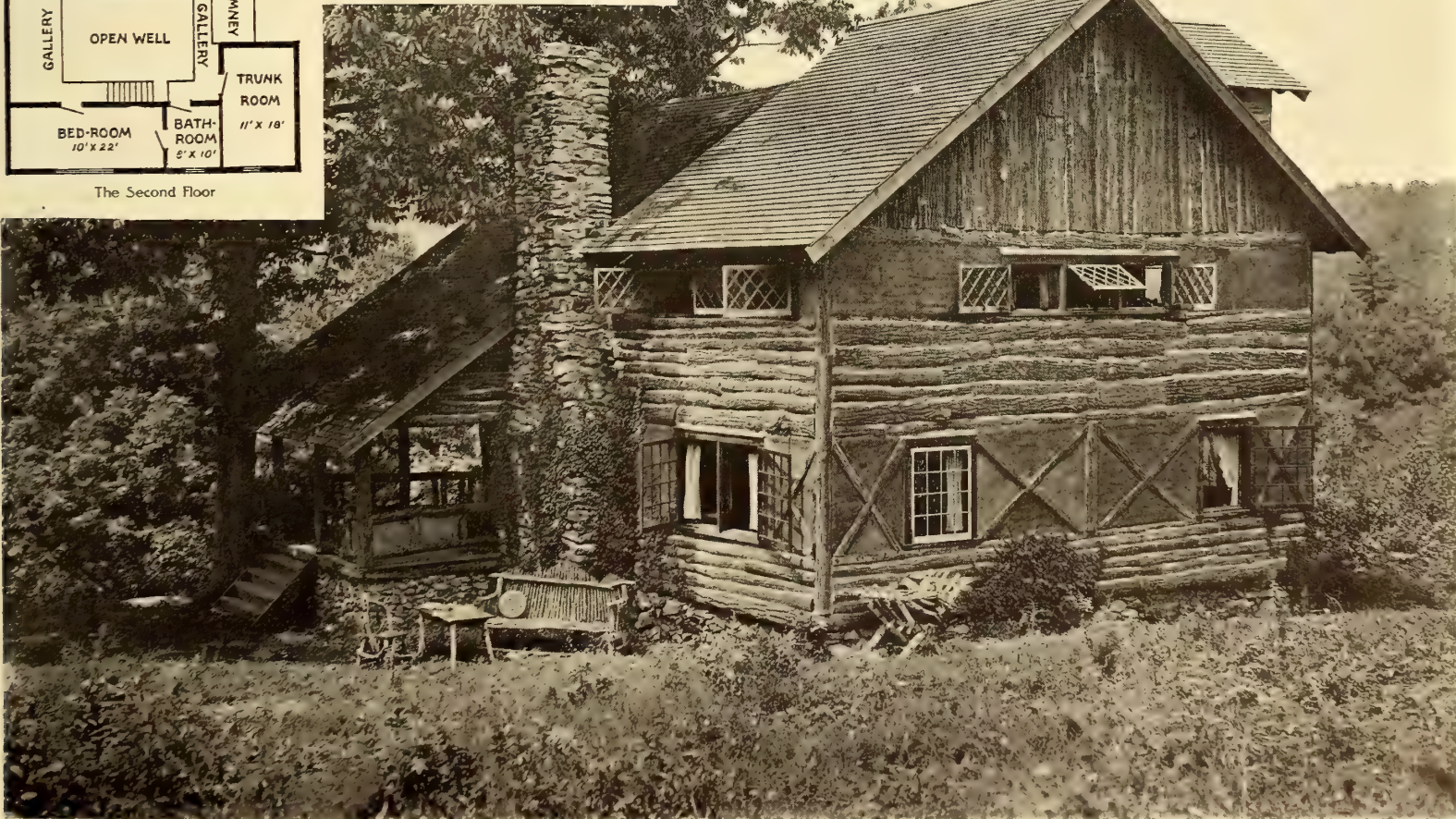
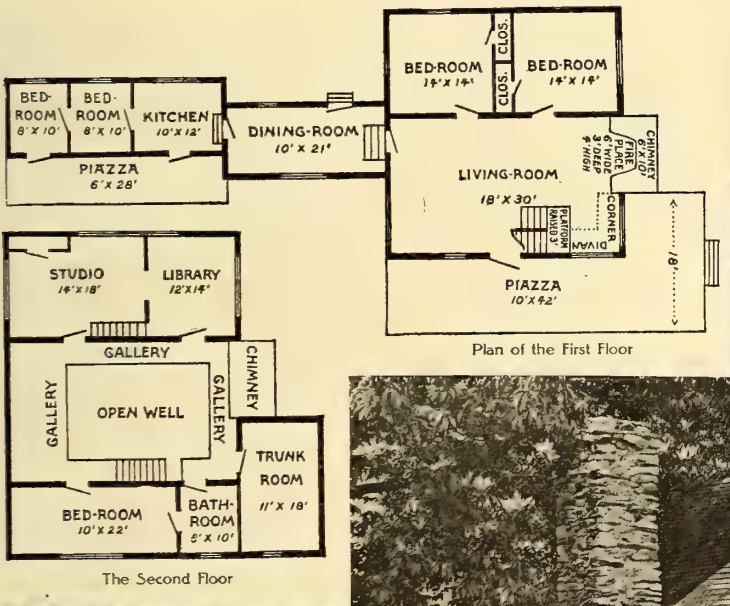
“Anoatok,” the “Home of Wind”

By Edward Fesser

THE first thing to do is to choose a site on a side hill, and where there is a good spring within easy reach. A well-built cistern will supply enough water for every purpose except drinking and cooking. The reasons for building on a side hill are twofold. First, it will insure perfect drainage; and, secondly, there will be enough space left underneath the building for a good sized cellar without having much excavating to do. After you have carefully drawn up your floor plans, elevations and specifications, get some trustworthy builder in your neighborhood to help you construct the framework, flooring, roof, inside sheathing and partitions, and have a first-class mason build your foundation walls, stone chimney and fireplace. Owing to the fact that in some parts of the country perfectly straight trees of equal dimension are scarce and hard to secure in quantities, the modern log cabin is built of slabs. These slabs are nothing more

than the refuse leavings of the saw mill, the first four outside slices of the log with the bark on, which are piled up to be cut into firewood, and they can be procured in almost any quantities. If a careful selection be made from these piles enough good slabs can be selected to cover the whole exterior in such a way that they will have the appearance of whole logs. The wood should be chosen with the roughest bark for the exterior and the smoothest for the interior wainscoting—chestnut, hickory and oak are the most durable for outside wear.

Great care should be taken in constructing the chimney, otherwise it will surely “smoke” and prove a source of endless discomfort. The main construction is done in rubble-work; the larger and rougher the stones the better. These are carefully laid in with cement, after which all the cement showing from the outside is dug or scraped away before it has firmly set. The inside wall of the chimney should be made of brick or tiles, or the whole inside surface smoothed



“Anoatok,” the “Home of Wind”: the Author’s Home-built Studio-bungalow at Kensico, New York

down with cement and the bottom of the flue built in the shape of a cone or funnel. The top of the chimney should extend at least two feet above the highest point of the house, and all the branches of trees or foliage cut away above the opening. A square flat stone or piece of slate is placed on four corner pillars, capping the chimney to keep out the rain.

The fireplace can be built square or with a curved top, according to taste. Open niches are left in the masonry—a long one directly over the fireplace opening which will serve as a mantel, and smaller ones here and there for bric-a-brac. A hob is made by having one large flat stone project on one side about eighteen inches from the masonry. To build the hearth a strong box is built under the flooring extending along the whole front of the chimney, about three feet in width and six inches deep. This is filled with concrete and the name of the cottage done in Mosaic by embedding the stones half way in the cement—small white ones for the lettering and darker ones for the filling in. These stones can be gathered up after the sand has been sifted by the masons. If you are near the seashore an infinite variety of stones beautifully tinted by nature can be picked up and used to advantage.

The nailing of the slabs to the outside studding is a very simple matter. Leave enough space between the slabs for the cement filling to "clinch," and this latter process is accomplished by nailing strips of half-inch wire mesh with

small staples on all the open spaces; but this must be done from the inside. Then mix two parts of sharp sand with one part Portland cement and a generous amount of hair. When applied both inside and outside between the slabs this cement will be found to clinch in such a way that it will be hard to remove with a hammer. If applied only on the outside the seasoning and natural shrinking of the wood will cause the cement filling to drop out in a very short time. The outside panels, if there are any in the plans, can be treated differently. Use any kind of old boards for a background—then bevel the two edges of ordinary laths in such a way as to form an undercut groove when the beveled edges face the panel. Nail these laths three or four inches apart and then plaster the whole surface with the same proportionate cement mixture mentioned above. When the panels are dry and hard they can be tinted red or any desired color with shingle stains.

For the rustic work on the piazza locust is very effective wood, as the bark is very rough and irregular; but if a smooth wood is preferred use cedar. Both these woods will stand the weather for many years. To clean the cedar bark use a coarse wire brush. After the staircases are in place the newel posts, railings and fancy work are made of white birch, and this is continued right around the open gallery. White or silver birch is very effective for indoor work and for rustic furniture, but it must never be used where it will be exposed to the weather or it will soon rot. It must be



The Rough Irregular Surface of Locust Logs Is Admirable for the Rustic Work of the Piazza

handled very carefully, as the bark, when green, is very tender and will curl up when bruised or torn.

The rafters or floor beams are left just as they are, uncovered, and stained dark brown to give the look of antiquity. The doors and windows are specially made to order from a window and sash factory. A large, heavy, old-fashioned Dutch door in two parts can be used for the main entrance. This should be of plain black walnut thoroughly oiled and waxed. Simple doors of finished chestnut are used for the inner rooms, and when stained green with shingle stains the beautiful grain of the wood stands out in bold relief. Casement windows are appropriate, and the square panes—sixteen to a window—can be varied to the small diamond panes where desired. Strong patent fastenings

must be used on these windows, otherwise much damage will result by the force of the wind when they are left opened.

The interior must be decorated and partitioned off according to the requirements of the occupant. The large window, twelve feet high by eight feet wide facing north, which is built out from the gable in the room, will give more than enough light for any purpose. The floor is partitioned off in such a way as to allow plenty of space for the living-room and just enough room on the south end for a small, comfortable bedroom, and additional floor space is made over the latter by flooring it over, thus forming a broad gallery with a little staircase and railing made of white birch leading up to it. This gallery will be found very useful for storage purposes.

In order to have the kitchen and servants' quarters as far away from the house as possible they are placed in an entirely separate building about twenty feet away, but joined to the main house by an inclosed passageway which is easily converted into a cozy little dining-room with broad windows on both sides. A rough collapsible extension table is ingeniously put together in such a way that it can be carried without trouble to any part of the house—to the front porch, or placed out under the trees when the small dining-room is found too cramped for anything more elaborate than ordinary domestic uses.

It would take more space than is allowed me here to go into all the details of inexpensive interior decorations and of the many pieces of rustic furniture, which could be made by means of various woods with the bark on, with a few simple tools, and last, and by no means least, a whole lot of good taste and common sense in order to have everything in keeping so as to prevent clashes of contrast as regards materials as well as color.



Inside the Studio-bungalow

The following figures will give an idea of the approximate cost of such a log house to build, the prices varying according to the locality and the relative values of materials and labor, as compared with those given below, which are based on the cost at Kensico, N. Y.

MASONRY—

Building dry foundation—main house....	\$55.00	
“ piers under kitchen in cement...	25.00	
“ wall and piers under piazza in cement	50.00	
“ chimney, fireplace, etc.....	90.00	\$220.00

BUILDING—Contract price for—

Framework, flooring, partitions, inside sheathing, doors and windows, staircases, kitchen, servants' rooms and dining-room	\$1,750.00	
Roofing—best cedar shingles.....	150.00	1,900.00

EXTERIOR—

15 loads slabs @ \$1.00.....	\$15.00	
Hauling same from mill.....	15.00	\$30.00
4 bbls. Portland cement.....	9.00	
Sand	4.00	
Nails	3.50	
Wire mesh	5.50	
Labor putting on slabs.....	35.00	87.00
		<u>\$2,207.00</u>



Seven Hundred Old Railway Ties Transformed Into a Bungalow



Ties in Their Natural Silver Gray and Posts and Trim Painted Green



The Porch Above the Creek

A Bungalow Made

By Ma



THE comfort and convenience of living in a bungalow can only be appreciated by those who have experienced it. There is something delightfully informal about bungalow life, and everything tends to keep expense down, and not only can the simplest kind of furniture be used, but often the services of a maid can be dispensed with, and a simple life can be enjoyed where the house has been planned to entail only a minimum amount of labor.

Birchwood bungalow is very accessible, being within a stone's throw of the trolley line at Ridley Park, one of the beautiful country places near Philadelphia. There are many points of interest about this bungalow. One is, that it was designed without the help of an architect, the original owner, Mr. Norman Sloane, and a builder, planned it together. They have succeeded in building a very artistic and practical bungalow.

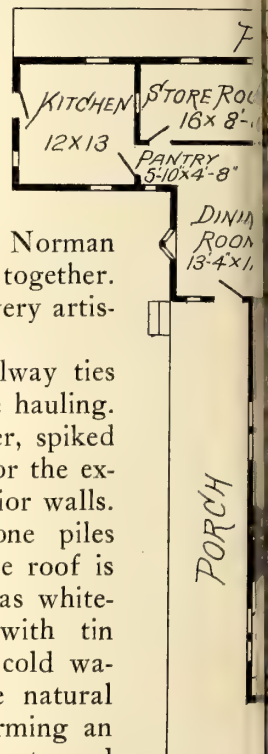
It was built out of 700 old railway ties which cost five cents a piece and the hauling. The ties were laid one upon another, spiked and cemented with the round side for the exterior, and the flat side for the interior walls.

The foundations consist of stone piles sunk three feet in the ground. The roof is made of a wooden frame which was white-washed. This was then covered with tin which was afterward painted with cold water paint. The ties were left the natural color, the silvery gray of these forming an admirable contrast to the rough posts and trims, which were painted green.

There is something quite Japanese in the appearance of the bungalow, and the choice of location is a particularly happy one. One side overlooks a deep ravine through which the picturesque Ridley Creek flows. The porch is built almost entirely round the house, and on the south and west sides branches of trees spread over the piazza, giving it a most beautiful bowery appearance. This can be seen in looking at one of the small illustrations taken before the leaves were fully out, so as to get a glimpse of the bungalow.

The present owners, Mr. and Mrs. Albert B. Mears, have furnished the bungalow appropriately, and in perfect taste. They made several valuable changes which considerably improved it.

The door opens into a small square hall which presents a charmingly rustic appearance with the flat side of the ties painted a dull, soft green. Originally the walls were orange, but when Mr. Mears bought it, he painted the walls green, putting two coats of green cold water paint over the orange. This has accidentally given a most artistic appearance to the walls, as there is a



From Railway Ties

man

cloudy appearance of purple varying the dull green in very attractive manner.

The same treatment is carried out in the walls of the living-room. They are charmingly broken by wooden shelves which are painted green like the rest of the walls. The irregular placing of these adds no little to the charm of the interior. One end is filled entirely by a generous fireplace built of local rough gray stone heavily pointed with gray plaster. The walls are broken considerably by doorways as it entered from the hall on

one side and opens out on to the porch above the creek on the other. Opposite this doorway is another leading to the dining-room, while opposite the fireplace is a wide doorway leading to the rest of the house. Green is the keynote of this room. The floor being somewhat rough has been entirely covered with plain green filling. Relief is given by simple Mission furniture stained brown, upholstered in tan leather.

The dining-room is quite as attractive in its way as the living-room. The walls consist of pine boards oiled, relieved by trims of white woodwork. The room is in blue and yellow accented by a strong note of blue in the Japanese plates. A portiere of blue canvas hangs in the doorway leading into the living-room, while the opposite doorway is also hung with a similar curtain. Particularly attractive

are the fumed chairs stained brown with their wooden seats. The sideboard is carefully chosen, and is not too large for the room. A wide, low window, hung with white swiss curtains and blue inner curtains, overlooks the porch. The sepia platinumypes are framed in brown, and make a pleasing contrast to the yellow walls. The pine ceiling is left unfinished, but is relieved by white painted striping. The large doorway with its iron latch opens directly on to the porch. The floor is covered with rug of old blue.

Returning through the living-room, and going through a passage we find ourselves in a cheery little dining-room. The floor is covered with matting, and the walls of pine are painted ivory white.

The cost of building such a bungalow would be about \$1,500 to-day, but when the bungalow was built several years ago it cost only \$1,000. When one realizes that the ties from which the house was built cost only \$35.00 it can readily be understood how very economically bungalows can be erected by making use of them. The three fireplaces cost \$180.00.



The Corner Fireplace of the Sitting-room



The Living-room Fireplace Completely Fills One End



The Dining-room Is Walled with Oiled Pine Boards Relieved by White Trim



Seven Hundred Old Railway Ties Transformed Into a Bungalow



Ties in Their Natural Silver Gray and Posts and Trim Painted Green



The Porch Above the Creek

A Bungalow Made from Railway Ties

By Ma Truman



HE comfort and convenience of living in a bungalow can only be appreciated in a very attractive manner.

by those who have experienced it. The same treatment is carried out in the walls of the living-room. They are charmingly broken by wooden formal about bungalow life, and everyshelves which are painted green like the rest of the thing tends to keep expense down, as walls. The irregular placing of these adds no little to not only can the simplest kind of furniture the charm of the interior. One end is filled entirely by

ture be used, but often the services of a maid can be dispensed with, and a simple life can be enjoyed when the house has been planned to entail only a minimum amount of labor.

Birchwood bungalow is very accessible, being within a stone's throw of the trolley line at Ridley Park, one of the beautiful country places near Philadelphia. There are many points of interest about this bungalow. One is, that it was designed without the help of an architect, the original owner, Mr. Norman Sloane, and a builder, planned it together. They have succeeded in building a very artistic and practical bungalow.

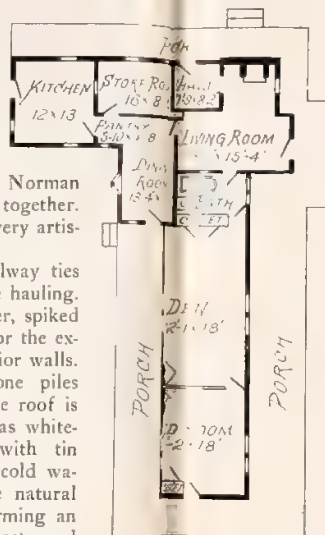
It was built out of 700 old railway ties which cost five cents a piece and the hauling. The ties were laid one upon another, spiked and cemented with the round side for the exterior, and the flat side for the interior walls.

The foundations consist of stone piles sunk three feet in the ground. The roof is made of a wooden frame which was white-washed. This was then covered with tin which was afterward painted with cold water paint. The ties were left the natural color, the silvery gray of these forming an admirable contrast to the rough posts and trims, which were painted green.

There is something quite Japanese in the appearance of the bungalow, and the choice of location is a particularly happy one. One side overlooks a deep ravine through which the picturesque Ridley Creek flows. The porch is built almost entirely round the house, and on the south and west sides branches of trees spread over the piazza, giving it a most beautiful bowery appearance. This can be seen in looking at one of the small illustrations taken before the leaves were fully out, so as to get a glimpse of the bungalow.

The present owners, Mr. and Mrs. Albert B. Mears, have furnished the bungalow appropriately, and in perfect taste. They made several valuable changes which considerably improved it.

The door opens into a small square hall which presents a charmingly rustic appearance with the flat side of the ties painted a dull, soft green. Originally the walls were orange, but when Mr. Mears bought it, he painted the walls green, putting two coats of green cold water paint over the orange. This has accidentally given a most artistic appearance to the walls, as there is a



one side and opens out on to the porch above the creek on the other. Opposite this doorway is another leading to the dining-room, while opposite the fireplace is a wide doorway leading to the rest of the house. Green is the keynote of this room. The floor being somewhat rough has been entirely covered with plain green filling. Relief is given by simple Mission furniture stained brown, upholstered in tan leather.

The dining-room is quite as attractive in its way as the living-room. The walls consist of pine boards oiled, relieved by trims of white woodwork. The room is in blue and yellow accented by a strong note of blue in the Japanese plates. A portiere of blue canvas hangs in the doorway leading into the living-room, while the opposite doorway is also hung with a similar curtain. Particularly attractive

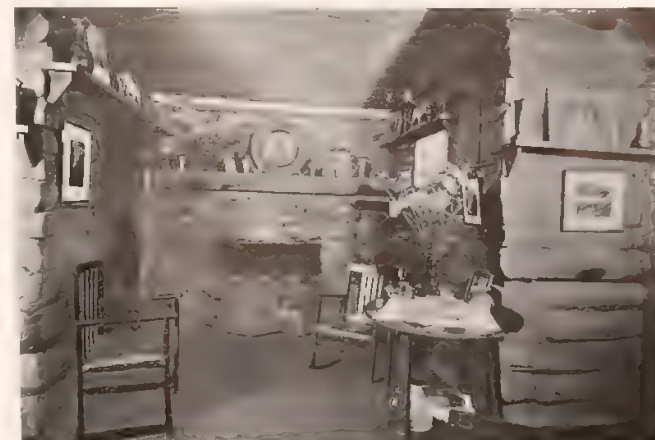
are the fumed chairs stained brown with their wooden seats. The sideboard is carefully chosen, and is not too large for the room. A wide, low window, hung with white swiss curtains and blue inner curtains, overlooks the porch. The sepia platinumypes are framed in brown, and make a pleasing contrast to the yellow walls. The pine ceiling is left unfinished, but is relieved by white painted striping. The large doorway with its iron latch opens directly on to the porch. The floor is covered with a rug of old blue.

Returning through the living-room, and going through a passage we find ourselves in a cheery little sitting-room. The floor is covered with matting, and the walls of pine are painted ivory white.

The cost of building such a bungalow would be about \$1,500 to-day, but when the bungalow was built several years ago it cost only \$1,000. When one realizes that the ties from which the house was built cost only \$35.00 it can readily be understood how very economically bungalows can be erected by making use of them. The three stone fireplaces cost \$180.00.



The Corner Fireplace of the Sitting room



The Living room Fireplace Completely Fills One End



The Dining-room Is Walled with Oiled Pine Boards Relieved by White Trim



Furniture for the Bungalow

By Esther Singleton



THE first requirement for house decoration, as in personal dress, is appropriateness. Furniture, like costume, should be selected for the purpose for which it is intended. One would never think of wearing a dress suit on a golf course, nor a calling costume for a walk in the woods; nor would a person of taste carry Boule, Louis XV, Sheraton, or Chippendale furniture into a simple cottage or bungalow. Ornate and luxurious furniture and furnishings are as discordant in rustic retreats as wicker chairs, printed cottons and

earthenware in wealthy town house or suburban villa. In furnishing a bungalow the next thing to remember, after simplicity, is color. The brightest hues should be selected—scarlets, blues, yellows and greens—vying with the blazing splendor of the hollyhocks that you have not omitted to plant near the house; for, in the country, in the midst of green woods, or surrounded with an expanse of blue sea and sky, bright hues are a necessity as well as a delight.

Comfort and coziness should also enter into the furnishing of a bungalow. These two requirements are well met in

the illustration (Fig. 18), and by the simplest means. Ordinary mat and Windsor chairs of the cheapest kind form the seats, the curtains slip on a rod without even the addition of rings, and the table is an inexpensive wicker.

A novel and convenient arrangement, especially where space is a consideration, appears in Fig. 12. The beds are nothing more nor less than bunks; and the room in which they occur is shown in Fig. 10, where the owner's nautical taste is expressed in every detail. However, the idea of the arrangement of the beds is not a bad one.

A very good suggestion for the side of a dining-room appears in Fig. 17, where the paneled recess is very cleverly made into a buffet, or sideboard, by means of uprights and shelves. A drawer is also inserted. This can be made by any carpenter, so



1—Dining-room in a California Bungalow



2—Sheraton Arm Chair, Birch
Unfinished \$4.50



3—Rocking Chair, Birch,
Unfinished \$4.75



4—Sheraton Dining Chair, Birch
Unfinished \$3.00

simple is it in construction and so economical in material. Small shelves could be added for the display and storage of china with a considerable gain in both effect and convenience.

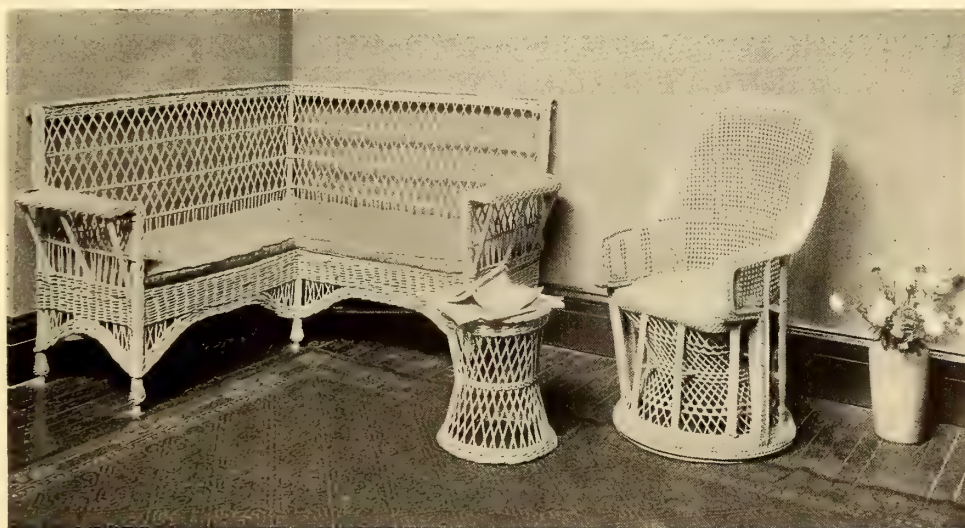
Of the pictures shown Fig. 13 comes nearest to the ideal of an artistic, inexpensive and comfortable room, in harmony with the rustic surroundings, and quite within reach of the most modest purse.

Let us now, therefore, imagine a bungalow in which such a dining-room would occur—literally a house in the woods, or a tent on the beach, made of logs, or unpainted boards, and unplastered within. This rural home consists of five rooms: a living-room, a dining-room, a kitchen and two bedrooms and tiny bathroom on the same, or the second, floor. It is probably a retreat for busy, professional workers, or for those who, wearied of the

demands of society, wish to enjoy a few months, or weeks, of unconventional life and yet who do not like "to rough it." Such a bungalow can be furnished comfortably and artistically for about the

small sum of \$500 if nothing is selected but the simplest furniture. The local carpenter's aid should first be invoked; he can nail up tiers of shelves in the living-room for books, tiers of shelves in the dining-room for china (see Fig. 13), tiers of shelves in the kitchen for the few necessary utensils, and tiers of shelves in the bedrooms for dressing tables and wash handstand. A

great part of the furniture, therefore, can be obtained for the price of the carpenter's labor. Having thus got rid of the most expensive part of the furnishing (which does not have to be moved, nor taken care of when the bungalow is vacated in the autumn), there re-



5—Wicker Furniture: Chair \$7.00; Stool \$2.00; Settle \$25.00
Including Upholstered Cushions



6—Sheraton Dining Chair, Birch
Unfinished \$3.25



7—Chairs with Backs in Chippendale Style
Birch, Unfinished \$5.50



8—Rocking Chair, Birch
Unfinished \$3.50



9—Living-room

main to be purchased only beds, seats and tables. A large roll of matting will cover the floors of living-room, dining-room and bedrooms, and will certainly last one season; rugs of any quality will, of course, look well; but in case they have to be purchased, rag, jute or Japanese rugs can be bought for comparatively small prices; and these should

accord in color with the hangings of each room. Durable carpet in plain colors can be purchased for \$1.00 a yard, and square rugs can be made of this, with border.

We will suppose that each room is lighted by two double windows, each two feet by three. These should be hung with dotted muslin inner curtains and outside curtains of some bright hue or artistic design. Sills or shelves, inside or outside, should be added for potted plants, or window boxes.

Of the many attractive materials and colors that have been recently placed upon the market, the most practical and decorative is the India print cotton with bold design in colors on a white ground. This artistic material is heavy, hangs beautifully and has the additional recommendation of being washable. Another

advantage that it possesses is that of being inexpensive and needing no lining. Durable, cleanly, cheap and decorative, it is an ideal material for draperies. It also stands the mists of mountain and sea. This India print costs \$1.85 a yard, and is sixty inches wide. The design and colors are scarlet bamboo on a white ground; bright green on a white ground; yellow on a white ground; blue on a white ground. The design is bold, showing the jointed stalks and spiky leaves gracefully twined as they shoot upward. This material may also be had in a variety of other patterns of Japanese character.

Living-room and dining-room decorated with this material, one green and white and the other scarlet and white—or one blue and white instead of the green—would furnish two rooms of a simple bungalow very artistically.

Let us first furnish the living-room.

In one corner we place a couch covered with India print bamboo design in blue and white. On this four large floss-filled cushions covered with plain blue velours, velveteen (or even cotton) stand stiffly against the wall, while four down-filled cushions (two covered with India print bamboo



10—A Nautical Bedroom

design and two with pale pink, or yellow silk), are piled carelessly in the corner; these are for comfort and to give a touch of color. In another corner of the room are bookshelves supplied with a curtain of India print like the couch cover; on the top of the bookshelves stand some bowls, or vases, for flowers and brass candlesticks. The simple chimney-piece is unadorned save by vases, bowls and candlesticks, and, of course, the brass hearth furniture, which consists of andirons, tongs, fender, shovel, bellows and hearthbrush. A large desk stands in another corner, and a solid table in another for lamp, books, magazines, etc. The small windows are supplied with muslin curtains, and curtains of India print, bamboo design, hangs outside of them. On the window sill or shelf, put up by the carpenter, stand a few pots of brightly blooming flowers. The floor is covered with matting, over which is spread a white and blue Japanese rug. A few large photographs of famous pictures, framed in black, or colored prints, hang on the walls.

This room could be done, if preferred, in green and white, or scarlet and white. A bamboo portiere, or one of glass beads, or bamboo and shell, hangs at the door leading into the dining-room.

The dining-room furniture consists of a table and six chairs, a sideboard and china cupboard. Shelves and plate racks can be hammered up easily for the accommodation of the earthenware and china when not in use. The symmetrical arrangement of plates, cups, saucers, jugs and dishes will give a pretty decorative effect. If the blue and white India print is selected for this room a service of blue and white dishes should be chosen. In the selection of china, floral designs are especially pretty in the country. Brightly hued and boldly decorated earthenware is also in good taste and cheerful. Ordinary plated-ware and inexpensive cutlery should be chosen; for any loss can be easily replaced, and no care is involved. The table linen should also be of the most inexpensive nature—abun-



11—Living-room with Mission Furniture

dance rather than quality is to be desired in this respect. The linen can be kept on shelves in the dining-room, before which an India print curtain might be hung.

The kitchen, of course, contains a stove, or open fireplace, for cooking, a dresser, a table, two plain chairs, and as few utensils as possible. A cook is not necessarily known by the number of pots and pans he keeps, for with a few saucepans and skillets of assorted sizes, a gridiron, a toasting-rack, a few baking pans and long-handled wooden spoons, a good



12—Bunks in a Bungalow



13—Dining-room with Rustic Treatment

cook will accomplish wonders. However, he (or she) will demand a "bain-marie" and a wire frying-basket.

The floor should be covered with a bright oilcloth of a tiled pattern; and muslin curtains should drape the window.

The bedrooms should be very simple; the floor covered with matting; and the windows hung with muslin and chintz curtains, matching those of the chair cushions. An old wing chair, covered with chintz, is a comfortable addition; but in lieu of this then select a wicker, or rattan, easy chair, and supply it with cushions; a chintz-covered box is

a useful depository for clothes; the dressing-table can be a common table, nicely draped and covered with linen scarf; and the wash handstand can also be a broad, long shelf put up by the carpenter and covered with dainty linen. A ewer and basin, and other toilet articles of artistic design, can be made to contribute to the comfort and appearance of the room. The carpenter can also invent a wardrobe, before which curtains can be hung. Chintz of some graceful floral design (pink clover, yellow roses, scarlet hollyhocks, or the quaint patterns in which gay peacocks strut among the flowers) is appropriate for such simple rooms as are here suggested.

A few quotations will show how inexpensive such furnishings are.

Excellent chairs are shown in Figs. 2 to 8, which are manufactured in this country. The models shown in Figs. 2, 4 and 6 are good examples of Sheraton, and belong to his later period.

Figs. 3 and 8 are rocking-chairs. One of the chairs in Fig. 7 is a rocking chair also. The design of these is a development of the old "four-back" rush, or mat, chair; and was a favorite with Chippendale. By Sheraton's time it had vanished.

The chairs illustrated in Figs. 2 to 8 are made of birch



14—Living-room and Dining-room Separated by a Stairway



15—Stone Mantelpiece



16—Living-room

with rush seats; and can be stained and painted any color to order.

Willow chairs, \$5.96, \$6.49, \$7.24 and \$9.49; round-back rattan chairs, 37 inches high, 21 inches wide, with seat 17x16½ inches, \$4.50; square board arm rattan chairs, 38 inches high, 30½ inches wide, and with seat 20x19 inches, \$7.00; ditto, 37 inches high, 30 inches wide, with seat 20x18½ inches, \$6.00; and rattan arm chair, 42 inches, with seat 17½x17½ inches, \$7.00.

Willow tables can be had for \$5.49, \$6.49, \$7.24 and \$11.49.

The furniture in Fig. 19 costs only \$17.00: the chair can be had for \$7.00, table for \$8.00, and the waste-basket for \$2.00. The little corner group of wicker furniture (Fig. 5) is also inexpensive: the settle, including cushion, costs \$25.00; the chair, \$7.00, and the stand \$2.00.

India print cushions, down-filled, cost \$3.00 each; finer embroidered cushions, \$5.00, \$7.00 and \$9.00 to \$25.00 each.

Floss-filled cushions (28 inches square), uncovered, 79 cents; down-filled, uncovered cushions (26 inches square), \$1.19; extra white down (same size), \$1.97.

Bamboo portieres (8½ feet long by 3½ feet wide), \$1.25, \$2.75 and \$3.00 each; shell and bamboo (same size), \$5.50 each, and glass bead (same size), \$11.00 each.

India print curtains (2 feet by 3 feet), \$3.00 each; (2 feet by 4 feet), \$4.00 each.

India embroidered curtains, \$7.00, \$10.00 and \$12.00 each.

Comfort and cheerfulness are expressed in the elaborate room shown in Fig. 16, where Windsor and wicker chairs also appear.

Of different character, but equally comfortable and dignified in its simplicity, is the room shown in Fig. 9. The fireplace is good, the windows are well proportioned and the table and chairs strong and unpretentious. The addition of a few easy chairs and cushions would improve the room. Fig. 1 shows a simple but very comfortable room in a California bungalow. Particularly attractive are the small windows hung with turkey red curtains. Fig. 11 shows a living-room furnished in the Mission style.

A living-room and dining-room are shown in Fig. 14, separated by a stairway leading to the bedrooms above. Before the fireplace is a settle and table, and by the window a desk and a series of shelves. Portieres separate the two rooms. The dining-room is also supplied with shelves and the furniture is of the simplest.

A simple stairway also appears in Fig. 20. An appropriate mantelpiece for bungalows is the one of rough stones in Fig. 15, collected in the vicinity and built by the owners of the house in the woods.

A very attractive dining-room is photographed in Fig. 13. Everything here is of the simplest nature and harmonizes with the rustic stairway and natural tree-trunks. The china and earthenware when not in use stand on shelves put up by a local carpenter, who also made the table and the side



17—Sideboard in the Dining-room



18—A Simple Living-room



19—Wicker Furniture: Chair \$7.00; Table \$8.00; Basket \$2.00

table, which can be added to the center table when more table room is required. The table, chairs and shelves are painted a pleasing shade of green. The lattices of the windows are also painted green, are hung with simple curtains and are bright with flowers.

There are many reasons why simplicity is desired above all things save comfort. In the first place the summer cottage is, in most cases, a place of rest. The house-keeper wishes to avoid all care and responsibility; and, as servants may not be always available in a remote retreat, labor should be made as light as possible. Secondly, it is restful to the eyes and mind to live with a few well-chosen articles and harmonious colors. Rugs, innumerable cushions, curtains, lamps, pictures and books, comfortable beds, a neat kitchen in which delicate meals may be prepared and sufficient china for a simple service, a few cushioned wicker or rattan chairs, and an abundance of flowers will make "the wilderness blossom like the rose."

A bungalow can be furnished both artistically and comfortably for \$600, provided the owner is satisfied with simple articles and understands how to shop to advantage. The sums are as follows:

Living-room	\$100.00
Dining-room	50.00
Table linen	50.00
Table furniture, including china, glass, plated ware and cutlery	145.00
Bedrooms (2)	100.00
Household linen, blankets, etc.	112.00
Kitchen, including utensils	43.00
	\$600.00

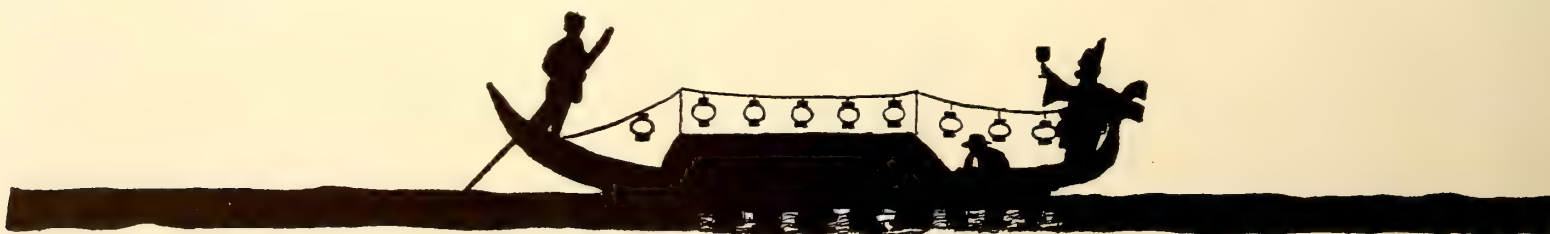
An itemized account of the furnishing of one room will show that this is possible:

Window curtains (2 feet by 3 feet)	\$.50
1 yard India point (bamboo design)	1.85
Corner couch	10.00
India print cover (bamboo design) 3 yards	5.50
4 floss cushions	3.16
Plain blue velours covers for do.	4.00
4 down cushions	4.16
Covers for do.	4.00
1 table	5.00
Cover for do.	3.00
2 round-back rattan chairs	9.00
2 rattan armchairs	14.00
Bamboo portiere (8½ x 3½)	1.25
3 yards India print (bamboo design) for bookshelves	5.55
Hearth furniture	15.00
Lamps, candlesticks, etc.	25.00

\$110.97



20—Simple Stairway and Entrance Hall



A Garden Room

By Carine Cadby



EVERYONE can live out of doors in hot weather, but there is so much in-between weather when it is just too cold or too windy to be quite in the open and when one yet longs to be out of doors. It was just such a time when a bright sun was shining and a very cold wind blowing that my sister

Joan and I thought of having a hut built in our garden that should be a kind of garden room. And such a success has it been, and so much pleasure have we had out of it, that I can confidently recommend it to all those who love an open-air life.

We had also been bitten with the craze for sleeping out of doors, so that our hut was also to be our night abode as well as our garden room.

We interviewed our local builder and carpenter and explained what we wanted. Our ideas on the subject—just a little house, with two sides open and a few shutters to put up—seemed so lucid and clear to ourselves, but when our village architect arrived with plans that looked like a cross between a chapel and a stable we had to get the advice of a practical cousin. And for the sake of those who for health's or pleasure's sake wish to live or sleep more in the open I will describe our little garden room. It is a square hut, ten by ten feet, built of weather boarding, with a boarded floor. It has two sides solid and two sides open (namely, south and

west) so that there will almost always be a shelter. The roof slants to a point so that the rain can run off. It is well tarred and has felt as well, for unless the little room is quite weather-proof it would lose half its value, and it would be a cheerless experience to wake up one rainy night with the wet dripping through on to one's face.

The west side opens to the ground, and has three large shutters which can be put up for shelter, should the wind draw from that quarter; the south side has what the local carpenter called a "dado" of about three feet in height, and a door in the middle the same height. This side has five small shutters, so that one can make it a solid wall or only shut off a corner or part of it, just as the vagaries of the wind demand. With all these shutters it will be seen one has a good deal of latitude, and it is amusing how soon necessity teaches one to be weather-wise, and one soon learns which parts to shut up and which to have open. One boisterous night that blew our hair about on our pillows taught us more than all our practical cousin's explanations.

Of course, we could have had a revolving house, but the size we wanted would have been most ruinously expensive, and our little room has only cost us under seventy-five dollars.

We gave a good deal of thought to the furnishing, our idea being to have as little in it as possible, no hangings or upholstery or anything unnecessary that should make it like



The Room in the Woods



The Outlook from the Porch



A Whole Side May Be Opened to the Air



The Sleeping Bunks Within the Room

an indoor place. As two beds would have taken up too much room, our cousin designed one for us on the principle of ship's berths, one bed on top of the other. It is fitted with good castors, so that it can easily be moved about and its position altered according to how the room is opened. A rough table, also on castors, and a deal form and basket chair complete our outfit, as we do all our dressing in our bedrooms. Each side of the dado is a seat, so that we are quite able to entertain. The bed, like the sofa of the Germans, is considered the place of honor, which is always accorded to our most important visitor. The walls inside are matchboarded; we wished to keep them as natural looking as possible, so instead of paint or varnish we rubbed them ourselves with a little linseed oil, which preserves the wood and is yet not at all expensive.

"And are you two lone women not afraid of sleeping out?" asked a friend. "Not with Tim and Ann," we answered, pointing to our two trusty dogs, and we did not add that we often wished them a little less trusty, and that they would not guard us in such an officious and noisy manner from the tentative visits of a robin, or be so loudly furious with the inquisitiveness of a harmless cat. The birds, too, as the

summer comes along, seem to make it their business that we shall not miss the best of the early morning, still one soon gets accustomed to the out-of-door sounds, and they only mingle in an amusing way with one's dreams. The lower berth has a little dark green curtain—our only one—that can be drawn should the morning light be too bright, as it is more exposed to the light than the top one.

We have now slept out through a winter—with blanket suits and hot bottles—and the difference it has made to our health is remarkable, and we are getting used to being asked where we have been for a change. As the weather gets hot we intend pulling our bed just outside and sleeping really under the stars, but quite near our hut, so that should the elements not approve we can always just push it back, the big castors making it easy to move.

I need hardly say we have grown very fond of our garden room, and much of our working time and leisure has been spent in it. Our friends, too, seem to have enjoyed the spells they have spent with us out of doors, and with our children friends our makeshift picnic teas have been quite a success; altogether our garden room has been a continual pleasure to us, and we only regret the years before we had it.





CORRESPONDENCE



The Editor of *American Homes and Gardens* desires to extend an invitation to all its readers to send to the Correspondence Department inquiries on any matter pertaining to the decorating and furnishing of the home and to the developing of the home grounds.

All letters accompanied by return postage will be answered promptly by mail. Replies that are of general benefit will be published in this Department.

Problems in Home Furnishing

By Alice M. Kellogg

Author of "Home Furnishing: Practical and Artistic"

FURNISHING A NURSERY

WHAT fittings can be introduced in an ordinary third-story room to make it attractive for three children, all under six years of age? Also, what colors will be the most suitable for such a room?"

The advantages of a special play-room for young children are obvious. Elaborate effects, either in the arrangement of furniture or the introduction of decorations, are not essential, as simplicity of detail gives an opportunity for the expression of the normal activities of childhood.

A warm rug may cover nearly all of the floor, with the edges fastened down at intervals by brass pins that slip into sockets. A Scotch rug in mixed colors will withstand nursery usage better than any of the moderate priced rugs.

A charming treatment for the lower wall of a nursery is to use the French picture paper, "The Goose Girl," up to a height of five feet, and above this a plain buff paper (repeating one of the tones in the landscape), joining the two papers with a narrow photograph shelf of wood that matches the other woodwork in the room. By this plan the picture element on the wall is within range of the children's vision, the upper wall serves as a background for framed pictures, and on the little shelf the children may make their own gallery with post cards, photographs, etc. Large colored prints of outdoor life appeal especially to children, and some of the nursery friezes that are designed for wall coverings are well adapted for framing.

In repainting the woodwork of this room the suitable color would be one of the tones of green that is prominent in the picture paper.

Furniture in small sizes for children may now be had in splint, cane, oak, mahogany and willow. Each child may have his own chair and table, with extra benches and settees added for visitors. In the selection of each of these pieces care should be taken to exclude such as have sharp points or corners. A comfortable divan and a wall blackboard may be added to the necessary furnishings of this room.

With an open fire there should be one of the new spark guards that fits straight across the chimney opening. Iron bars across the lower part of the window, on the outside, are another means for preventing accidents.

A narrow wooden shelf in line with the window sill will be found a pleasant change from the tables and floor for playing with small toys. An orderly disposal of toys, books and games, when not in use, may be provided for by shelves and cupboards that are within reach of the little folks, with individual lockers wherever practicable.

Curtains for a day nursery need only to be of a light weight goods in a color that harmonizes with the wall covering. In the new Scotch gauzes that are guaranteed to withstand fading there is a plain green that would be suitable with the proposed scheme for the wall treatment.

FURNITURE COVERINGS

"How can I bring the coverings of my chairs and sofas into harmony with the other colorings in the room?" asks a correspondent in the West. "My wall paper is a tapestry pattern with a brown background and a good deal of green in the pattern. The carpet is vari-colored and of Oriental design; the over-curtains are of still another pattern, with no special color predominating. I am ready to recover all of the furniture if I could be sure of not making a mistake."

In the room described there has not been enough thought given to a balance of effects. When all of the materials are figured the result is unrestful. (On the other hand, when only plain textures are employed, there is a feeling of monotony.)

(Continued on Page ix)

Garden Work About the Home

By Charles Downing Lay

SELECTING PROPER SEEDS FOR THE VEGETABLE AND FLOWER GARDEN

TP. L. asks "how to determine the quantities of seed to order and how much space to give to different vegetables in the garden."

Beginners in gardening will find it advantageous to make a plan for the planting of their vegetable and flower gardens at the same time that they make their seed and plant lists.

The plan of the garden space should be drawn in ink on tracing cloth, to any convenient scale; one-eighth of an inch to a foot is usually large enough. Prints can then be made from this tracing and used for pencil studies of the arrangement. The plan should show the spacing of plants in the rows or hills and the length and distance apart of the rows; in fact, all the details of the vegetable garden. This will give some idea of the quantities of seed needed and of the probable yield, so that one may avoid having too much corn and not enough beans, or the reverse. Seed catalogues give all the information about distances apart to plant and the amount of seed required for a given length of row, as well as the proper time to plant; which should also be noted on the plan.

Another print can be used as a record of the actual work, and this should give the date of planting, date of gathering the first mess, end of picking, and the yield. If this scheme is carried out you will have, at the end of the season, definite information about the proper time to plant things in your garden, of the time it takes to mature, of the duration of yield, and the date of clearing away for another crop to follow. You can decide much better about the planting for a second year when you have a record of actual consumption for one season. No one can tell in advance just how much of each vegetable a given family will need.

On the plan of the flower garden you should note the number and date of setting out plants, the date of blooming; and if there are bulbs growing among the herbaceous plants a record of them should be kept on the plan so that you will know where they are after they have bloomed and their leaves are gone.

While the plants are flowering notes of color relations and ideas for their improvement can be made for use when the garden is next overhauled. For instance, you may find a predominance of one blue in the iris bed, and mark a portion of that variety for removal in the autumn, or you may find that the best chrysanthemums have been run out by poorer varieties, or that your Oriental poppy is in front of a red paeony.

Without such notes and locations of things on a plan it will be difficult to remember what you want to do and where the plants are when the time comes for doing the work.

C. C. S. wants to know the best varieties of gladioli.

They are the new hybrid gladioli, known in catalogues as Groff's hybrids. They are developments of a strain originally grown by Luther Burbank, and they are extremely interesting, and some are very beautiful. They have a wide range of color, from the whites, striped and blotched with pink, through the many shades of red, to the varying purples with golden streaks and patches, and the dark blues which almost equal the iris in richness and depth of tone. The yellow series, ranging from pale cream tints through the lemon yellows to the many salmon and light orange shades, has many charming individuals. Then there are other tints which are only curious, such as the pale lilac and violet colors. One expects new colors in flowers to be quite ugly, but these are not so, and they relieve the monotonous reds of the older types.

Some of the blue section are small, quill-like, almost tubular flowers, with a certain primness about them which is most attractive in contrast with the more luxuriant and freer petals of the red section,

(Continued on Page x)

PROBLEMS IN HOME FURNISHING

(Continued from page 214)

By eliminating designs from the furniture coverings an improvement may be begun that may, later on perhaps, be furthered by changing the curtains.

For the present, the two prominent colors in the wall paper, brown and green, suggest themselves as the most desirable for repeating in the new materials to upholster the furniture. A new kind of velour, which is plain in effect but in which a gold thread is woven with olive green, is well adapted for the tufted chairs and sofas. (This material is fifty inches wide and costs three dollars a yard.) For the arm chairs, where the material is applied without tufting, a green linen damask with a small self-woven pattern (three dollars and sixty-five cents a yard, fifty inches wide) may be chosen. One of the sofas and two of the small chairs may have brown velvet in a narrow stripe (two dollars and a half a yard), and brown wool tapestry (four dollars a yard) may be chosen for the other pieces of furniture.

DINING-ROOM CHAIRS

"I intend buying six chairs to go with a round dining table. Shall I get two arm chairs? Or shall I have only one with arms? I notice in some dining-rooms that there are only side chairs."

There is no specific rule to follow in this matter. The popularity of the round dining table has brought into favor the side chair for general use, as this permits a larger number to be seated comfortably than when arm chairs are used. Sometimes certain members of the household prefer an arm chair for dining, and sometimes there is no choice in the matter.

A RECEPTION HALL

A Minnesota reader wishes some suggestions for a small reception-hall that will make it different from other houses. "There is no stairway to consider and only one long Dutch window with small panes of glass and a wide sill. I do not know how to treat this window. The woodwork is a pretty shade of weathered oak."

In a hall of this kind one may depart somewhat from the conventional to create an attractive impression, but it would not be wise to introduce many novelties. English oak furniture would be substantial, with chairs of the Cromwellian period. A fine leather in dull orange color could be upholstered on the chairs and settee. A thin silk curtain in the orange color may be hung at the sides of the window and closed at night. Three pots of flowers in Japanese jardinières with saucers to match may be kept in the center of the window ledge.

A large rug made of English Axminster carpet in a small, set pattern woven in dark blue and brown may be the floor covering. A hammered copper holder for umbrellas may stand near the front door, and an oak costumier take the place of a hat rack. Wall paper showing a bold design of forest scenery will give decoration without the need of framed pictures.

MATERIAL FOR PORTIERES

An inexpensive material suitable for a door curtain between a dining-room and sitting-room in a farmhouse has been inquired for.

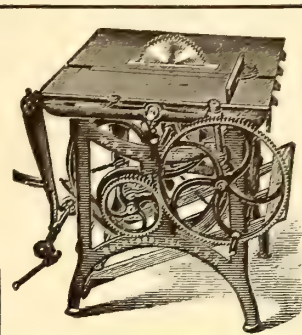
There are many novelties being produced these days in double-faced goods at a moderate price. One of the easiest to obtain is the cotton rep, which comes in a great variety of colors and costs less than a dollar a yard. As the hemming will show on one side of the curtain, it will look better to add a band of

CARPENTERS

in these days of close competition

**Need the Best
Possible Equipment**

and this they can have in

**BARNES'
Hand and Foot Power
Machinery****W.F. & JOHN BARNES CO.
567 Ruby Street ROCKFORD, ILL.**Send
for
our
New
Cata-
logue**Our New
Foot and Hand Power
Circular Saw No. 4**

THE strongest, most powerful, and in every way the best machine of its kind ever made. For ripping, cross-cutting, boring and grooving.



THE GREENHOUSE AND THE GARDEN

One is as indispensable as the other—one the complement of the other.

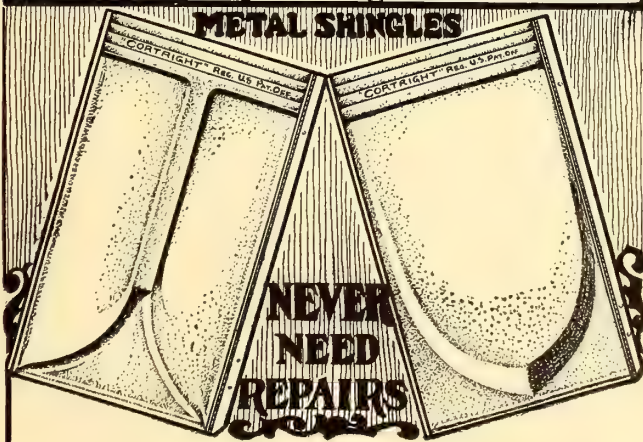
One for the few short summer months, the other a protected garden for every month.

Both beautiful—ornamental—indispensable.

Surely, no country grounds can be complete without a greenhouse. Let us consider the question with you.

HITCHINGS & COMPANY

1170 BROADWAY, NEW YORK

CORTRIGHT**METAL SHINGLES****Cortright Metal Roofing Co.**

Philadelphia and Chicago

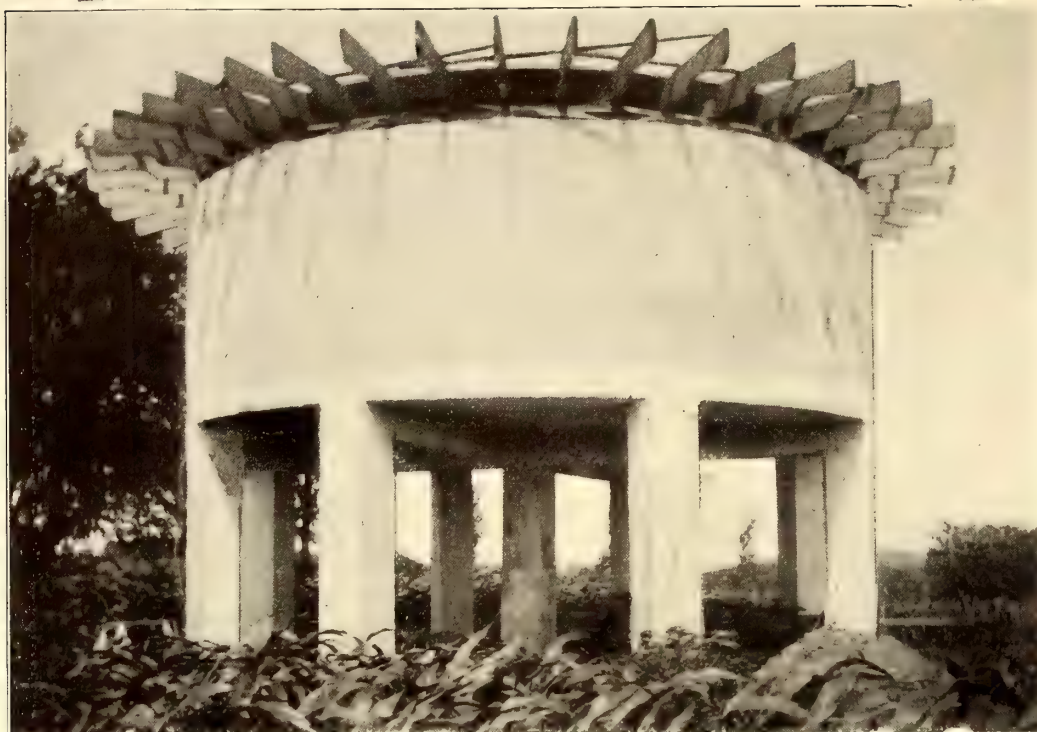
Beauty

That talks when the building is just finished. It takes years to demonstrate durability, but in both cases CORTRIGHT SHINGLES have no equal. They last as long as the building itself, and they add a distinctive quality that is positively fascinating. Wherever one house is covered with them, another follows. It pays architects to specify them.

FLOORS



ROOFS



A concrete tank erected on estate of Edmund Tatham, Katonah, New York

Frederick J. Sterner, Architect - - New York
De Lancey A. Cameron, Builder - - New York

Tank designed for storage supply of 15,000 gallons, built entirely of concrete reinforced with Clinton welded wire. Before roof was placed over tank, and during winter months, ice 10 inches thick formed on water stored therein. No cracks or leakage have developed.

Clinton Wire Cloth Company
CLINTON, MASS.

Ceilings

FIREPROOFING DEPARTMENT
ALBERT OLIVER
1 MADISON AVE., NEW YORK

WASHINGTON: ROSSLYN SUPPLY CO., COLORADO BUILDING
SYRACUSE, N. Y.: PARAGON PLASTER CO.
ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
SAN FRANCISCO: L. A. MORRIS, 835 MONADNOCK BUILDING
SEATTLE: L. A. MORRIS, 909 ALASKA BUILDING

Partitions

trimming down the sides and across the bottom. A tapestry border for this purpose may be bought for twenty-five cents a yard.

Another appropriate material for portieres at one dollar and twenty-five cents a yard is a rough linen. There are also a number of materials made of jute and mercerized cottons that are effective and inexpensive. Linen velours is a standard fabric, at a higher price, that is always in style.

MAKING A WINDOW SEAT

"I would like very much some advice in regard to a window seat which I want to place in our sitting-room. There is a projection on one side of the room with a window at each end, one looking to the east and the other to the west. How high should a seat be made and how deep? Should it be boxed in or left open? How shall I cushion it? And what kind of pillows?"

This recess may be fitted with a seat, using wood that matches the other woodwork in the room. If the seat is boxed in it will look more substantial, but, to avoid expense, it may be only supported by legs at the front with cleats underneath at the back. The seat should be only sixteen inches high to allow a two-inch hair cushion to be laid on the top. Twenty-one inches is a good depth for the seat.

Corduroy is an excellent material for covering a seat cushion, either with the narrow or with the wide ribs. Some down-filled pillows, twenty inches square, may be added if they are required for service. These may have both sides covered alike with figured silk, shadow taffeta or handblocked linen. Too many pillows and too varied an assortment of covers should be avoided.

GARDEN WORK ABOUT THE HOME

(Continued from page 214)

which in this detail surpasses the old forms. When gladioli are grown for cutting they may well be planted in the vegetable garden; otherwise plant them in masses in the flower garden, and if possible have them among other plants which will cover the ground.

They can be planted very close together (three inches each way) if in small clumps, and look better so, because their growth is all upward, and each plant needs little space. Double rows, with corns four inches apart in the row, may be planted in the vegetable garden. Close planting avoids, in a measure, the staking which is so necessary when they stand alone. Sometimes it will be convenient to plant gladioli among things that bloom early and disappear, like the Oriental poppy.

With bulbs like the tulip they will do very well if care be used in planting and in taking them up in the autumn. They are also very good planted in mass, as one plants narcissi, and in the rock garden such masses are very effective.

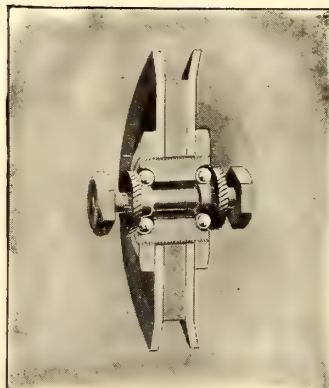
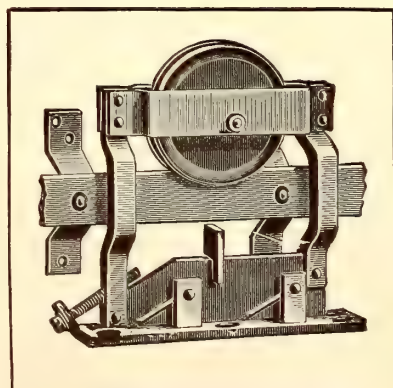
The first planting should be made as soon as the ground is ready to work and succeeding plantings every two weeks, or thereabouts, until the Fourth of July. They cost from two to six dollars a hundred.

Gladioli are very easy to plant and to care for, and the results are certain. The flowers are very useful for house decoration. Picked when the first bud is expanding they open

"LANE'S BALL-BEARING"

is the

Best
House-
Door
Hanger
Made



Other Styles for Less Money

Sold by Hardware Trade

Send for Catalog

Lane Brothers Company, 434-466 Prospect Street, Poughkeepsie, N.Y.

Ornamental Waterfowl

SWANS DUCKS GEESE

Show Birds and Animals
of Every Description :: ::

LOUIS RUHE, 248 Grand Street, NEW YORK



POMPEIAN TABLE FROM THE HOUSE OF CORNELIUS RUFUS

An example of the many unusual replicas of the Erkins Studios which visitors have often compared to foreign art galleries. Our Studios are open all day and visitors will always find a cordial welcome.

FOUNTAINS, STATUARY, COLUMNS, PERGOLAS, BALUSTRADES, STANDARDS, SUN-DIALS, PEDESTALS, BENCHES, TABLES, VASES, WELL HEADS, WALL FOUNTAINS, LIONS, SPHINXES, ETC., IN MARBLE, STONE, AND POMPEIAN STONE WHICH SUCCESSFULLY WITHSTANDS THE AMERICAN CLIMATE

Illustrations and Sun-Dial Booklet upon request. Our Catalogue of Garden Furniture, containing 400 illustrations of Italian and Classical Models, sent upon receipt of 25 cents.

THE ERKINS STUDIOS
3 West Fifteenth Street, New York

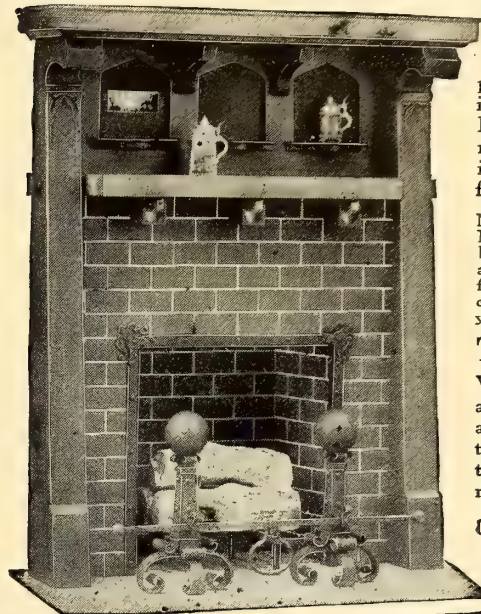
Save 1/3 Your Mantel Money

To add just the right atmosphere to a room, adorn it with a tasteful mantel. Most harmonious effects and finest workmanship are combined with most reasonable prices in

LORENZEN MANTELS

Because we "know how," have the most modern plant, and do business on a large scale, we can turn out a product unexcelled in quality and priced one-third lower than any other. Our reputation is world-wide, so we can't afford to put the name "Lorenzen" on a mantel that is not absolutely perfect.

We make mantels in all styles—Craftsman, Colonial, Mission, etc.; all woods, all finishes. If you have any original ideas we will execute them just as you order.



FREE CATALOG, 9x14

Our 1908 catalog—finest work on mantels ever printed—gives splendid ideas on interior decoration. If you want to save on mantels you ought to have it. Sent free if you write for it at once.

NOTE.—We are so sure Lorenzen Mantels are all a mantel ought to be that we send them anywhere and pay the freight. If you don't find any Lorenzen Mantel all we claim, ship it back to us. You see you take no risk.

Tile & Mosaic Work

We also do all kinds of Tile and Ceramic Mosaic Work and Tile Mantels. Send us the sizes of spaces you wish to cover and we will submit designs and estimates.

CHAS. F. LORENZEN & CO.
303 No. Ashland Ave.
CHICAGO



A Concrete Residence at Haworth, N. J.



Are You Going to Build? If so, Why Not of CONCRETE? It is inexpensive, fireproof, will not deteriorate with age, needs no repairs or paint, and is adaptable to any style of architecture.

OUR BOOK Concrete Country Residences

(Second Edition)

contains photographs and floor plans of over 150 *Concrete Houses*, and should be of immense value to you in planning your house. These houses were designed by the best architects in the country and are of several different systems of concrete construction.

A copy of this book, 168 pages (size 10x12), will be sent express prepaid upon receipt of \$1.00

The ATLAS PORTLAND CEMENT CO., DEPARTMENT 10
30 BROAD ST., NEW YORK



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.

Denver

CHICAGO

Trenton



Are You Going to Build a Bungalow?

If you are, you should buy plans of me. Get my books and see what different styles I offer: all original and artistic.

New Book of Bungalows. Price, by mail, \$2.00. A unique and artistic book, containing designs for one and one-and-a-half story Bungalows, in various styles, from \$1,000 up.

Picturesque Camps, Cabins and Shacks. Price, by mail, \$2.00. A New

Book of 40 original and picturesque designs for cheap Camps, Bungalows, Log and Slab Cabins, etc. Over half the designs can be built for between \$350 and \$1,000. It has careful estimates and cheap plans.

Picturesque Summer Cottages. Vol. III. Revised edition. Price, by mail, \$1.00. Designs for stone and rustic Summer Cottages and Bungalows.

E. E. HOLMAN, Architect, Room 14, 1020 Chestnut St., Philadelphia, Pa.



Preserve and Beautify Your Shingles

BY STAINING THEM WITH

CABOT'S SHINGLE STAINS

They are made of Creosote ("the best wood preservative known"), pure linseed oil, and the best pigments, and give soft, velvety coloring effects (moss-greens, bark-browns, silver-grays, etc.), that look better and wear better than any other. 50 per cent. cheaper than paint.

Send for Stained-wood samples and Catalogue

SAMUEL CABOT, Inc., Sole Manufacturers

131 Milk Street, Boston, Mass.

AGENTS AT ALL CENTRAL POINTS

Cabot's Sheathing "Quilt" Makes Warm Houses



Clark & Russell, Architects, Boston

nicely indoors and lend themselves to use in many tall vases and look particularly well in large copper jars.

N. B. writes to ask how to manage annual plants in the flower garden.

They are hard to arrange in the flower garden because many, like the poppy, look shabby when through blooming; or, like the asters, bloom late, and are uninteresting before they bloom. Dividing them into two classes in another way there are some which are indispensable for use in the house, like the sweet peas, asters and nasturtiums, and others which are remarkable for their profusion of bloom and the strong masses of color they give in the garden. Such are the marigolds, zinnias and poppies—which few people care to bring into the house.

Annuals and bulbs do very well in the same beds. Thus a bed which was full of tulips in the spring will in August be a mass of zinnias perhaps, and give us two seasons of bloom with half the usual space required for two different flowers. The marigold can be sown among early tulips or in a seed bed, and afterward transplanted to the tulip bed without taking up the tulips.

Poppy seed sprinkled on the last snow in April over a tulip bed will germinate early, cover the ground with green, and the poppies will begin to bloom soon after the tulips are past and when their leaves are shriveling. (Sprinkling seed on the snow is good, because one can see where the seed falls and distribute it evenly.) When the poppies are gone zinnias may be taken from the seed bed to fill their place, and the zinnias will bloom until the frost kills them.

Ageratum can be planted with white or yellow English or Spanish iris, which will grow up through the ageratum, bloom and then wither, while the ageratum continues to bloom. Centaurea also may have a few English iris with it.

Annual pinks do well with things like the Dodecatheon, which blooms early, and without some annual would leave the ground bare after June. In the same way the annual Eschscholtzia can be sown among plants of Mertensia, which is gone by the first days of summer.

Nasturtiums should have cedar posts six feet high, with the branches on, set in the garden. The nasturtiums look well near the cabbage bed. Cosmos, asters, mignonette and petunia should be grown in the vegetable garden. They can follow early peas, or may have their special place in a "cut-flower" garden.

The sweet peas need the cultivation and watering and extra attention they will get in the vegetable garden, and they should be grown as other peas are. The flowers must not be allowed to remain on the vine a day after they are open—they might even be picked a little before they open, as one flower allowed to go to seed means decreased bloom.

These flowers in the vegetable garden will improve the appearance of that garden with their gay colors, and make it more pleasant to look at and to walk in. The vegetables themselves are fine to look at. Is there a handsomer plant than a pepper or one more graceful than corn? Cabbages are beautiful in color and opulent in form.

One sometimes hesitates to cut the flowers in the flower garden for fear of spoiling the effect, but when they are grown as vegetables are, for a large yield, one can scarcely use all the blooms, and the garden will be as gay as before. Another advantage is that the strong colors of annuals are sometimes hard to arrange in a flower garden where there are

already many bright perennials, but in the vegetable garden the color clashes are easier to avoid, and if they can not be entirely prevented it will not matter so much there.

We are asked if it is worth while to collect plants in the woods for use in the wild garden. Decidedly it is. Many of the plants found in profusion in the woods are not to be had in the nurseries, and if one can not collect them one must buy from men who make it a business to collect wild plants. It is also, of course, much cheaper to collect them for one's self.

Spring blooming plants should be transplanted soon after flowering, because many of them lose their leaves early in the summer and are then very hard to find.

If you walk constantly in the woods it will not be hard to keep track of things and to collect them when the leaves are turning yellow, which is the best time. If you wait too long you will look in vain for dog-tooth violets. Carry a basket and a trowel on your walks or drives and dig things as you come across them. Get all the roots of the plants; place them in the basket between layers of damp moss or leaves, and if you come to a brook dip basket and all in the water for an instant. As soon as you reach home set them out, water, and shade for a few days if necessary, and they will seldom die.

I have often dug up a plant with a pocket-knife or with my fingers and carried it home wrapped in a handkerchief in my pocket without harm.

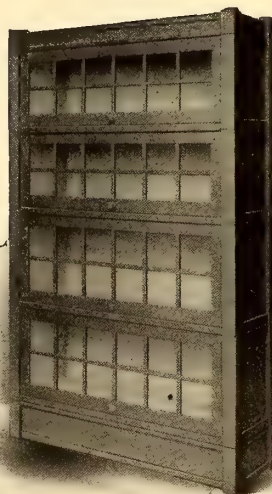
The trilliums, Solomon's seal, Jack-in-the-pulpit, houstonia (blueets), anemone, blood-root, erythronium, all the violets, moss pink, silene, etc., are very easy to transplant and to establish.

The lady-slippers are harder to manage. Their roots are long and thick, and they are very particular about soil, which must be peaty and cool.

Trailing arbutus is almost impossible to transplant, or rather it is impossible to make it grow after transplanting. If one has a large place it will be a temptation to bring home a small hemlock or a pine, just for the sake of such an intimate connection with its life and welfare, and indeed one would like to preserve the memory of all one's walks in such a pleasant, tangible way.



Good Taste
Good Workmanship
Distinctiveness



SECTIONAL Mission Bookcases and Filing Cabinets

We are the makers of the
exclusive

"CASE WITH THE
RAISED-PANELED
ENDS"

Send for Catalogues
No. 307—Bookcases
No. 107—Filing Cabinets

Vilas-Diven Co.
921 Lackawanna Ave.
ELMIRA, N. Y.

THE UTILITY OF THE BUNGALOW

By Elsie Leonard

THERE are quite a number of ways in which a bungalow appeals to the housekeeper by reason of its utility. Its housekeeping excellencies are perhaps best summed up in its general convenience; "as convenient as a flat" is a ready way to explain its housekeeping advantages so it will be best appreciated by the city housekeeper, while those who have never kept house with the rooms all on a single floor will find in it a revelation of convenience and comfort. Everything is at one's hands; there is no going up and down stairs; there is an ease of access and an ease in housekeeping that appertains to no other style of dwelling. And this convenience is something that is with one every day and all day, and its very great advantage is the supreme test of the bungalow's utility.

Nor is its utility in simplicity to be ignored; in fact, in some senses this is its chief advantage. The bungalow is a simply built house, intended to be simply furnished, and adapted to the simple life. The latter phrase has, indeed, been greatly overworked of late,

and perhaps does not really mean as much as its promoters would have us think. But one can not think of gorgeousness in a bungalow nor of the luxurious life as it is now understood and interpreted. Hence its claims for simple living are not to be overlooked nor scorned as hinting at a passing jest.

The structural simplicity of the bungalow is, however, one of its most notable characteristics. Few modern houses are to-day built without cost; the bungalow is not always the cheapest form of construction; but at least it never speaks its modest cost aloud, for it makes no pretense to be other than what it really is—a simple little house, built at as moderate a cost as may be, and used, if you please, and quite naturally, as the abode of persons of simple taste.

This quality is well shown in the furnishings, which, in a bungalow, are naturally much more modest and much more simple than in a dwelling of greater cost. Here one may dispose one's purchases of inexpensive summer furniture without thought of criticism and

without dread of unfavorable comment. There is a world of comfort in this, for many of us crave at times a quiet little house where there is freedom from the expensive equipment that often belongs to the more costly dwelling, and where sometimes we can not be as comfortable as we would, because we must be so very careful of our tables and chairs, our rugs, hangings, and other things the careful housekeeper often feels she must have whether absolutely necessary or not.

The utility of the bungalow is, therefore, a matter of prime importance and of truly high significance. It is a dwelling of a type; not always definitely indicated, perhaps, but still typical and in a general sense universally characteristic. It is a form of house that has been so wrought out by our architects that it can be as readily adapted to the luscious climate of California as to the more trying climate of, let me say, Massachusetts. It is true enough we would not, in Massachusetts, or in any northern State, select this as the type of house to be chosen for all the year living; but it is



In the Early Springtime

the farmer sows his barley—each seed a living thing. Soon it germinates, sprouts and ripens. Harvest time comes, the living crop is garnered—every seed multiplied a hundred fold. Nothing but the prime Northern barley is used in the preparation of

ANHEUSER-BUSCH'S

Malt-Nutrine

except a right proportion of the juices of imported Saazer Hops. The result is a malt tonic of extraordinary richness and invigorating properties. Thus Malt-Nutrine (containing an organic extract from the life-cells of a staple cereal) possesses in the very highest degree all the active body-building principles of a genuine liquid food in pre-digested form.

Order of your Druggist or Grocer.

For 12 tops of Red Metal caps from Large Malt-Nutrine Bottles with Gold Trade-Mark or 24 from Split Bottles with Black Trade-Mark and 15c for postage, we will send one of our Vienna Art Plates to any address in the United States.

ANHEUSER-BUSCH,
St. Louis, Mo.



HOW TO LINE THE WALK TO A SUMMER HOME WITH FLOWERS

By Ida D. Bennett

THE possession of a summer home supposes a considerable time spent in the open air, and an interest in things that pertain thereto—chickens, birds and flowers. It will not, however, as a general thing be as desirable to devote any considerable amount of time to the flower garden—at least as compared to the time that would naturally be given the occupation in the all-the-year home. The spirit of the summer home is entire freedom from care, or at least a reasonable amount of leisure in which to enjoy outdoor life at the fullest. But a summer home would be lacking in one of the greatest charms of rural life were it destitute entirely of flowers and these, in some form or other, must be provided for, though a formal garden will scarcely appeal to one in this connection.

Probably the most practical arrangement of flowers in the summer home will be the wide border along the walk leading to the front or rear door—this arrangement so dear to our grandmothers—has much to recommend it. It gives a welcome at the very gate itself—a promise of the more personal, cordial welcome that shall greet one at the threshold.

Where the summer home is a permanent possession to be returned to year after year this planting may preferably be of hardy perennials, which will require little care beyond an annual weeding and loosening up of the soil, and, perhaps, a mulching with leaves and compost in late fall. The list of available plants for the purpose is so large that almost any color preference may be consulted, but if the home is only to be occupied during July, August and September it will be well to select flowers which are most in evidence at that time rather than those early spring blooming plants which will, in this case, but waste their sweetness on the desert air.

The June roses, the paeonies and the garden pinks and lilies will have had their day and faded by the time the summer vacation is on, but the various spireas will be much in evidence, and the Japanese iris will give a fine display throughout July, and the monkshood and achilleas will still be in evidence. Tall hollyhocks should form the background of this border planting and the single flowers will be quite as effective as the double varieties and far more enduring and hardy. Late Columbians will throw their long spurred flowers to the wind—a picture of grace and beauty—and the tall spikes of asphodel contrast finely with the blue of the larkspur. Then there are the tall spikes of the foxglove than which there is no finer flower to be desired, and the Canterbury balls and, where a brilliant bit of color is wanted, the scarlet lychnis, which works into lovely bouquets when combined with the white of the clematis or gypsophila.

Later there will come the glory of the golden glow and the more subdued splendor of the purple cone flower which belongs to the same family. Nor must the Sweet Williams be overlooked, as these are ironclad denizens of the hardy garden, hardy and, especially in their new forms, beautiful.

All these may be planted in stately rows adown the garden paths, planting the taller growing forms in the rear as a background for the lower growing sorts and edging the beds with thrift or armeria.

This is by no means a complete list of the

H. J. CORFIELD, the past three years designing and constructing an estate nearly 300 acres in extent, is open for an engagement as manager of a first-class estate, or to carry out landscape work. Life's experience on the finest estates and gardens and with leading landscape architects in England and this country; an experience that has been acknowledged by the wealthiest and leading professional men in both countries. Agriculture, Horticulture, Surveying, Mapping, Road Making, Draining, Grading, Planting, Sewerage Systems, Reinforced Concrete, and every detail of a first-class estate of unlimited extent.

H. J. CORFIELD

291 WEST 4TH ST.

NEW YORK

RUGS FROM OLD CARPETS

Our beautiful hand-woven Rugs made in all sizes from old carpets will outwear any other carpet or rug at a cost of one half.

Rag Rugs woven in any size from new materials in Hit-and-Miss, Cretonne and other old-fashioned patterns, most serviceable and harmonious floor coverings for Bungalows, Camps, Living- and Bed-Rooms, Piazzas, etc.

Send for Booklet G, giving full particulars

AMERICAN RUG CO., 310 East 96th St., NEW YORK

useful, as perhaps no other type is, for summer use, for vacation use, for temporary occupation; a house one might flee to for a brief respite from more formal housekeeping, or which one might enjoy from summer's beginning to the end.

Here, then, is a house of such surpassing utility that its excellence scarce needs to be rehearsed. It is a fine thing that this is so, as well as a fact of manifest excellence. No other house, no other kind of house, can be put to so many varied uses, and employed in so many different ways. It is a house that lends itself to all purses, and which is as welcome to the millionaire as to the housekeeper of most modest means.

I think I do not exaggerate when I designate it as the summer house par excellence. It

is a love of a house, a charming, bright, livable, adaptable, usable home. It meets every demand put upon it. It meets every requirement that may be asked of a house, save, of course, winter's continuous use. Here, perhaps, it is wanting in its general adaptability; but its utility in other seasons is so very great that surely this one defect—if it be a defect, may be pardoned.

To me the bungalow is the house of houses. At least it is a house such as I can have and delight in. There are a good many houses I know I can't have, and some perhaps that I would not care to have; but my bungalow nesting under its clump of green trees, with its vine-clad walls, its modest garden, its pleasant furniture—that indeed is a house and a home!

This
Pagoda
Model

\$3.00

VENETIAN, DUTCH,
ITALIAN & TURKISH

LANTERNS

with ruby, green, amber or white glass panels, which when lighted create an effect both artistic and beautiful. Fitted for oil ready to light, or can be adapted to gas or electricity. Absolutely unique for the Porch, Hall, Den or Mission Room in the city or country home and for the Bungalow. Catalogue illustrates a few Hanging Fixtures and Table Lamps for the Library or Dining Room. Send stamp for "Lamp Information"—knowledge acquired through years of experience.

The Rochester Lamp Co., Dept. B, Rochester, N. Y.



Take off your Hat to the

Write for Circulars
and Prices to
F. E. Myers & Bro.
Ashland, Ohio

MYERS

THE
PUMP
THAT

PUMPS

**HAY
TOOLS**

BARN DOOR
HANGERS
HAY RACK
CLAMPS

Gilson Gasoline Engine and Pumping Jack

JACKS TO FIT ANY STYLE PUMP

\$70.00 COMPLETE. Every country home supplied with our system always has water. Will run ice cream freezer, churn, washing machine, etc., etc.

All Sizes

Send for
Catalog



"GOES LIKE
SIXTY."

GILSON

MFG. CO., 308 Park St., Pt. Washington, Wis.



All features of LANDSCAPE WORK handled to produce pleasing, lasting and quick results. Write for free booklet, "The Landscape Beautiful" H. R. COTTA, Landscape Architect, Rockford, Ill.

Plan the right heating

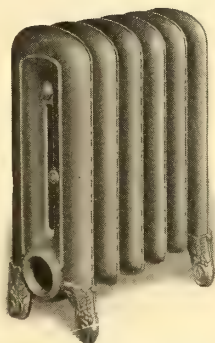
If you are newly building, don't discredit your property at the start by putting in old-fashioned forms of heating. Whether planning a new house or intending to move, don't overlook the great importance of a modern heating equipment. There isn't any other feature of the home which will save you so much or give you equal comfort as



**AMERICAN & IDEAL
RADIATORS & BOILERS**

These outfits for Low-Pressure Steam or Hot Water will soon repay their cost

in coal savings, lessened labor, absence of repairs, and low insurance. All ash-dust, smoke, soot, and coal-gases are kept out of the living-rooms—reducing house-cleaning one-half and saving the wear on carpets, decorations, and furniture.



This small, plain, perfectly smooth Radiator is one of several thousand patterns and sizes of AMERICAN Radiation made to fit any architectural needs. It is so clean and cleanable—suited to narrow halls, bathrooms, nursery, etc.

If property is sold you get back their full value, or they attract and hold best tenants at 10% to 15% higher rental. The saving of but one ton of coal in a year will meet the interest upon \$100, and this sum will nearly cover the difference in the cost of IDEAL Boilers and AMERICAN Radiators as compared with a hot-air furnace for a good-size cottage.

IDEAL Boilers and AMERICAN Radiators are annually replacing thousands of hot-air furnaces and stoves that have been found wasteful and wanting in OLD cottages, houses, stores, churches, schools, etc. Ever heard of any one going back to other forms of heating once they have tried our way? Any argument in that to you?

Please let us tell you the full why, how, and present attractive price. No tearing-up necessary—and in these less hurried months you get the services of the most skillful, quickest fitters! Ask for free valuable booklet. Inquiries cordially welcomed.

DEPT. 6

AMERICAN RADIATOR COMPANY

CHICAGO



THE "GLOBE"
is built on honor
and sold on merit

The "Globe" Ventilator

In Galvanized Iron, Brass and Copper
Also with Glass Tops for Skylight

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. *Smoky Chimneys Cured.*

"GLOBE VENTILATED RIDGING"

Manufactured by

Globe Ventilator Company :: Troy, N. Y.

Patented and
Trade-Mark
Reg. U.S. Pat. Off.



Cattle Manure in Bags

Shredded or Pulverized
Best for all indoor and outdoor work. No bad odor. Easily applied. Delivered east of Missouri River. \$2.00 per bag (100 lbs.) Write for circulars.

The Pulverized Manure Co.
21 Union Stock Yards, Chicago.

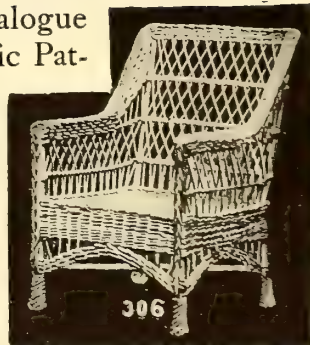
BOOKS

RELATING TO
Architecture
Decoration
Furniture Rugs
Ceramics, etc.

will be recommended and supplied by our well equipped Book Department.

MUNN & CO.
361 Broadway
NEW YORK

OUR Catalogue of Artistic Patterns will be mailed to you upon receipt of 25 cents in stamps.



This amount will be refunded upon receipt of your order for one or more pieces of furniture.

WILLOWCRAFT SHOPS

(Box B)

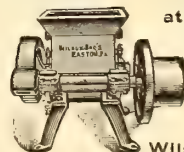
NORTH CAMBRIDGE, MASSACHUSETTS

Make Your Own Fertilizer

at Small Cost with

WILSON'S PHOSPHATE MILLS

From 1 to 40 H.P. Also Bone Cutters, hand and power, for the poultrymen; grit and shell mills, farm feed mills, family grit mills, scrap cake mills. Send for our catalog.



Wilson Bros., Sole Mfrs. Easton, Pa.



To Have a Handsome Home—How to Do It and How Not to Do It

READ this from a recent letter:—
"I tried all the different kinds of varnish stains, and oil stains with varnish finish, but the effect was muddy."

I tried several wood stains and found that they would rub off unless I gave them a wax finish and then they would show light and dark spots.

Then I used your Dye finishing with your Prepared Wax and was surprised and delighted with the results. All the beauty of the wood was brought out and your Wax gave it a beautiful soft tone, so different from the harsh effect varnish gives."

And now read this from a recent number of the American Carpenter and Builder:—

"Although great claims are made by varnish manufacturers for their floor varnishes, it may be truthfully said that none of them will stand the hard usage of walking on them without sooner or later marring white. As was very pertinently said by a varnish manufacturer, speaking on the subject of varnished floors at a master painters' convention, 'floor varnishes are not made to be walked on.'"

These matters are easily explained—
Stain and varnish, shellac, hard oil and similar preparations cannot sink into the grain of wood because they are too "thick" to penetrate the pores—so the wood is simply stained over or coated—thus the coating, instead of bringing out the beauty of the wood in the grain, hides it and makes it look flat and muddy—and, as the coating is only on the surface, every scratch and scrape and blow makes a light spot—the uncolored wood shows through the coating.

Now Johnson's Wood Dyes are dyes—not mere stains.

Johnson's Wood Dyes do not coat over the wood—they color it (to any desired shade) because they are so prepared that they penetrate the pores—thus they develop and accentuate the beautiful grain of the wood.

That is why they give an unequalled richness and

depth of permanent tone and a perfectly even texture which will not rub off.

Any one can secure the best results with Johnson's Wood Dyes and you can easily keep all your woodwork, furniture and floors in perfect condition by applying Johnson's Prepared Wax with a cloth right over the Dye or any other finish.

Johnson's Prepared Wax gives a rich, subdued, lustrous and enduring surface which cannot be produced by any other finish, and, unlike shellac, hard oil or varnish, it does not show heel marks or scratches—"it is made to be walked on"—and sat on—rubbing only gives it a finer polish.

Johnson's Wood Finishes are not new preparations.

We studied them out years ago in order to be able to preserve and bring out the natural beauty of the fine hardwood flooring which we make and ship all over the world.

You see we had an object in seeking out the very best finish for our wood that could possibly be made.

Now you can profit by our self-interest.

For your name and address on a postal we will send you, with our compliments, a very handsome and interesting 48-page illustrated book, "The Proper Treatment for Floors, Woodwork and Furniture."

This book tells you in detail the easiest and most economical way to have a handsome home. You can do all the work yourself and the expense is trifling.

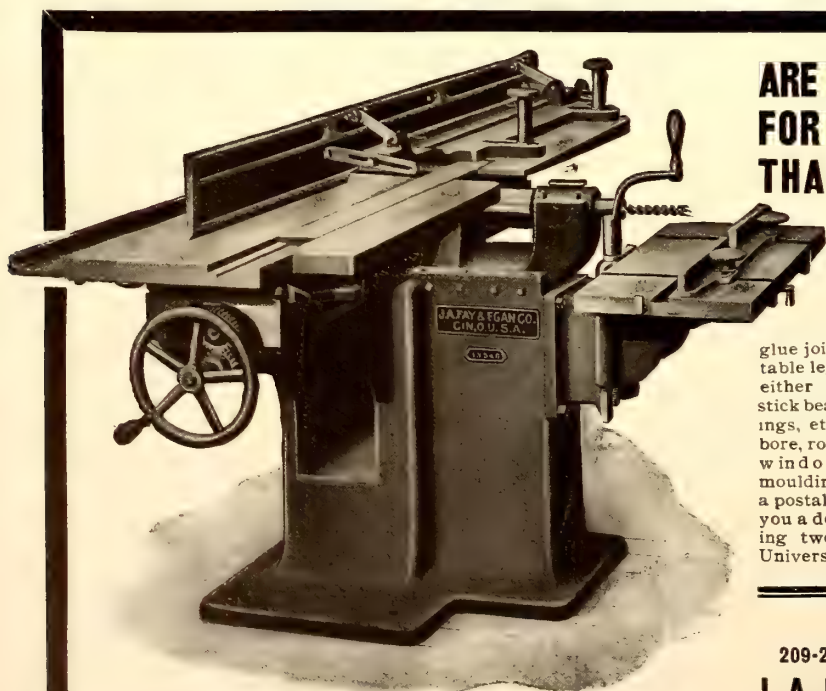
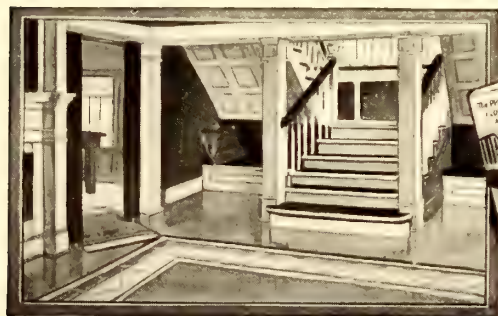
Just send us your name and address on a postal now.

S. C. JOHNSON & SON, Station HG-5 Racine, Wis.

"The Wood Finishing Authorities."

Johnson's Wood Dyes for the artistic coloring of woods (14 shades), half pint cans 80 cents, pint cans 50 cents.
Johnson's Prepared Wax, 10 and 25-cent packages and large size cans Sold by all dealers in paint.

JOHNSON'S
ARTISTIC WOOD FINISHES
JOHNSON'S



ARE YOU LOOKING FOR A MACHINE THAT WILL

plane out of wind, surface straight or tapering, rabbet door frames, rabbet and face inside blinds, joint, bevel, gain, chamfer, plow, make glue joints, square up bed posts, table legs, newels, raise panels, either square, bevel or ogee, stick beads, work circular mouldings, etc., rip, cross cut, tenon, bore, rout, rabbet, joint and bead window blinds, work edge mouldings, etc.? If so, drop us a postal card, and we will send you a descriptive circular showing two views of our No. 62 Universal Wood Worker.

Write

209-229 WEST FRONT STREET
J. A. FAY & EGAN CO.
CINCINNATI, OHIO

No. 62. UNIVERSAL WOOD WORKER

plants available for bloom during a stated part of the year, but will make a beginning to which may be added many other desirable sorts.

The path, to harmonize with the old time effect of the planting, should be laid in red bricks in a zigzag pattern and a row of bricks set cornerwise outline the bed. Down this my lady may trip in the gloaming to tryst with her lover under the clematis at the gate.

But the summer home quite often consists of a cottage rented for the season and perennial planting is not to be thought of, then there remains the alternative of a flowerless summer, or the use of annuals. But this class of flowers, while entailing somewhat more trouble than perennials, is rich in color, odor and grace and affords, perhaps, more pleasure than the paler colored perennials. Most of the hardy annuals may be planted in the open ground after the summer has well begun, and many may be started in the city home and transported to the summer home along with the pet cat and canary.

Early blooming asters, salvias and stocks may be used for the background of these beds and such low-growing plants as pansies, daisies and verbenas be used for edging. Phlox Drummondii is another charming plant for edging beds of taller plants, and is also excellent for cutting. A bed of scarlet sage interspersed with the two tobacco plants—*N. affinis* and *sylvestris*—and bordered with scarlet and white phlox can not but be charming.

Where the path runs from east to west a pretty effect may be obtained by planting these tall growing plants on the north side and lower forms on the south. To the tall sorts cited may be added the cleomes, which will give an abundance of attractive, showy flowers all summer, and on the south side such plants as stock, scabious, poppies, asters and gypsophila may be grown; all these will give an abundance of cut flowers suitable for vase or for corsage wear and none is exacting in the matter of culture.

In preparing the bed for this summer planting it should be dug twelve or eighteen inches deep and well enriched with old manure well incorporated with the soil. If the soil is rough and gravelly, or stiff with clay, it will be well to remove a portion of it and replace it with a quantity of good, mellow loam and leaf mold. This will be cheaper in the end than to labor with a hard soil all summer and meet with failure instead of success in the growing of flowers.

If there is a rough bank about the grounds cover it with nasturtiums, but failing this let the nasturtiums climb about the porches, and peep in at the windows and share the honors with the morning glories.

Sweet peas, pansies and petunias are about all the remaining annual flowers that will repay culture where little care can be given them, and these may find a place about the foundations of the house or elsewhere on the premises, and should be included in one's plans for the summer, even though it be in a temporary home. Many of these plants mentioned will self-sow and come up year after year. Verbenas, asters, pansies, ageratum, cleomes, scabious, the nicotianas, poppies and petunias may all be depended upon to come up, self-sown, year after year.

A dollar's worth of seed will supply all the flowers needed for such a garden, and the pleasure to be derived therefrom cannot be measured in dollars and cents, though such a border, in an otherwise flowerless neighborhood, may be made very remunerative by the sale of cut flowers.

CURRANTS AND GOOSEBERRIES

By E. P. Powell

THE currant is one of the prime essentials to home comfort. It came over from England with the Puritans, and no garden has ever been complete without it. We are recently finding out that it is impossible to overstock the market with fine fruit of this sort. In fact the price has been going steadily upward for the last ten years. It used to rule at about five cents a pound or quart, and is now somewhere between twelve and fourteen. This price, of course, does not rule in remote sections, where the city market can not be easily reached. Better yet, the currant is one of the quickest of our fruits to make returns after planting. One-year-old plants should be in fine bearing the third year, while two or three-year-old plants should begin to bear at once.

The list of varieties has grown greatly within the last few years, but most of the new sorts are hardly worth the planting. I have tried most of them, and am now confining my new planting either to my own seedlings, or to White Grape, with Versailles and Fay. One or two of the new ones, notably Perfection, prove excellent. I have from my long list of seedlings selected three which surpass everything except White Grape. Number 1 ripens a tremendous crop about the Fourth of July, a little earlier than any other sort, and for that reason I have named it Fourth of July. The branches are long, but the berry is not quite as large as Fay. Number 2 is every way identical with Fay and Versailles, except that the bush stands fully one-third larger than either of these sorts, and gives me full one-half more currants. It is a magnificent bush, standing six and seven feet high, with a strong arm and an open head. Number 3 is abnormal in holding its fruit, in perfect condition, for two months after all other currants are gone. Two years ago it was entirely sound until November 12, when it was frozen. In 1907 it was frozen a little earlier, but through October it was as fresh as any currant ever picked in July. I have named it October Red. Number 2 I have named the Red Giant. I do not yet offer these for sale, but have placed them in the hands of the veteran strawberry grower, M. Crawford, of Cuyahoga Falls, Ohio.

In planting for market it is necessary to select red sorts, although the white currant is, as a rule, sweeter and every way better. It makes a red jelly, but not as red as the red currant. Where these facts are known the market is slowly changing, and the demand for whites is increasing. I would, therefore, plant one row of White Grapes to every ten rows of red sorts. This White Grape currant is the most delicious ever yet produced for eating out of hand, or for table use. The bush is also an enormous producer. I have picked from a single bush seven quarts, a quantity never surpassed in my garden by any other variety except Red Giant. It must be borne in mind that white currants are less subject to being devoured by the birds. They do not see them as readily as they see the red. This whole matter of destruction by birds depends, however, upon the largeness of the plantation. Those country homes which have long rows of cherries will hardly observe the loss of the few; and it is the same with berries and currants. I allow my hens to go freely among the currants, and rarely observe them touching one.

The currant is a good home fruit for another reason, that we can propagate them ourselves, and very easily, from either seeds or cuttings. If from cuttings, take the trimmings of recent growth, make them about one foot in length, cut smooth under a joint, and

GRAND RAPIDS CORRUGATED ASBESTOS TABLE PADS

Patent applied for

Heat proof air spaces above and below the corrugated center board of asbestos make scorching and blistering by hot dishes absolutely impossible. No moisture can penetrate the pad, and its soft envelope of finest white flannel makes scratches and scars impossible. The pad is ribbon hinged. Can be folded most compactly and put away in the sideboard when not in use. The flannel covering is bound and tied with tape and thoroughly shrunken.

The "Grand Rapids" Pad

can be supplied in any size, round or square, cut to fit your table top exactly. Extra pads for leaves if wanted. Gives a dainty charm to the service which no other equipment can impart. Noiseless, soft, firm, absolutely smooth and even.

48-inch, round or square	• •	\$5.00
54-inch, round or square	• •	6.00
60-inch, round or square	• •	7.00

Proportionable prices on any other dimension or diameter quoted on request. 54-inch leaves for extension, \$1.20 each.

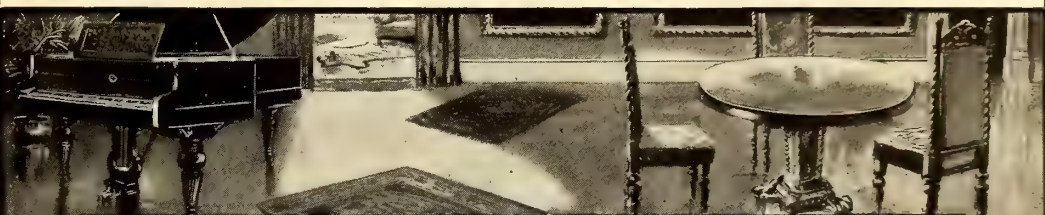
If not satisfactory in every respect, pad may be returned within 30 days, express collect, and full price will be refunded. Ask your furniture dealer to show you the "Grand Rapids" Pad. Dainty booklet, Edition No. 4 "The Dining Table," sent free on request.

The Veach Asbestos Co., Oil City, Pa.

Preserve the handsome finish of your dining table top

by use of the "Grand Rapids" Pad. No other means can afford perfect protection.

A BOOK TELLING HOW TO Make Floors Beautiful SENT FREE ON REQUEST



For Floors, Furniture and Interior Woodwork

Old English Floor Wax

"The Wax with a Guarantee"

has become the standard of "quality" with professional decorators simply because it is made a little better than any other wax.

Old English Floor Wax gives that much-sought "rich, subdued lustre." It is transparent and accentuates the grain of natural or stained woods. Equally suitable for the finest inlaid hardwood or plain pine floors. Never peels nor shows heel marks. Won't scratch or become sticky. Preserves the floor and is sanitary because dust and dirt do not adhere.

Economical—1 lb. (50c.) covers 300 square feet. Put up in 1, 2, 4 and 8 lb. cans. Nothing equals it as a finish for furniture and woodwork.

Write for Our Free Book, "BEAUTIFYING AND CARING FOR WOOD FLOORS"

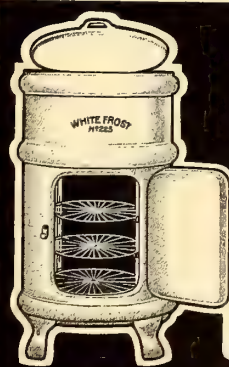
which contains expert advice on the finish and care of floors, woodwork and furniture.

A book to read and keep for future reference. Write for the book now and

Ask for Free Sample and mention your dealer's name when you write. Sold by dealers in paint, everywhere.

We guarantee Old English to give entire satisfaction when used as directed, or money refunded.

A. S. BOYLE & COMPANY, Department O. Cincinnati, Ohio
Largest Exclusive Manufacturers of Floor Wax in the World.



White Frost Refrigerators

Do you want the Neatest, Sweetest, Cleanest, Handsomest Refrigerator made, one that will always remain clean and sweet?

Send Postal Card To-day for Free Booklet and learn all about the WHITE FROST, with its Revolving Shelves and pure Sanitary Construction. Exclusively Metallic. Finished in Spotless White Enamel inside and out. No wood in its make-up. High Art and Low Price.

We will sell you one, freight prepaid to your station, at trade discount if your dealer doesn't handle them.

METAL STAMPING CO., 528 Mechanic St., Jackson, Mich.



Dear Bob: I want you to buy me a White Frost Refrigerator

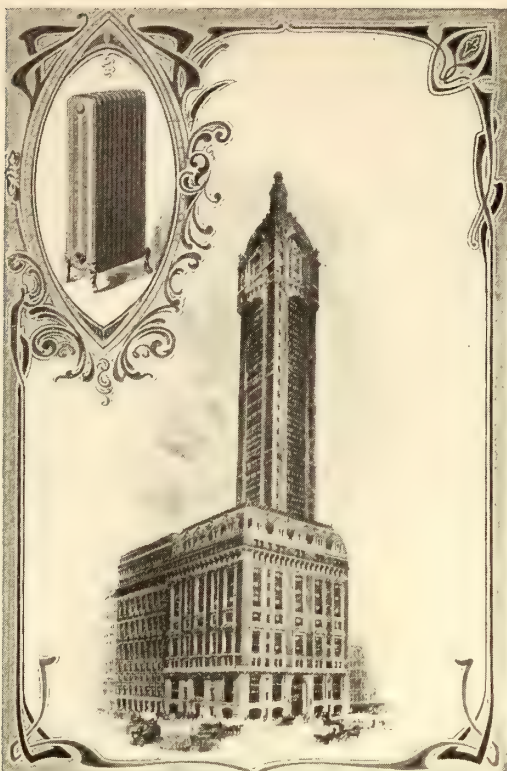


The expense and annoyance of painting will not recur every year or two if you use

DIXON'S SILICA-GRAPHITE PAINT

the "Proven Shield for Steel Work." Durability records in all climates; write for a few.

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.



Kinnear Pressed Radiators

Selected for

THE SINGER BUILDING, NEW YORK

Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

**On the Wall—Off the Floor
Out of the Way**

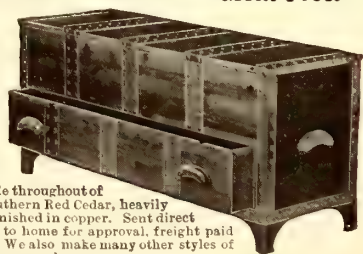
If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.

Write for Catalog "D" for any desired information.

**THE PRESSED RADIATOR CO.
PITTSBURGH, PA.**

RED CEDAR CHEST GUARANTEED "Moth Proof"

Our old fashion Treasure or Dowry Chest is an ideal wedding or birthday gift; a work of art and a jewel of utility.



Made throughout of Fragrant Southern Red Cedar, heavily bound and finished in copper. Sent direct from factory to home for approval, freight paid both ways. We also make many other styles of chests and box couches.

Write at once for pictures and prices. Dept. 40

Piedmont Red Cedar Chest Co., Statesville, N. C.

Details of Building Construction

A collection of 33 plates of scale drawings with introductory text
By **CLARENCE A. MARTIN**
Assistant Professor, College of Architecture, Cornell University

This book is 10 by 12 1/2 inches in size, and substantially bound in cloth. **PRICE, \$2.00**

FOR SALE BY

MUNN & CO., 361 Broadway, N. Y. City

thrust them into a clean vegetable mold (better where there is a mixture of sand), and stamp the dirt down tight over them, leaving three or four buds out of the ground. They will be well rooted at the end of a year and ready for transplanting to the field. Trimming currants means the cutting out of new shoots and old wornout wood. Leave the good, strong healthy shoots of two or three years age; and occasionally leave a new shoot. The currant likes all sorts of manures or compost, and feeds readily without getting diseased. To destroy the slug which comes from the sawfly egg, spray with white hellebore and arsenical mixtures combined. A thorough spraying, done just as soon as the worms appear, will generally do the work. A second crop sometimes hatches during the picking season, and these must be sprayed with hellebore alone.

The English are decidedly ahead of us in their love for gooseberries; but the American market begins to demand this delicious berry quite up to the supply. I would recommend anyone, who wishes to experiment with them, to start with Columbus, Industry, Red Jacket and Crown Bob. Crown Bob and Industry are foreign sorts, but well acclimated to our soil and climate. On the whole I think I should select, for a single variety, Red Jacket. It is a red berry of the American type, and thrives everywhere. Triumph is an American seedling of the English type, and a noble berry every way. Industry has only one objection, that the berry is covered with rather rough hairs. I have been able to grow some good seedlings, one of them ripening before all other varieties—a rich red and very sweet berry, as well as large. Those who wish to experiment will be very sure to find among wild gooseberries more or less sorts worth transplanting to the garden. Jelly from these wild sorts can hardly be exceeded in rich flavor.

The cultivation of the gooseberry used to be considered difficult, but if you will plant the rows to run north and south on high and dry land, but not over-dry or barren, you will have no trouble from mildew. Keep the ground well cultivated until the berries will be pulled off by the cultivator. It is not desirable to set them with a southern exposure, and in the full glare of the sun, for a protracted hot spell will sometimes roast the berries by bushels. When you trim the gooseberry bear in mind that the fruit, unlike that of the currant, grows on new wood. You will, therefore, cut out more old wood and less new. You will bear in mind that the sawfly begins to lay its eggs on the gooseberry a little earlier than on the currant, and there you will soonest find the worms. Have hellebore and Paris green ready, and spray at the very earliest moment. Bear in mind also that hens will eat every gooseberry as soon as it forms if allowed access to the bushes. It is the one fruit above all others that they crave. Better inclose your currant and gooseberry garden with a wire fence two or three feet high until after the bearing season.

In discussing the currant and gooseberry we are considering the two plants which have been found best adapted to pioneering. Our fathers brought them over the water with them, and every pioneer's yard or garden, all the way westward, had the currant and the gooseberry. The birds gathered the fruit and scattered the seed around the woods and openings, in this way increasing their own food, and multiplying the varieties for human use. I do not feel that we are wasting our time if we return this favor by planting a good many more bushes than we need for our own use. Count the birds in not only for a few extra cherry trees, but for a plenty of currants and gooseberries.

MENNEN'S BORATED TALCUM TOILET POWDER

"A SAFE HIT"

When Mennen's was first introduced it made a hit immediately, and was then and is now specially recommended by physicians everywhere as perfectly pure and safe. It has proven a summer necessity, a boon for comfort of old and young.

MENNEN'S BORATED TALCUM TOILET POWDER

prevents and relieves Chapping, Chafing, Prickly Heat, Sunburn, and all skin troubles of summer. After bathing and shaving it is delightful; in the nursery, indispensable.

For your protection the genuine is put up in non-refillable boxes—the "Box that Lox," with Mennen's face on top. Guaranteed under the Food and Drugs Act, June 30, 1906. Serial No. 1542. Sold everywhere, or by mail 25 cents. Sample free.

**Gerhard Mennen Co.
Newark, N. J.**

Try Mennen's Violet (Borated) Talcum Toilet Powder—it has the scent of fresh-cut Parma Violets.

The Box that Lox



Van Dorn Iron Works Co.



PRISON, HOUSE & STABLE WORK

**JOIST HANGERS
LAWN FURNITURE
FENCING, ETC.**

CLEVELAND, OHIO



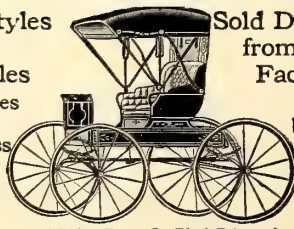
Standing Seam ROOF IRONS

CLINCH right through the standing seam of metal roofs. No nails are needed unless desired. We make a similar one for slate roofs.

SEND FOR CIRCULAR

**BERGER BROS. CO.
PHILADELPHIA**

200 Styles of Vehicles
65 Styles of Harness



Sold Direct from our Factory to User

No. 669. Fancy Car Plush Trimmed Buggy with auto seat, fancy padded wing dash, bike gear and rubber tire. Price complete, \$78.00. As good as sells for \$85 more.

Buy Direct From Our Factory

Saving all expenses and profits of the dealer. Elkhart Buggies and Harness have been sold direct from our factory to the user for 35 years. We are

The Largest Manufacturers in the World selling to the consumer exclusively. We ship for examination and approval, guaranteeing safe delivery. No cost to you if not satisfied as to style, quality and price. Send for new free catalog.

**Elkhart Carriage & Harness Mfg. Co.
Elkhart, Ind.**

No. 313. Light Surrey with Canopy top and fine auto seats. Price complete, \$78.00. As good as sells for \$85 more.



WHO IS YOUR BUILDER?

"HE IS a rogue, watch him!" "No, he's all right, trust him." "Look out for the extras, he'll soak you!" "He's one of the squarest men I ever met."

Opinions of the average building contractor vary widely—perhaps more widely than of men in other occupations. To a layman his methods are a mystery. A layman can not see how estimates involving the entire cost of a building are made, or how there may be any sort of system in the business. Sometimes he swings to the extreme of not seeing how any work at all is necessary in the office from the time of signing the contract until the final bill is made up. An engineer in one contractor's office has been asked repeatedly by his friends: "Just what do you have to do anyway?"

This article is to deal with the average small contractor whom everyone meets at least once—if one builds one ordinary-sized house; and not with the large firms of million-dollar contractors doing large city work or skyscrapers or, in rare cases, private work. For many small builders a notable feature is a lack of up-to-date business methods. He often works up from an able, progressive journeyman who knows how to do his work, and who learns all he can about costs, buying and estimates, but who naturally has less opportunity for acquiring business-like methods and systematizing. This lack is a severe handicap. He often spends his life in the business, respected and honorable in all his dealings, turning out many jobs of excellence, but closing up with but little money for his old age. In fact, this is decidedly the rule for small builders, as it is, for varying reasons, in all kinds of business. These statements apply equally well to all the various building trades. It is to these men, who as a class are hard workers and have to be, whose methods are not understood and are often thought to be of the hit or miss variety, and who often do not accumulate money enough to have easy credits, that the home builder must look for the execution of his plans. These plans often represent long considered and cherished ideas, involving, perhaps, the one large expenditure of a lifetime. The choice of a builder, then, should be a very serious matter.

One of the first questions coming to the mind of a man about to build is: "Why do prices vary so?" It is true that for the same section of the country (not to deal with differences between sections) bids upon a small house, costing, say, between four and ten thousand dollars, may vary twenty-five per cent. Yet in each bid is included the house complete as called for, and when figured from architect's plans and specifications it might seem that general uniformity of workmanship and material was insured.

Plans and specifications, however carefully made, are subject to varying interpretations of meaning because of the imperfections of language as a method of communication. This can not be overcome—and an architect's insistence upon the grades of material and workmanship he has specified as plainly as possible is often hindered thereby. It is easy for a job to vary largely in quality and cost to the contractor between the best and a grade which to the architect or owner may be clearly enough not what they desire, and yet not be so poor that there is any chance for complaint of deficiencies obvious enough to be beyond dispute. Disputes of this sort are long, annoying and often fruitless.

It is worth while recalling just what variations in bids upon a house mean. Two figures twenty-five per cent. apart may each give an owner his money's worth. In this case

CREX

Grass Carpets and Rugs

TRADE MARK



From Maine to California

CREX Sanitary Carpets and Rugs have become so universally known that at the mere mention of CREX you associate healthfulness and cleanliness with the most sanitary and durable floor covering.

In thousands of homes where CREX was introduced as the

Ideal Summer Floor Covering

it is serving its purpose all the year round.

You do not tire of CREX—it always appears fresh and restful. The toughness of the grass resists wear and is not injured by sweeping or the use of water.

Avoid imitations. Look for the CREX Trade Mark.

For sale by all up-to-date Department, Furniture and Carpet Stores.

THE AMERICAN GRASS TWINE CO.
377 Broadway, New York. St. Paul, Minn.

Where A Broom Can't Go

The Bissell Sweeper is the every-day necessity and convenience of the home. It reaches the dust under couches, beds and other places where it is awkward and distressing to use a corn broom, making an easy task of what is ordinarily a hardship. The superiority of the

Bissell

Sweeper is recognized throughout the world, and over nine million homes can testify to its efficiency and labor-saving qualities. It performs its work so easily, quietly and thoroughly as to win the everlasting approval of the user. It has robbed sweeping day of its terror, making the work a pleasant pastime instead of a disagreeable drudgery.

Bear in mind its great economy in dollars and cents, as it will last longer than fifty corn brooms.

Buy of your dealer now, send us the purchase slip within one week, and we will send you FREE a good quality Morocco leather card case with no printing on it.

Prices \$2.50 to \$6.50.

Free booklet upon request.

Address Dept. 125
BISSELL CARPET SWEEPER CO.
GRAND RAPIDS, MICH.

(Largest and only exclusive carpet sweeper makers in the world.)



clearly the higher price gives the better job. A high figure may give a poor job—yielding a large profit unless wasted by bad management; or a low figure may give a good job, if a contractor has made a mistake through ignorance or carelessness. Contractors doing

either kind of work, poor or good, may be estimating too low, and after a time may go into bankruptcy. Of course, the extremes of figuring would be the good contractor making a good profit and the poor contractor figuring too low, and the variation between these two

STUDY ARCHITECTURE



EASY LESSONS OR STEPPING-STONE TO ARCHITECTURE

BY THOMAS MITCHELL

A SIMPLE TEXT-BOOK telling in a series of plain and simple answers to questions all about the various orders, as well as the general principles of construction. The book contains 92 pages, printed on heavy cream plate paper, and illustrated by 150 engravings, amongst which are illustrations of various historic buildings. The book is 12mo in size and is attractively bound in cloth.



PRICE, FIFTY CENTS, POSTPAID
MUNN & CO., 361 Broadway, NEW YORK

Colonial Houses

FOR MODERN HOMES

A COLLECTION of designs of houses with Colonial (Georgian) details, but arranged with modern comforts and the completeness of the twentieth century.

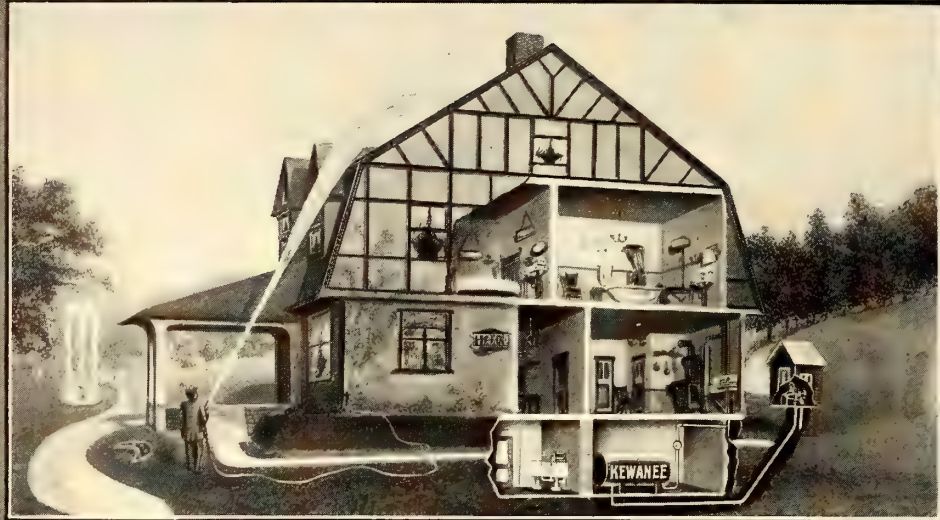
Written & Illustrated by E. S. CHILD, *Architect*

They show large, correctly drawn perspectives, full floor plans, and complete descriptions, with estimates of cost. The designs are new, original, unique, consistent, but not stiff nor constrained. Made, not by an artist, but by an architect. They combine beauty of exterior with complete and convenient interiors, with kitchens, laundries, pantries and closets carefully and skillfully considered.

If you are at all interested in the subject, you will enjoy this publication.

Price, postpaid, \$2.00

MUNN & CO., 361 Broadway, NEW YORK



Perfect Water Supply Service for Your Country or Suburban Home.

YOU can have a thoroughly efficient and reliable water supply service in your home—service equal to that afforded by the best city water works system. You can have an abundant supply of hot and cold water delivered under strong pressure to the bathroom, kitchen, bedrooms, laundry, lawn, garden, barn, anywhere.

This service and first class fire protection will be yours, if you install

The Kewanee System of Water Supply

With the Kewanee System, there is no elevated or attic tank to leak, freeze, overflow or collapse. A Kewanee Pneumatic Tank is placed in the cellar, buried in the ground or located in a pump house.

The Kewanee Tank rests on solid ground, will last almost indefinitely and furnishes a fresh usable supply of water during all seasons.

The water is delivered by air pressure. Pumping water into the tank from your well, cistern, or other source of supply, creates the pressure. 40 pounds is a good average pressure and is equal to the pressure from an elevated tank 93 feet high.

Kewanee Pneumatic Tanks and complete Kewanee

Systems are imitated. Accept no tank as a Kewanee Tank unless it bears this trade mark. **KEWANEE** Look for our name-plate on all pumping machinery. Then you will be safe from inferior equipment.

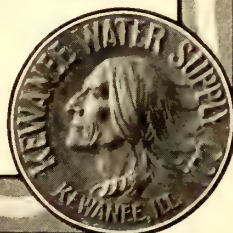
Over 8,000 Kewanee Systems in successful operation, providing water for country and suburban homes, clubs, hotels, schools, apartment buildings, public and private institutions and towns.

Our engineering service is free. No charge for specifications and estimates. Our guarantee protects you.

Our 64-page illustrated catalog explains everything. Ask for catalog No. 36.

Kewanee Water Supply Company Kewanee, Illinois.

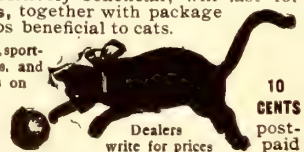
32 Broadway, New York City.
820 Marquette Building, Chicago.
404 Equitable Building, Baltimore.
710 Diamond Bank Building, Pittsburg.



CATNIP BALL (Pat'd) a toy for cats—ridiculously amusing; positively beneficial; will last for years. **Price 10 Cents**, together with package of catnip and other herbs beneficial to cats.

For sale by 5 and 10-cent stores, sporting goods, drug and bird stores, and news stands, or mailed by us on receipt of price.

National Cat Supplies Co.
Dept. A.H., East Boston, Mass.



10
CENTS
post-
paid

KILLWEED

Used to kill weeds on Paths, Gravel Walks and Gutters **Price, \$1 per Gallon**

Francis Lynch, Agent, 78 Clinton St., Newburgh, N.Y.



T.H. BROOKS & CO. CLEVELAND, O.
FLOOR & SIDEWALK LIGHTS.
OF EVERY DESCRIPTION.
SEND FOR CATALOGUE.

Details of Building Construction

A collection of 33 plates of scale drawings with introductory text.

This book is 10 by 12½ in. in size, and substantially bound in cloth.

By **CLARENCE A. MARTIN**

Assistant Professor, College of Architecture, Cornell University

Price, \$2.00

For Sale by

MUNN & COMPANY, 361 Broadway, New York

may often prove to be twenty-five or thirty per cent.

Of the very small builder who works upon a job himself and has no office force, it is often maintained that he can turn out work cheaper because of less expense. This statement should not need refutation. Such a builder has no system, and can devote no proper time to the executive end of his business. It is axiomatic that the larger the business, other conditions being alike, the less is the expense of conducting it per thousand dollars' worth done.

Besides these things there are sectional differences. For instance, first-class contractors around Boston who are used to working for Boston architects may waste time going into certain sections where architects' requirements are not so strict and competing builders not so good. This condition does not affect the smaller house especially considered here, however, because competition upon it usually would be by local men.

These statements about variations in estimates assume, it is clear, a free-for-all competition. Too often this kind of competition is encountered. Good architects' opinions upon the quality of work done by various men will vary, and some of the best of them invite all kinds of contractors into their competitions—sometimes for reasons given later and sometimes through errors in judgment. Architects do not, however, expect to get a good job from a cheap, poor builder, and obviously they are best fitted to do so were it possible. They realize fully that the personality of the builder counts largely, and that no amount of superintendence and specifications will produce a good job, excepting from a good builder. They classify builders whose work they know, and intend to invite competition only among those doing the grade of work they desire.

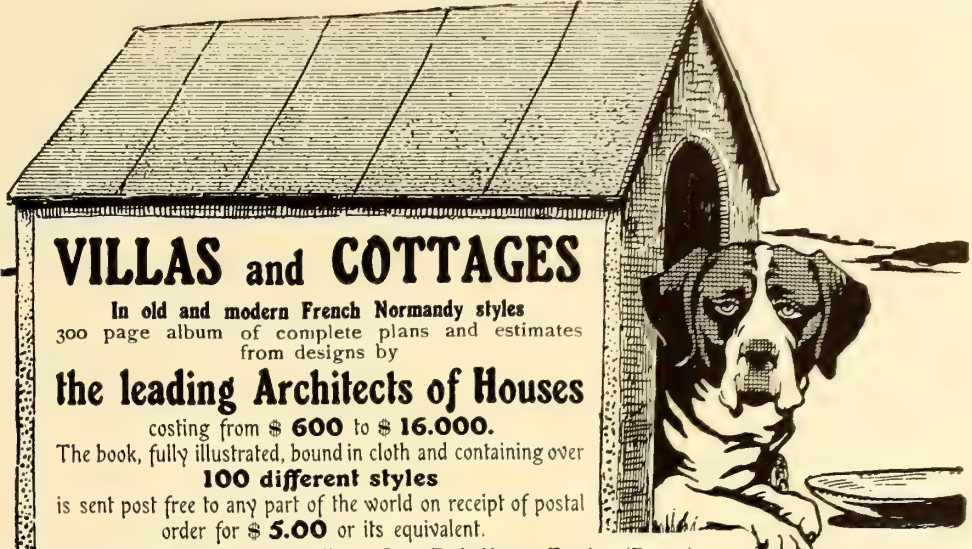
It is evident that this procedure cuts down the variations between bids very largely, but there still remains an often neglected feature. The bidder—who is often called the principal contractor—usually does one or two lines of work himself and sublets the rest. Upon a house of the size here considered he is likely to do the carpenter work and to sub-contract the plumbing, painting, heating, electric work, masonry, roofing and plastering. There are associated upon one job six or eight contractors, all doing important work. They are often chosen, in part at least, by the principal contractor, and there is a strong temptation, even among good builders, to reduce bids and increase chances of winning by using low sub-estimates. Here is the cause of a considerable variation in bids. Architects are more and more getting the practice of calling for lists of sub-contractors to be handed to them for approval. Often some of these things are withheld from the principal contract and let separately. Thus may be seen a tendency—a growing tendency—to consider the personality of each and every contractor involved upon a good job as of prime importance; and a mere range of prices submitted as only one of the items leading to the award of a contract.

It may be confidently stated that a list of bids based upon carefully prepared plans and specifications, and made by selected bidders and selected sub-bidders, will not vary ten per cent.—will often not vary five per cent. Remarkable instances of close figuring could be quoted to those who do not believe there is much exactness in estimating—instances proving this closeness the result of accuracy and not an accident. Careful estimators upon all that goes into a modern house, with its complications, can tell within one per cent. what profit they will make, although sometimes unforeseen changes in market or labor conditions may upset the very basis of their computations.

It can not be said too emphatically that when there is considerable variation in a list of bids careful examination of other conditions is necessary if high-class work is desired. A group of figures close together in a list often shows the proper price for the work, noticeably low or high ones being "wild" for some reason. This is not always true, because one good man may figure low because work is scarce, or another good man's bid may be high because he is overloaded and doesn't care to win. It is also obvious that the cheap man will be a low bidder and that the careless or ignorant man may be low or high or anywhere. Safety to the owner lies in the assumption that in a close group of figures by selected bidders lies the proper price, and there should be good reasons for the acceptance of any bid notably lower.

There is naturally at all times an attraction toward a low estimate upon a job. Architects are not free from it. They may set about preparing plans not to exceed a sum named by the owner. In their desire for a fine result they are likely to exceed the limit set. Then comes their temptation by a low bid. The owner may have a definite scheme for his house which overruns his limit of price—and there is his temptation by a low estimate. A list of bids varying quite evenly between wide limits (say twenty-five per cent. apart) is likely to mean that builders doing varying grades of work are bidding. Sometimes a cheap contractor is included in a list of bidders so that he may be used if the job runs too high among the men preferred for the work. This or any use of a poor builder is dangerous; poor work of any kind is expensive—as it is in all matters. If it is necessary to reduce a price cut down the requirements and let what is done be well done. Extreme fineness of finish, expensive materials, and elaboration of detail may all be reduced, thereby lessening the expense without recourse to the low-grade builder, whose poor quality would extend through every detail of the work, from rough construction to finish. A poor job is a continual source of expense. Many a man has spent the difference between a low accepted bid and a reasonable one during his first five years' occupancy of his house; and in the end still has had a cheaply built house.

Another source of annoyance to which an owner often feels himself subjected is the slowness of the contractor. Toward the completion of the work, when perhaps the owner is impatient to occupy his premises, this is especially noticeable. Good work takes time. Many houses are rushed more than they should be. At the same time laxity in this regard is a common fault among builders—chiefly because they do not tabulate their experiences in this line and carelessly agree to time limits which careful thought or comparison would show to be too close. At the same time it should be remembered that so many sub-contractors are involved, and such variety of material, coming sometimes from distant places, is used that it is not surprising if estimates upon time of completion go astray. Sometimes the owner seeks to counteract this by inserting a "forfeit and bonus" clause in his contract—by which the builder loses a stated amount for each day the job is incomplete after a certain date. This clause is practically valueless concerning house work. An owner may take advantage of a very trifling or self-originated, unfinished detail to collect a forfeit or avoid a bonus. Where neither party means to use any unfair advantage yet disagreements will arise. A trifle of hardware, a shelf, or the improper working of some fixture may cause this. These little things are likely to occur upon any job not fully adjusted to use. It has been shown to



VILLAS and COTTAGES
In old and modern French Normandy styles
300 page album of complete plans and estimates
from designs by
the leading Architects of Houses
costing from \$ 600 to \$ 16,000.
The book, fully illustrated, bound in cloth and containing over
100 different styles
is sent post free to any part of the world on receipt of postal
order for \$ 5.00 or its equivalent.
ARNAUD & Co. 17. Rue Le Peletier. Paris (France).

French Lick-West Baden Springs
The Ideal Place to Rest—Perfect Hotel
Accommodations. Open the year
'round. Offers every attraction to
seekers of Health—Rest—Recreation



Situated in Southern Indiana on the
MONON ROUTE

Write for descriptive booklet, rates, etc.
B. E. TAYLOR General Manager
FRANK J. REED Gen'l Passenger Agent
Custom House Place, CHICAGO

FIVE MINUTE TALK
Sent Free
**"HOW TO KEEP AWAY CHICKEN LICE
AND MITES" by only One Application a Year**
Successfully used for upwards of 30 years
CARBOLINEUM WOOD PRESERVING CO.
350 West Broadway, New York, N. Y.

**A
Green Corn
Luxury**

Ever eat corn cakes made in
true Southern style? You
can have them just as sweet
and delicious if you use

Kornlet

Not canned corn. It's the pulpy
cream of the kernel, absolutely
free from husks and hulls. In
Kornlet you have a green corn
luxury the year 'round.

The book of 41 Kornlet recipes packed under
the wrapper only begins to suggest the
wonderful cooking adaptability of Kornlet.

If your grocer hasn't Kornlet,
write us.

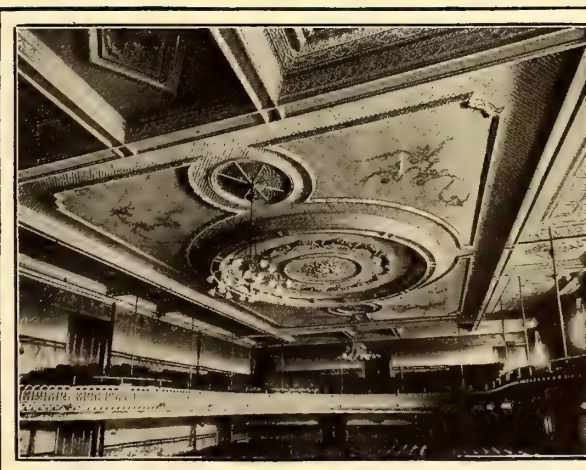
THE HASEROT CANNERIES CO.,
CLEVELAND, OHIO,
U. S. A.

MANLOVE AUTOMATIC GATE



can be attached to ordinary
posts. Is opened and closed
by any vehicle, including
Automobiles. Machinery is
all above ground. Simple,
durable, inexpensive. Especially
adapted for Summer
Homes and Country Clubs.

MANLOVE GATE CO., 272 E. Huron St., Chicago



**Berger's
"CLASSIK"
STEEL CEILINGS**

cover the field so completely
that suitable selection may easily
be made for any class of room,
whether something elaborate or
something simple and low-
priced is desired.

MOST COMPLETE LINE OF ARTISTIC STEEL CEILINGS IN EXISTENCE

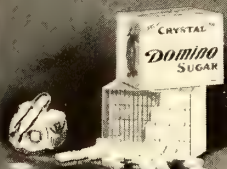
Have you the Catalog?
Write for it **TO-DAY**
Ask for **D 64**

The Berger Mfg. Co., Canton, Ohio

New York Philadelphia Boston Chicago St. Louis San Francisco Minneapolis Atlanta

SPECIALTIES: STEEL CEILINGS, ROOFING, VAULT AND SIDEWALK LIGHTS, FIREPROOFING, STEEL FURNITURE, ETC.

CRYSTAL Domino SUGAR



5½ Sealed Boxes Only!

Best Sugar For Tea and Coffee!

*A Tobey Hand-Carving
in Solid Mahogany*



Tobey Handmade Furniture

Elegant in line and finish, and the nearest approach to structural perfection—the highest known achievement of the cabinet-maker's art.

Made of beautifully grained, solid woods in patterns answering almost every requirement of the home. Special designs to order.

We invite you to visit our stores, or to correspond.

The Tobey Furniture Company
CHICAGO NEW YORK
Wabash Avenue and 11 West Thirty-
Washington Street second Street



MERRICK LONG ISLAND

Plots 100x200 and larger FOR SALE. Houses will be built from purchaser's own plans, and liberal terms may be made. This property is in the center of a rapidly developing section of Long Island, is fully restricted and is surrounded by gentlemen's country places, within an hour from the heart of New York City.

For maps, prices, etc., address

Edward McVickar

GENERAL AGENT

200 Broadway, New York
and 1 WEST 34th STREET

ADIRONDACK CAMP FOR SALE



ON UPPER SARANAC LAKE

Magnificently situated. 1,700 feet altitude. 100 acres, 30 cleared, balance wooded. 2,000 feet like front. Good roads. Unfailing supply of spring water. Ten buildings, including out-buildings, all in perfect condition. Tennis courts. Two miles from Golf Links. Boat houses, docks, gasoline engine and dynamo. This is one of the finest propositions in the Adirondack Park.

For particulars, photos and maps, address

W. H. Symonds
Architect
23 West 24th Street
New York

ALLEN'S FOOT-EASE

Shake Into Your Shoes



Allen's Foot-Ease, a powder for the feet. It relieves painful, swollen, smarting, nervous feet, and instantly takes the sting out of corns and bunions. It's the greatest comfort discovery of the age. Allen's Foot-Ease makes tight-fitting or new shoes feel easy. It is a certain cure for ingrowing nails, sweating, callous and hot, tired, aching feet. We have over 30,000 testimonials. **TRY IT TO-DAY.** Sold by all Druggists and Shoe Stores, 25c. Do not accept any substitute. Sent by mail for 25c. In stamps.

FREE TRIAL PACKAGE

sent by mail.
**MOTHER GRAY'S SWEET POW-
DERS**, the best medicine for Feverish, sickly
Children. Sold by Druggists everywhere.
Trial Package **FREE**. Address,
ALLEN S. OLIMSTED, Le Roy, N.Y.

be common practise to let some of the sub-contracts independent of the principal contract. Such are beyond the control of the principal, and who is to decide if they have delayed the work and made it impossible to complete it on time? A careful builder will come to the time of completion set for him, if possible—and if he can not a forfeit will not make him do so. It will not even make a slow man hurry—he probably will not realize he is slow until too late for his awakening to accomplish the desired result.

Sometimes in making estimates a careful contractor figuring upon too short a time with a forfeit will compute the overrun and add the amount to be forfeited to his bid—expecting to take his own time and pay for it. This also defeats the purpose of the forfeiture clause. Rarely the purpose is to make money for the owner. An instance is known of an owner who boasted to a friend that he had saved three thousand dollars by a forfeit and short time set, and he advised his friend to do likewise. Fortunately scamps are still a minority, and most forfeits are merely designed to impel a contractor to hurry up and get through. Choose a good contractor, and if quick time is desired look up his reputation in that respect. This will give greater satisfaction and certainty about completion than any other method.

It is hoped that it has been clearly shown that no one should feel satisfied that his house built as he wants it is assured from the moment his contract is signed when consideration for the construction has been solely or chiefly based upon price. Two things are necessary for a good house—a good architect and a good builder. The former is much the easier to select. An architect of any standing at all is likely to be at least trained enough to design a house of the size here considered; but contractors of all kinds, and whether doing a large or small business, differ widely in the quality of their work. Many of them especially cater to poorer classes of work and are fitted to do it; this means poor or rough work at a low price, and may be desirable in many cases. The man who is building a home,



A Hammock that's Right

The only Hammock made that combines quality, durability and beauty with comfort. Can be used indoors or out. For further particulars write

Queen Hammock Co.

184 Lake St., Muskegon, Mich. [Formerly Kalamazoo]

however, should look for good work and expect to pay for it. Only in this way can his home be a continual delight to him if he is critical in such matters. Only in this way is he sure his home will be as good when ten years old as when first built. Only in this way can he avoid annoying items of expense as his house grows older. To the man about to build a home these words can not be said too emphatically: Select your builder. Do not rub your hands in glee at a low bid received, for it means nothing in connection with the result you want to get. It is only one of several items which should lead to your decision upon a contractor.

NEW BOOKS

(Continued from page vii)

HANDBOOK OF THE TREES OF THE NORTHERN STATES AND CANADA EAST OF THE ROCKY MOUNTAINS. By Romeyn Beck Hough, B.A. 1907. Lowville, N. Y.: The Author. Cloth, 6½ by 9½ in. 498 Figures. Price, \$8.00.

A treatise designed to meet the wants alike of the amateur observer of trees, the lumberman and of the technical botanist. To accomplish this task, generally considered quite impossible, the camera has been depended upon to portray forms, and, after a vast number of experiments and a tremendous amount of field work, a series of illustrations has been perfected which fully meets the requirements. By their aid a bright schoolchild may know the trees, without reading a word, save the name, and yet the technical botanist will find them brimming with interest. One feels in them the confidence inspired by a photograph, as "the camera does not lie," and no "errors of artist" need be allowed for.

Leaves and fruits are photographed against a measured background by which the comparative size of all of the objects is at once apparent.

The wood structure of at least one species of each genus is given, shown by a series of photo-micrographs of transverse sections magnified fifteen diameters. This interesting feature furnishes a means of identifying woods by comparison with the aid of a simple magnifier.

The region covered by the volume is that lying north of the northern boundaries of North Carolina, Tennessee, Arkansas and Oklahoma, and east of the Rocky Mountains, extending southward in the Appalachian Region to northern Alabama and Georgia.

Nothing but the author's love of the subject and his peculiar vocation could have enabled him to follow out the work with such care and to publish results in so neat a volume. As he is required to be much in the field, it has given him unusual opportunity for completing the elaborate plan of this handbook.

THE BOOK OF VEGETABLES AND GARDEN HERBS. By Allen French. New York: The Macmillan Co., 1907. Pp. 26+312. Price, \$1.75 net.

This book is intended to be of assistance to all who have to do with vegetable seeds, whether as buyers or as sellers. The author aims to supplement the necessary brief directions given by seedsmen in their catalogues and with seeds by the most ample information that the grower of vegetables may have need of. Hence he gives complete directions for growing all vegetables cultivable in the northern part of the United States. This information, while presented in a very detailed manner, is kept within practical limits. The book is thus a storehouse of practical vegetable culture, following the plants from the first planting of the seed to their harvest and care after



First Impressions Are Best

The entrance to your home gives your caller the impression of dignity and hospitality when its construction is honest and its design is in good taste.

Morgan Doors

make most impressive entrances. Not only are they designed correctly according to the best ideas in doors, but they are built honestly from the best grade of hard wood and by workmen who know how to make good doors.

Morgan Doors are all stamped "Morgan" which is a guarantee—one we stand by—to replace any Morgan Door if it fails to give satisfaction. They are guaranteed not to crack, warp, or shrink.

Morgan Doors are made in all architectural styles, mission, chateau, empire, colonial, etc., and for inside or outside use.

"The Door Beautiful" Book Free Send us your name at once and you will receive a copy of this beautiful 80-page book which shows and describes the beauties of Morgan Doors.

Morgan Company, Dept. A. Oshkosh, Wis.

Distributed by Morgan Sash & Door Co., Chicago, Ill. Morgan Company Oshkosh, Wis. Morgan Company, Baltimore, Md.

harvest. The scope of the book is thus highly distinctive, and its practical value to the vegetable grower will be found helpful in the most notable sense.

THE GARDEN BOOK OF CALIFORNIA. By Belle Sumner Angier. San Francisco and New York: Paul Elder & Company, 1906. 8vo. Pages 14, 20 illustrations. \$2.00 net.

Gardening, according to the author, is a neglected art in California, where the natural growth of flowers and shrubs is so rankly luxuriant that few people care to devote honest and regular toil to flower growing—although it is a labor which yields rich results.

The author has little belief in dilettante gardening and talks of such things as weeds, and the need of watering. In the opening pages we read that "the planting of a lawn is merely an initial expense; the keeping it up is where the cost comes in;" and later, in speaking of municipal avenues, "it is absolute folly to plant trees which are not to be protected." As might be expected from one who takes this stand, the book is a practical one,

calculated to be of use to the Californian who aspires to plant a garden, whether it be one of a dozen acres or one to hide the bareness of a back yard. Every one of the sixteen chapters contains something practical; and each treats of one aspect of gardening. A few of the subjects dealt with are bulbs, rose culture, ferns and ferneries, the culture of common plants, palms and tropical plants, treeplanting and protection, and plant diseases.

Gardening is urged on women and young people, with a wise caution that they do not attempt too much. The book should achieve its end; flower enthusiasm and practical gardening are happily blended in its pages, making it at once practical to read and full of information.

OUTDOORS: A BOOK OF THE WOODS, FIELDS AND MARSHLANDS. By Ernest McGaffey. New York: Charles Scribner's Sons. 1907. Pp. 8+271. Price, \$1.25 net.

Mr. McGaffey's book is brimful of outdoor delight. It is a book of agreeable sketches of outdoor life, of life in the marshes, of life

(Continued on page xxvi)

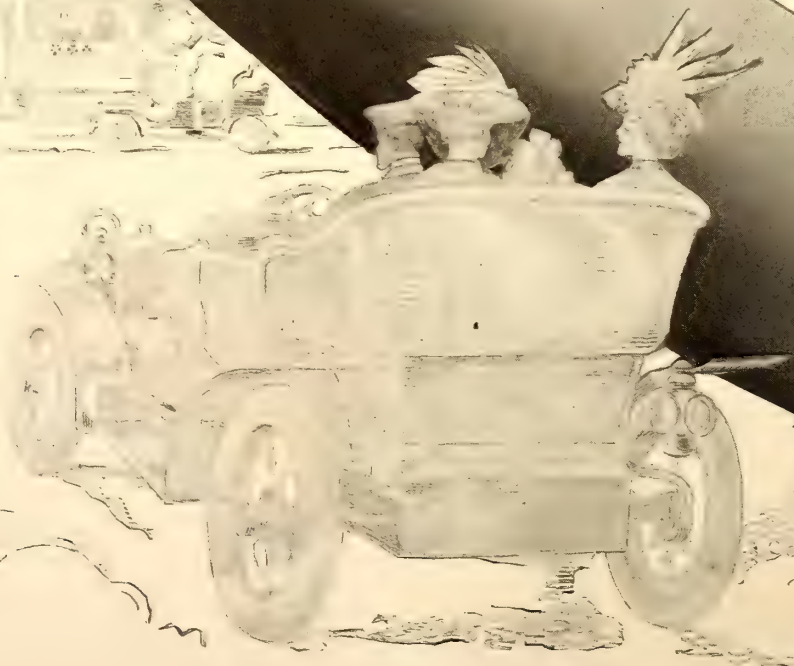
MORGAN & WRIGHT TIRES
ARE GOOD TIRES

When you buy your car, specify
your tire equipment

It used to be true that the buyer of an automobile accepted whatever tire equipment happened to be on the car at the time the purchase was made; but the present tendency (and it is a very pronounced one) is to *SPECIFY the kind of tires your good money is to pay for.*

The rapid increase in the use of MORGAN & WRIGHT TIRES since the fore part of last season has been due in a large measure to this "I-want-the-kind-of-tires-I-want" spirit on the part of car buyers; for it is a *known fact* among users of these tires that they actually give the kind of service a motorist has a right to expect.

They are made of rubber specially compounded to meet *auto tire service*—a service that is considerably more severe than that given to any other kind of rubber tires. The high grade of fabric in MORGAN & WRIGHT TIRES, plus *our method* of using it, is what gave rise to the familiar statement in our tire literature, "You may never have occasion to use the reserve strength that is put into these tires, *but it's there if you do.*"





Possibly the extra-good service which MORGAN & WRIGHT TIRES give is due to our long experience in the tire game; possibly it is because we not only employ a superior grade of materials, but insist upon the most rigid inspection at every step in the making of the tires; possibly it is because the tires are made under peculiarly favorable factory conditions. But whatever may be the *cause* (and it is probably a combination of *all* these reasons), the all-important fact is that

MORGAN & WRIGHT TIRES give the motorist an *exceptionally satisfactory* tire equipment, both because he is fully protected in case of extra strain upon his car and because they *actually reduce the cost of car maintenance.*

Here is a sample of the kind of service the motorist gets who specifies MORGAN & WRIGHT equipment:

F. H. CROUL, of Detroit, wrote us under date of January 3d, 1908:

"On May 11, 1906, I purchased a Packard machine and specified your tires. These tires are still in operation on this machine, and, outside of a few minor repairs, have never been out of service. In the same month and year, I specified your tires on a Northern runabout and have had the same experience with them, and at this writing they are in good order. On May 1, 1907, I specified your tires on a four-cylinder Model G Cadillac runabout, and at this writing they are in perfect order. All three of my machines are in use the entire year, and have been operated a great many miles. I am also pleased to inform you that the tires furnished Mrs. Ellen P. Croul on a large Welch machine are giving most excellent service, and she is much pleased with them."

If service of this kind appeals to you, *specify the same kind of equipment for your car.*

CLINCHER, DUNLOP OR QUICK DETACHABLE

Morgan & Wright, Detroit

Branches, Agencies or Dealers Everywhere

Handsome catalog on request

NEW BOOKS

Bungalows, Camps and Mountain Houses



Bungalow at White Bluffs, Tenn. D. V. Stroop, Architect Chattanooga, Tenn.

CONSISTING of a large variety of designs by a number of architects showing buildings that have been erected in all parts of the country.

Many of these are intended for summer use, while other examples are of structures erected in California and the Southern States for permanent residences.

Also Camps, Hunters' Lodges, Log Cabins, etc.

The book contains **Seventy Separate Designs** of which several are Log Cabins and Camps. 78 Exterior Views, 12 Interior Views, and 69 Floor Plans

In the text there will be given an article on "The Bungalow," with hints on selection of site, sanitation, lay-out and construction, together with a very complete description of each design, with cost where it could be obtained.

The work is intended to meet the needs of a large class of people who are planning summer homes at low and moderate cost, for erection in the woods, mountains, and on lake and seashore.

It will be substantially bound, in illuminated board covers, printed on coated paper size 8x9½ inches. Price, net, \$2

In Press (Soon to be Ready)

Two Family and Twin Houses

THIS work will contain upwards of fifty designs, showing exteriors and plans of two family and twin houses selected from recent work of Architects and Builders in the Bronx, Brooklyn and suburbs of New York, Boston, St. Louis and Kansas City as well as many designs erected in the smaller cities of the country. These designs are selected from a large number submitted to us by Architects from the various cities who have made a specialty of this class of work. The work will be found suggestive, not only to Architects and Builders, but also to Owners wishing to improve properties suited to this class of dwellings. The work will be uniform with "Bungalows," Size 8x9½ inches, illuminated boards. Price, net, \$2.

Rumford Fireplaces and How They Are Made

By G. CURTIS GILLESPIE, M.E., ARCHITECT

CONTAINING Benjamin Count of Rumford's Essay on "Proper Fireplace Construction." A plea for a more general consideration of the form and proportion of a very much neglected feature of our homes and buildings. With nearly 200 illustrations, including the original Rumford drawings diagrams for fireplace construction and numerous ancient and modern mantels and fireplaces, one hundred and iron designs and other details and fixtures, together with preface and explanatory notes. One 12mo volume, illuminated cover. Price, net, \$2.

Detailed Working Drawings of the Five Orders of Architecture

By JAMES T. BALL, ARCHITECT

THIS work consists of 17 plates and descriptive letterpress, one being a plate of scales, the first plate being a comparison of the Five Orders arranged in succession, giving a very vivid and striking example of the evolution of the Orders, from the Tuscan to the Composite periods. Following this are three plates for each Order, brought out in a large portfolio, 14 x 21. Price, postpaid, \$4. Send for full descriptive circular.

Practical Lessons in Architectural Drawing

By WILLIAM B. TUTHILL, A.M., ARCHITECT

HOW to Make the Working Drawings for Buildings. Thirteenth Edition. Containing 44 pages of descriptive letterpress, illustrated by 33 full-page plates (one in colors) and 33 woodcuts, showing methods of construction and representation. The work embraces scale drawings of plans, elevations, sections and details of frame, brick, and stone building, with full descriptions and a form of specifications adapted to the same. Suited to the wants of architectural students, carpenters, builders and all desirous of acquiring a thorough knowledge of architectural drawing and construction. One large 8vo volume; oblong; cloth. Price, \$2.50.

WILLIAM T. COMSTOCK, Publisher

23 WARREN STREET, NEW YORK

Illustrated and Descriptive Catalogue and sample copy of "Architects' and Builders' Magazine" on request

in pursuit of birds and game, of search after nature's beauties. Floral life has, indeed, not so much space in it as bird life and animal life. But it is charming reading, and presents the fresh outdoor thoughts of the true lover of the outer world.

The author takes his readers far afield at times, at others he is close to home; but whether on land or water he finds new zest in every aspect of outdoor activity and mirrors his experiences in pleasant words for the delectation of his readers. It is a book of genuine outdoor enjoyment, not of one aspect of outdoor life, but of every aspect that comes before the true nature-lover, whose eyes are bright, whose sensations are open, who loves the fields and meadows and the creatures that make their homes in them. There is much hunting and some fishing in the book, but it is the hunting and fishing of the nature-lover. It is a book filled from cover to cover with the charm of the outdoor world, which is presented in the most agreeable manner possible.

FLATS, URBAN HOUSES AND COTTAGE HOMES. Text by Frank T. Verity, Edwin T. Hall, Gerald C. Horseley, and W. Shaw Sparrow. New York: Paul Wenzel. Price, \$3.00.

This volume belongs to a class of publications that has not yet made much headway in America, consisting of numerous illustrations, both in black and white and in color, with explanatory and descriptive text. It has somewhat the character of an architectural scrap-book, the contents being quite miscellaneous, a characteristic that is heightened by the nature of the illustrations. It is, however, a book of broad interest, and is a most interesting summary of the better work of contemporary British architects in the very difficult field of which it treats. The subjects are, it is but fair to say, somewhat miscellaneous, running as they do from London flats to cottage homes in the country; but the book is a useful one, and is crowded, from cover to cover, with interesting suggestions.

It is, moreover, a helpful summary of the work being done by contemporary English architects in the designing and building of flats and homes. The apartment house question is, perhaps, somewhat individual in each country; but every nation has its contribution to make to this theme, and the work of British architects in this line should be distinctly welcome to their brother laborers in America. The illustrations are lavish in the extreme, and include many interior views, both in colors and from photographs.

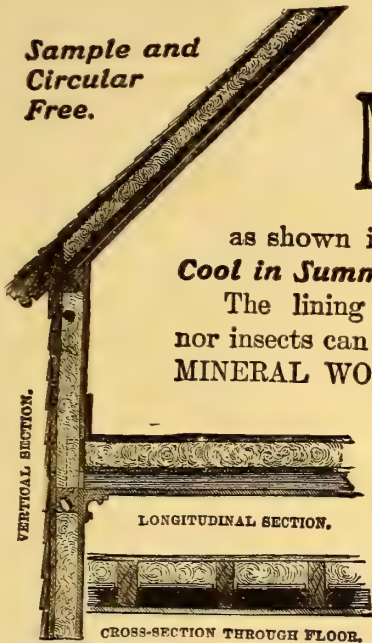
THE ARCHITECTS' DIRECTORY AND SPECIFICATION INDEX FOR 1907. New York: William T. Comstock, 1907. Pp. 192. Price, \$3.00 net.

The eighth edition of this Directory is sufficient testimony to its usefulness and value. It contains lists of architectural societies and schools, building departments, the change of schedule of the American Institute of Architects and other useful information of like sort. The architects are listed by States and cities, and number nearly six thousand for the United States and about five hundred for Canada. Lists of naval architects and of landscape architects add to the completeness of the book.

WITTEKIND'S PORTFOLIO OF MODERN AND ARTISTIC HOMES. Henry Wittekind: Chicago.

This portfolio contains drawings, with plans of two floors, of houses varying in cost from \$1,000 to \$7,500. These figures, however, do not include heating, gas fixtures and grading, while an addition of from fifteen to twenty per cent. is recommended owing to the recent increased cost of building materials and labor. Brief descriptions accompany each design.

Sample and
Circular
Free.



A House Lined with Mineral Wool

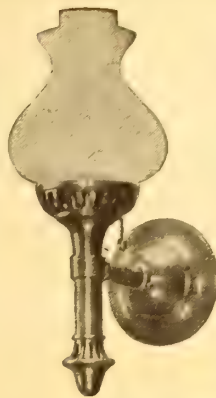
as shown in these sections, is *Warm in Winter, Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice, nor insects can make their way through or live in it. MINERAL WOOL checks the spread of fire and keeps out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.

140 Cedar St., NEW YORK CITY.



A Difficult Problem—

To secure inexpensive lighting fixtures which shall evidence the skill of the designer's art.

This Company insists upon the same attention to the design and manufacture of its small cost fixtures as is bestowed upon its elaborate and expensive productions.

Our new catalogue, showing fixtures designed especially for the lighting of homes, mailed on request.

For the protection of our clients, our trade-mark will be found on each and every piece of work made by us.

The Enos Company

MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
San Francisco, 1748 California Street
Toronto, 94 King Street, West
Pittsburg, G. P. Norton Penn at 4th St.
Chicago, W. K. Cowan & Co., 203 Michigan Blvd.

NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & Co., BOSTON



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER, TILING

An Ideal Floor Covering for Court Houses, Banking Institutions, Churches, Hospitals, Libraries, Business Offices, Restaurants, Vestibules, Elevators, Kitchens, Laundries, Pantries, Bathrooms, Steamships and Floating Property generally.

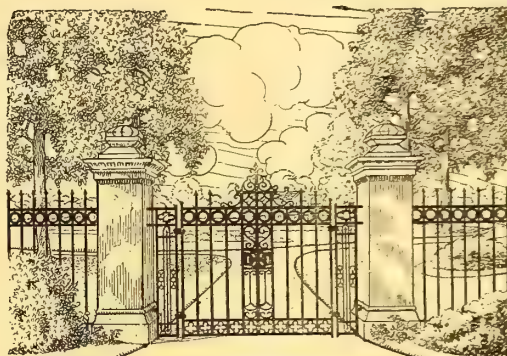
We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street



WROUGHT IRON FENCE And Entrance Gates WIRE FENCING

Ornamental Iron Work,
Tree Guards, Lawn Furniture etc.

Tennis Court Enclosures

A SPECIAL FEATURE
J. F. CARPENTER C^o
7 & 9 WARREN ST. NEW YORK

?
**What
Do You Want
to Buy**
?

We can tell you where to buy anything you want. Write us for the addresses of manufacturers in any line of business—Novelties, Special Tools, Machinery, Equipments, new patent *Labor-Saving Devices*.

MUNN & COMPANY

Publishers of Scientific American

361 BROADWAY, NEW YORK, U. S. A.

The Seal Outside Tells



of the Goodness Inside

The first box of Necco Sweets delights you with its freshness, wholesomeness and goodness. The second box proves to you that the Necco Sweets Seal means, always and everywhere, uniform excellence and perfect satisfaction. Let the first box be, for instance,

Lenox Chocolates

one of the favorite varieties of Necco Sweets.

Compare them with ordinary chocolates—this superiority will be found in every one of the 500 varieties of Necco Sweets, from the simplest confections to the most elaborate bonbons.

The Necco Seal is your guarantee of good wholesome confectionery, the kind you want for your children—the kind you want for your guests—the kind you want for yourself.

*Necco Sweets are sold by all dealers who sell high grade goods. If your dealer does not have them, send us 25 cents for an attractive package of **Lenox Chocolates**; or, better still, order one of our special \$1 packages in a handsome art box. Either package sent postpaid.*

NEW ENGLAND CONFECTIONERY CO.,
Summer and Melcher Sts., Boston, Mass.

7100
A512
Hort.

AMERICAN HOMES_{AND} GARDENS



Vol. V. No. 6

JUNE, 1908

Price 25 Cents

MUNN & COMPANY, Publishers

For
the
Little
Ones



Give the children all the Necco Sweets they want. Youngsters really thrive on good wholesome confectionery. Sugar is as necessary a food as bread and meat. It's only candy of uncertain quality that does harm.

Lenox Chocolates

are one of the 500 varieties of Necco Sweets—you can get any kind of confectionery you can think of—plain hard candies or fancy bon-bons—under the name of Necco Sweets. The Necco Seal is for your protection. Look for the seal and you are safe.

Necco Sweets are sold by all dealers who sell high grade goods. If your dealer does not have them, send us 25 cents for an attractive package of **Lenox Chocolates**; or, better still, order one of our special \$1.00 packages in a handsome art box. Either package sent postpaid.

NEW ENGLAND CONFECTIONERY COMPANY
Summer and Melcher Sts., Boston, Mass.



REPRODUCTION IN WALNUT OF A BISHAM ABBEY CHAIR \$28. SIDE CHAIR \$20. ITS CHARACTERISTIC FEATURES ARE THE UNUSUAL TURNING AND THE COARSE WEAVE OF THE CANING

Antique furniture and reproductions
in the English Periods exclusively

Let us estimate on furnishing and decorating your country or seaside home

A. J. Crawford Co.
251-255 Fifth Avenue New York

Nursery Products for May Planting

EVERGREENS. Our collection is acknowledged to be the most complete in existence. Our plants are the handsomest ever grown in this climate; every plant will dig with a ball of roots and will live and grow everywhere.

BOXWOOD. Never in the history of the Nursery business has such a magnificent collection of Boxwood been offered to lovers of beautiful plants. We have thousands of plants in every shape and form.

RHODODENDRONS. Kinds that will grow and bloom everywhere, in all sizes from twelve inches to seven feet, all handsome specimens, well rooted and full of buds.

BAY TREES for Formal, Italian, French and English Gardens, interior and exterior decoration, in all forms and sizes.

ROSES, IN POTS. We have an exquisite collection in pots for delivery any time during the summer. These consist of tree and bush forms, in everblooming and hybrid perpetual varieties.

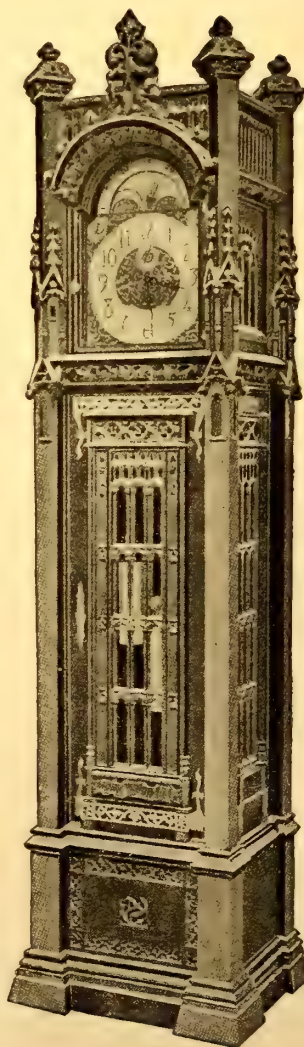
HARDY VINES AND CLIMBERS, IN POTS. We have a splendid lot growing in pots for immediate delivery; they can be planted any time during the summer. Will be glad to mail varieties and prices upon application.

Our ILLUSTRATED GENERAL CATALOGUE No. 12 will tell you about the above and all our other products for Lawns and Gardens. Ask for it.

Visit our Nursery

BOBBINK & ATKINS
Nurserymen and Landscape Architects RUTHERFORD, N. J.

HALL CLOCKS



The most useful and ornamental article you can have in your home is a fine HALL CLOCK. We make many styles and kinds, with or without chimes.

The "Banjo," which is so popular for dining-room and library, is a most satisfactory clock.

We also make a full line of Marble Clocks and Regulators.

If your local dealer does not sell our line, send direct for new illustrated catalogue.

Waltham Clock Company
Waltham, Mass.

**BEST SUGAR
FOR TEA AND COFFEE!**

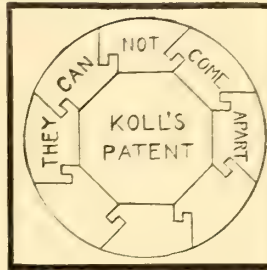
**CRYSTAL
Domino
SUGAR**



5 lb Sealed Boxes Only!
By Grocers Everywhere!



*Entrance to
Showrooms
of the
J. L. Mott
Iron Works
Columns
furnished
by us*



60,000 columns at an average of \$5.00 each, or 6,000 at \$50.00 each, gives you an idea of the annual capacity of our plant.

We own the largest factory building in the world devoted exclusively to the manufacture of high-grade column and porch work. Send for Catalogue A 19 of *Columns* or A 29 of *Sun-dials and Pedestals*.

HARTMANN-SANDERS COMPANY

Sole Manufacturers of Koll's Patent Lock-Joint Columns

Elston and Webster Avenues, CHICAGO, ILL.

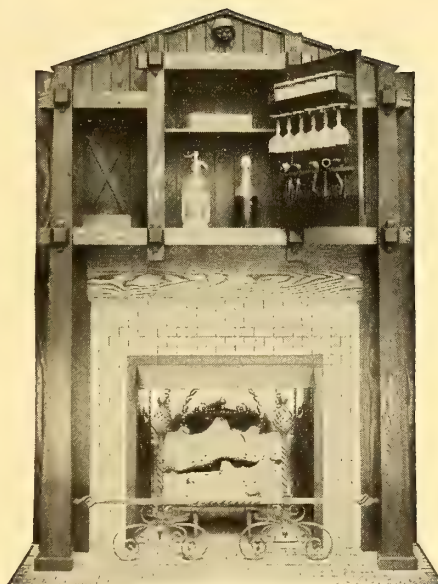
Eastern Office, 1123 Broadway, NEW YORK

The Best Columns for PORCHES, PERGOLAS OR INTERIOR USE

**American Homes and Gardens
and Scientific American** will be sent to
one address for

\$5.00

Regular Price, \$6.00



MISSION MANTEL FOR DEN

Artistic Mantels

OUR CATALOGUES contain 130 designs, including Mission, Colonial, White, Mahogany & Oak. Everything, from the very cheapest to the best.

Fireplace Hardware and Tiling of every description.

Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.

Unity Building
Chicago, Ill.

306 Main Street
Jacksonville, Fla.

Factory, Knoxville, Tenn.

**AN OIL
FOR
EVERY
PART**

Mobiloil is especially prepared to meet the particular requirements of every make of automobile. It comes in various grades—a special grade for every make of engine.

**VACUUM
MOBIL OIL**

is the only perfect automobile lubricant. Sold everywhere in barrels and cans of varying capacities. Send for Mobiloil booklet which lists every make of automobile and tells what grade of Mobiloil to use for each. It's free. Mobiloil manufactured by

VACUUM OIL CO.,
Rochester, N. Y.

BOOKS

Relating to Architecture, Decoration, Furniture, Rugs, Ceramics, Etc., will be recommended and supplied by our well-equipped Book Department.

MUNN & COMPANY
Publishers of Scientific American

NEW YORK
361 Broadway

BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont

METROPOLITAN MAGAZINE



THE METROPOLITAN MAGAZINE CO 35 & 37 WEST 29th STREET NEW YORK

The June Metropolitan Magazine

PRICE 15 CENTS A COPY

Another Remarkable Issue of an Exceedingly Popular Monthly

THE NATIONAL CONVENTIONS

By Charles Wadsworth Camp

CHRISTIAN SCIENCE

By Mrs. Eddy's Secretary

JEFFERSON DAVIS AT WEST POINT

By Prof. Walter F. Fleming, of the Louisiana State University

SHORT STORIES by A.T. Quiller-Couch, Herbert A. Sass and others

ART CONTRIBUTIONS in Color and in Black and White
Gibbs, Bull, Taylor and others

THE WORLD AT LARGE AND THE DRAMA

The Metropolitan Magazine

3 WEST 29th STREET

NEW YORK CITY



Kinnear Pressed Radiators

Selected for

THE SINGER BUILDING, NEW YORK
Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

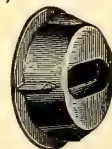
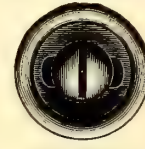
On the Wall—Off the Floor
Out of the Way

If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.

Write for Catalog "D" for any desired information.

THE PRESSED RADIATOR CO.
PITTSBURGH, PA.

PREVENTS DRAFTS, DUST AND WINDOW RATTLING.



IVES' PATENT
Window Stop Adjuster.

HEAVY BED

PATENTED.

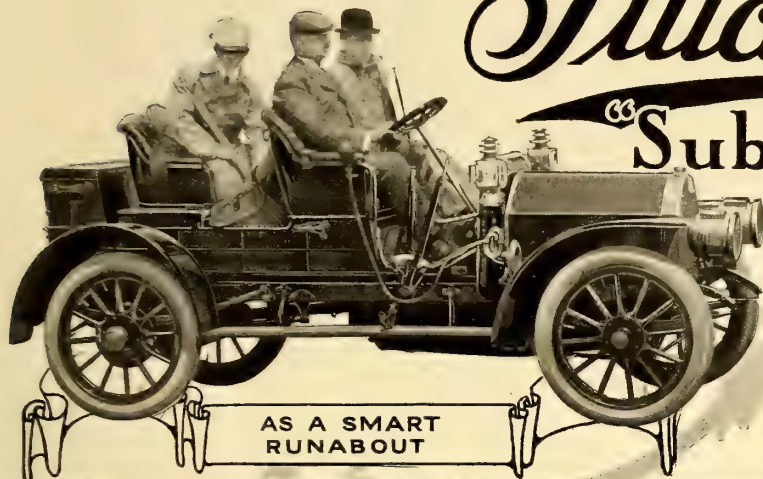
The only Stop Adjuster made from one piece of metal with solid ribs and heavy bed that will not cup, turn or bend in tightening the screw. Manufactured only by The H. B. IVES CO., New Haven, Conn., U. S. A. (Fifty-page Catalogue Mailed Free.)

Best grade cedar canoe for \$20

Best grade of Cedar Canoe for \$20. We sell direct, saving you \$20 on a canoe. All canoes cedar and copper fastened. We make all sizes and styles, also power canoes. Write for free catalogue giving prices with retailers' profit cut out. We are the largest manufacturers of canoes in the world.
DETROIT BOAT CO., 262 Bellevue Ave., Detroit, Mich.

We will send
A **AMERICAN HOMES & GARDENS**
and Scientific American
for one year to one address for
Regular Price
Six Dollars **FIVE DOLLARS**

Introducing the *Studebaker* "Suburban"



AS A SMART
RUNABOUT

THE
ADAPTABLE
CAR



COMBINATION PASSENGER
AND BAGGAGE CAR



AS A LIGHT FOUR
PASSENGER CAR

WHEN equipped with regular rear seat, a light four-passenger touring car; rear seat removed (can be done in a moment) and rumble seat substituted, a smart runabout; without rear or rumble seat, a combination passenger and baggage car.

A necessary adjunct to every suburban or country home

The Studebaker "Suburban" is adaptable to numerous uses that will readily suggest themselves.

For instance: When your home is located at a distance from the railway station and you have a visitor arriving on a late train, you can remove the rear seat and, if you wish, bring home your visitor and his baggage in one trip; or if there is a party you can send your man back for their baggage.

Your baggage can be carried to the beach in your Studebaker "Suburban."

It is just the car for a hunting, fishing or other outing trip, for running out to the golf or country club, as a light four-passenger touring car or as a smart runabout.

The Studebaker "Suburban" is a car you will use every day in half a dozen different ways.

The Studebaker "Suburban" chassis is identical with that of the regular Studebaker "30" touring car, which is a sufficient guarantee that from a mechanical standpoint the car will give satisfactory service.

*Write for full description of the Studebaker "Suburban"
and other gasoline and electric models.*

Studebaker Automobile Co., Main Factory South Bend, Ind., General Office Cleveland, Ohio

BRANCHES

BOSTON, MASS.—Studebaker Bros. Co. of New York, 1020 Boylston St. (Sub Branch).
KANSAS CITY, MO.—Studebaker Bros. Mfg. Co., 13th and Hickory Sts.
SAN FRANCISCO, CAL.—Studebaker Bros. Co. of California, Mission and Fremont Sts.
DALLAS, TEX.—Studebaker Bros. Mfg. Co., 317-319 Elm St.

DENVER, COL.—Studebaker Automobile Co., 1536 Broadway.
NEW YORK CITY—Studebaker Bros. Co. of New York, Broadway and 48th St.
CHICAGO, ILL.—Studebaker Bros. Mfg. Co., 378-388 Wabash Ave.
SALT LAKE CITY, UTAH.—Studebaker Bros. Co. of Utah, 157 State St.

PHILADELPHIA, PA.—Studebaker Bros. Co. of New York, 330 North Broad St. (Sub Branch).
PORTLAND, ORE.—Studebaker Bros. Co. Northwest, 330-336 East Morrison St.
SEATTLE, WASH.—Studebaker Bros. Co. Northwest, 308 First Avenue South (Sub Branch).

THE NEW AGRICULTURE

By
T. BYARD COLLINS

8vo. Cloth. 376 Pages
100 Illustrations
Price, \$2.00, Postpaid



HIS new and valuable work sets forth the changes which have taken place in American agricultural methods which are transforming farm life, formerly so hard, into the most independent, peaceful and agreeable existence. Farm life to-day offers more inducements than at any previous period in the world's history, and it is calling millions from the desk. The present work is one of the most practical treatises on the subject ever issued. It contains 376 pages and 100 illustrations.

In brief, the Contents are as follows

- CHAPTER I. This chapter contains a general statement of the advantages of farm life.
CHAPTER II. Deals with the vast systems of irrigation which are transforming the great West, and also hints at an application of water by artificial means in sections of the country where irrigation has not hitherto been found necessary.
CHAPTER III. Gives the principles and importance of fertilization and the possibility of inoculating the soil by means of nitrogen-gathering bacteria.
CHAPTER IV. Deals with the popular awakening to the importance of canals and good roads, and their relation to economy and social well-being.
CHAPTER V. Tells of some new interests which promise a profit.
CHAPTER VI. Gives a description of some new human creations in the plant world.
CHAPTER VII. Deals with new varieties of grain, root and fruit, and the principles upon which these modifications are effected and the possibilities which they indicate.
CHAPTER VIII. Describes improper methods in agricultural practice.
CHAPTER IX. Devoted to new machinery by which the drudgery of life on the farm is being eliminated, making the farm a factory and the farmer the manager of it.
CHAPTER X. Shows the relation of a body of specialists to the American farmer, who can have the most expert advice upon every phase of his work without any expense whatever to himself.



MUNN & CO., Publishers



361 Broadway, NEW YORK

Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

If you are interested in building a building of any sort, you will be interested in The Architectural Record.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO



A Great Combination

*Economy Color Effect
Durability*

All these qualities are combined in

RUBEROID RED ROOFING

Trade Mark Reg. U. S. Pat. Off.

ECONOMY—Because it is moderate in price, requires no skilled labor to lay, and costs little or nothing to keep in perfect condition.

COLOR EFFECT—Its richness of color lends an air of elegance and refinement to any building.

DURABILITY—Because it outlasts any other roofing made. Will not melt, rot or corrode like tar, shingles or metal roofs.

Fire Resisting and Weather-Proof

Made also in BROWN and GREEN

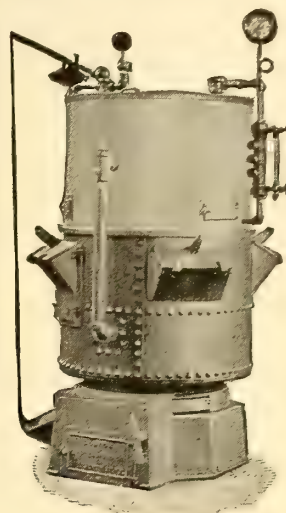
Write for Samples and Prices

THE STANDARD PAINT COMPANY

100 William St., New York

Chicago St. Louis Kansas City Boston Philadelphia New Orleans

GORTON SIDE FEED BOILERS SIDE FEED



For Steam
and
Hot Water
Heating

Insure a
Warm
Building
Day
and Night in
Coldest
Weather

Send for
Catalog

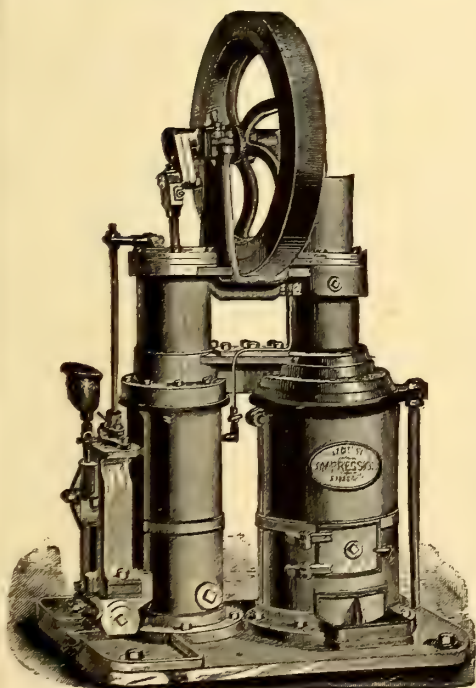
GORTON & LIDGERWOOD CO.
96 LIBERTY STREET, NEW YORK
Old Colony Bldg., Chicago 77 Oliver St., Boston



Take a
few minutes
right now and get real facts on
steel ceilings and side walls.

Call in your stenographer and simply say "Eller Manufacturing Company, Canton, Ohio. Send for catalogue." You will be more than repaid. We take such an interest—are glad to serve you, and for years everybody knows "Eller" has stood for the highest in quality.

ELLER MFG. CO.
CANTON, OHIO



Improved Rider Hot Air Pumping Engine

— AND —

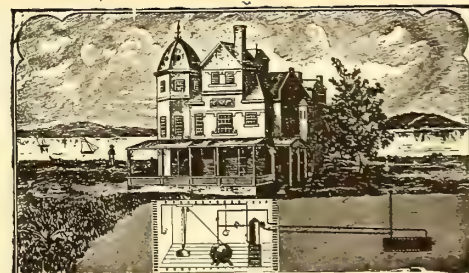
Improved Ericsson Hot Air Pumping Engine

**PRICES GREATLY
REDUCED**

Send for Catalog "E" to nearest office

Rider-Ericsson Engine Co.

35 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



Our remarkable recent inventions enable us to offer the public an intensely brilliant

Smokeless Gas

at much less cost than city gas, better, safer and cheaper than electricity, and costing but one-fourth as much as acetylene.

**Most Durable and Least Expensive
Apparatus to Maintain**

In effective perpetual operation. Gives services of lighting, cooking and heating. Fullest satisfaction guaranteed, and easy terms. The very apparatus for suburban homes, institutions, etc. We construct special apparatus also for fuel gas for manufacturing, producing gas equivalent to city gas at 50 cents per 1000 cubic feet, and made to respond to very large demands; also for lighting towns, etc.

C. M. Kemp Mfg. Co., Baltimore, Md.

FRENCH LICK WEST BADEN SPRINGS

The ideal year round health resort—waters unexcelled in the treatment of stomach, liver and kidney troubles—baths and sanitarium treatments if desired. Attractions include the quiet life and

Perfect Rest

Or, for those who prefer, there is every conceivable indoor and outdoor recreation. Hotel accommodations are not surpassed by any resort in the West.

Reached quickly and comfortably and only by the



Complete detailed information on request.

FRANK J. REED, G. P. A.
198 Custom House Place, CHICAGO



COUNTRY RESIDENCES IN EUROPE AND AMERICA. By Louis Valcoulon Lemoyne. New York: 1908. Doubleday, Page & Company. Pages, 460; illustrations, 473. Price, \$7.50 net.

Mr. Lemoyne's handsome volume on "Country Residences in Europe and America" is a classification of the Italian, French, English and American residences, forming four chapters.

The Italian villas, as shown in Chapter I, are particularly interesting and are representative of some of the best houses in Italy. The Italian villa is always delightful on account of the gardens which invariably surround it, and many of the illustrations show these.

The French chateau, as presented in Chapter II, does not create that artistic feeling quite like the Italian villa, though the French chateau is not shown to its best advantage in this chapter.

The English house, as shown in Chapter III, is always a delightful thing to look at, and is more so than any other type of residence on account of the fine gardens which surround it, for while they are formal they are also more natural than either the gardens in Italy or France.

It is to be regretted that the author in presenting the American residence in the final chapter of his volume has not selected a better example of the American residence, for there are many fine estates in this country which are quite equal to many of the estates in Europe, save for their antiquity. To one unfamiliar with the American house a better impression and a better insight into the magnitude to which the American estate has grown the past twenty years would have been obtained.

A GARDEN DIARY AND COUNTRY HOME GUIDE. By Loring Underwood. New York: 1908. Frederick A. Stokes Co. Pages, 365. Price, \$3.25 net.

Mr. Underwood's new book, entitled "A Garden Diary and Country Home Guide," meets a long-felt want in a very nice way. The author has planned a page for each day of the year in his diary, covering a period of four years, in which to make comments or follow the close study of the various plants and shrubs of one's garden, and keep a daily record of them. It is a book of garden advice and a four years' comparative journal with a continuous index, and is a book in which can be stored information in a form that makes it not only easily accessible, but likely to meet one's eye and jog one's memory at the opportune time. At the top of each page there is a short paragraph containing timely information and advice, or seasonable reminders. The suggestions apply not only to flowers, but to trees, shrubs and vegetables, and also to the lawn and the care of the grounds.

LILIES AND ORCHIDS. By Rosina C. Boardman. New York: Robert Grier Cooke, Inc. Price, \$2.50.

This is a series of charming drawings in color of some of the more interesting and beautiful specimens of these families. There is a brief descriptive text, quite short enough to be literally designated as brief, yet sufficiently ample to give the chief characteristics of the plants figured. Miss Boardman's drawings are delightfully done, and are colored with great care and delicacy. They comprise

TECO POTTERY

Is the Most
Admired of

Wedding Presents

because of a certain distinctness of individuality. It is not designed by paid artisans, but by those whose talents are not for hire.

Artists, architects, and designers, who dreamed beautiful things sent in their hints which we have crystallized in clay. And the result is

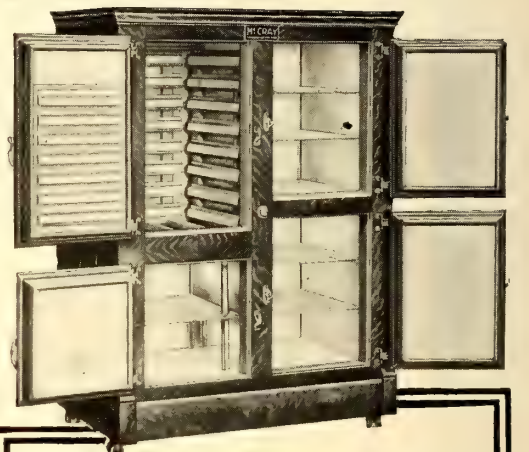
TECO POTTERY

the pottery of restful, peaceful green, remarkable for purity of line and originality of design. In various forms:—Candle sticks, Vases, Lamps, Jardinieres, etc.

Ask your dealer or write for booklet. Our trade-mark is on each piece.

THE GATES POTTERIES
681 Chamber of Commerce Bldg.,
Chicago.

Exclusive art dealers not carrying
TECO should
write.



Cut Down Your Ice Bills

You buy a refrigerator once in a lifetime—you buy ice every day. The walls of McCray Refrigerators are scientifically built so that they will keep the cold air in and the hot air out. They therefore use much less ice than others, and soon pay for themselves, besides keeping all provisions pure and in fresh condition.

McCray Refrigerators

are thoroughly insulated with mineral wool, the best insulating material known, and have the McCray Patent System of Refrigeration which insures a perfect circulation of pure, dry, cold air. They are lined with White Opal Glass, Porcelain Tile, White Enamel or Odorless White Wood, and are the cleanest, sweetest, driest, most sanitary refrigerators made. No zinc is ever used in their construction, as zinc forms oxides that poison milk and other food and is very dangerous.

Let us tell you how easy it is to have a McCray arranged to be iced from the outside, thus keeping the iceman out of the house.

McCray Refrigerators are made in all sizes, ready for immediate shipment, and are Built-to-Order for all purposes. Every refrigerator is positively guaranteed to give lasting satisfaction.

Send Us This Coupon

Ask for catalog No. 83 for Residences; No. 47 for Hotels, Clubs, Restaurants; No. 65 for Grocers; No. 58 for Meat Markets or No. 71 for Florists—They are the best refrigerator catalogs published.

McCray Refrigerator Co.

687 Mill Street,
Kendallville, Ind.

Branches in all
principal
cities.

McCray
Refrigerator
Company,
687 Mill Street,
Kendallville, Indiana.

Gentlemen:—Please send
me your free Catalog of
McCray Refrigerators No.

Name.....

Street.....

City.....State.....

Books RELATING TO

Architecture
Decoration
Furniture
Rugs
Ceramics
Etc.

will be recommended
and supplied by our
well-equipped Book
Department



Munn & Co.

Publishers of Scientific American
361 Broadway, New York

twenty-four plates. Their reproduction leaves nothing to be desired. It is a book that will win many friends, both for itself and for the lovely plants it illustrates.

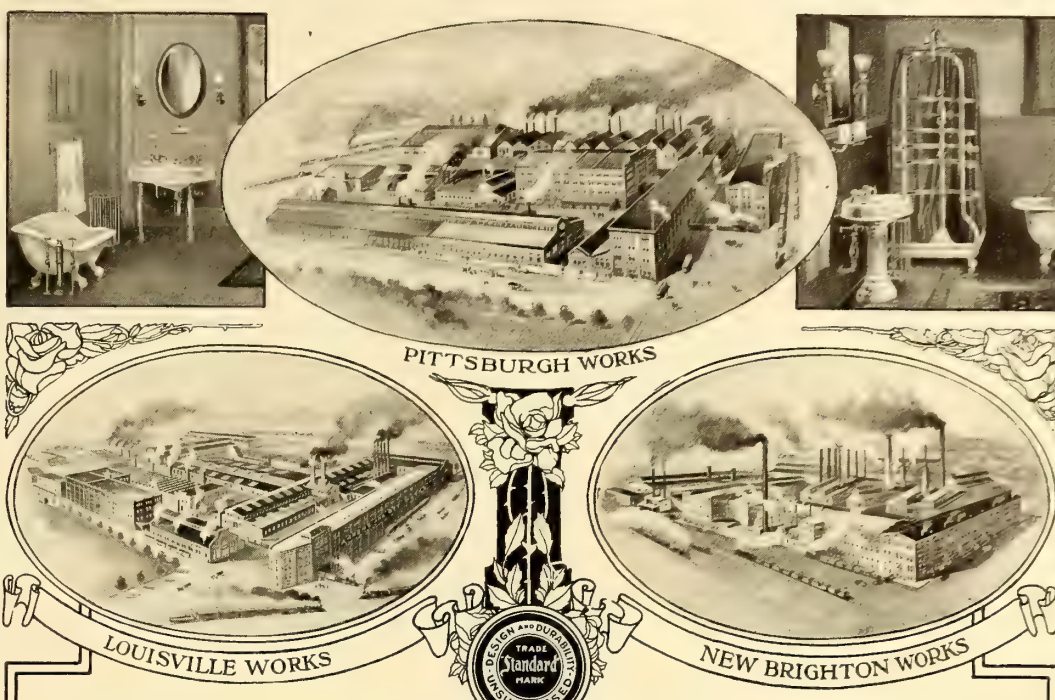
BUNGALOWS, CAMPS AND MOUNTAIN HOUSES. 1908: W. T. Comstock. 8vo, pp. 12. Price, \$2.00 net.

The urgent demand for inexpensive summer homes has brought forth another edition of "Bungalows, Camps and Mountain Houses." The editor, in compiling his book, has endeavored to bring together a group of bungalows, camps and mountain houses of a distinctive and interesting character—houses that are within the reach of the average man of modest means who desires a small place in the country, which can be easily built and easily maintained. Most of the illustrations present houses which have actually been built, and many of them show diagrams of the floor plans. There are also sketches which are helpful in the suggestions which they present for the prospective builder. Now that so much attention is being given to the summer home, this book should meet with a liberal response, and will be found of value to persons contemplating erecting such a home.

AMONG THE STRAWBERRIES

OF all the Rosaceae, or rose family, the strawberry is best loved by the people. It is a cousin of the apple, and of the pear, and of the plum, and the peach; and it likes to nestle in the shade of these bigger relatives. The ordinary country home should let the strawberry bed be near the orchard for shelter, but there are other things to be considered in this matter of location. You must set it down at the outset that if you want good strawberries and plenty of them you must give the plants enough water and enough food. If your home is not on a low flat section you must make sure of artificial watering—if the weather is not decidedly showery during the ripening season. One of the simplest methods of irrigation is through a series of V-shaped wooden troughs made of inch boards set at right angles to each other. The water must be permitted to flow out through auger holes placed near the bottom of the trough. But for permanent work nothing is so good as a line of tile placed deep enough under the plants to escape the cultivator and the plow—about two and a half feet under the surface. When it is necessary to irrigate block the lower end of the tile and keep the tiles full—while enough will soak out into the soil to supply the strawberries. This is a simple plan if you can have water from a stream or from a tank placed above the plantation. More important is it to hold the water that Nature gives; and this can be done by a continuous stirring of the surface soil. If you hand-water a strawberry bed be sure you never sprinkle it. Dig a small hole as large as the palm of your hand beside each hill and pour in not less than a quart of water at a time; then draw over this some dry earth to prevent evaporation. Sprinkling any kind of plants does more harm than good. It simply makes a cake over the surface of the soil, preventing the absorption of moisture from the air.

The next matter of importance is to locate your bed where it can be most easily fed. Of course, you can accomplish this feeding easiest by planting near the barn and stables. I never have used any commercial fertilizer on any crop whatever, not even on strawberries, nor do I ever intend to do this. I am a firm believer that stable manure composted with whatever Nature supplies will serve to enrich sufficiently all sorts of crops. Feed your plants and feed them high; even your



PITTSBURGH WORKS

LOUISVILLE WORKS

NEW BRIGHTON WORKS

DESIGN AND DURABILITY
STANDARD
UNSURPASSED

THE THREE GIANT HOMES "Standard"

Porcelain Enameled Plumbing Fixtures

Three of the largest factories of their kind in the world and the entire time and services of thousands of skilled men working night and day are required to supply the ever-growing demand for "Standard" Porcelain Enameled Ware—the standard sanitary equipment for the modern American home.

"Standard" Porcelain Enameled Plumbing Fixtures have been known and sold for over 30 years. Year by year they have gained in popular favor. Year by year the demand for them has increased. By sheer force of superiority—by the splendid sanitation it provides, by its superior beauty, by the years of perfect service it insures—"Standard" Ware has won universal recognition as the most desirable sanitary equipment in the world.

Genuine "Standard" Porcelain Enameled Ware is the one sanitary ware which makes and keeps your home healthful, modern and beautiful. Equip with "Standard" Fixtures and your sanitary problem is solved for good.

CAUTION—Every genuine "Standard" fixture bears the "Standard" Green and Gold Guarantee Label. Look for this label on every fixture you purchase, as none are genuine without it. The "Standard" label gives a protection you cannot afford to be without.

Write to-day for our beautifully illustrated 100-page book—Modern Bathrooms. This is the most complete book ever published on the sanitary subject. Send for it—enclosing 6c. postage and give the name of your architect or plumber, if selected.

Address **Standard Sanitary Mfg. Co.** Dept. 23, Pittsburgh, Pa., U. S. A.

Offices and Showrooms in New York: "Standard" Building, 35-37 West 31st Street.

London, Eng.: 22 Holborn Viaduct, E. C. Pittsburgh Showroom: 949 Penn Avenue. New Orleans: Cor. Baronne & St. Josephs Sts. Cleveland: 648-652 Huron Road, S. E.

big apple trees should be well fed. But make your own food and waste nothing—precisely as you should supply your own table from your own orchard and vegetable garden. By composting all weeds, leaves, stable manures, road waste, etc., you will soon be able to fatten your acres quite beyond your expectations. There is no sense in throwing this away or burning it up, and then buying commercial fertilizers which are used up at a stroke, leaving no humus behind them. Ashes are very important and may be applied at the rate of fifty bushels to an acre. However, if you must use fertilizer of a commercial sort, nothing is better than a combination of cottonseed meal, acid phosphate and muriate of potash.

The soil must be thoroughly prepared before you undertake to plant strawberries—rid entirely of grass, roots and seed. Be careful about applying stable manure that is not thoroughly decomposed. Good potato soil is said to be good strawberry soil. There is a difference, however, in the choice of soil by varieties. The Sharpless is a delicious berry grown on clay soil, but on light soils it is flavorless. Just as soon as you have your

plants in the ground let them be well mulched. This last point is not half appreciated in its effect on all sorts of small fruit culture. During the growing season the cultivator should be at work nearly every day; not only to irrigate, but to remove every weed that starts. When the runners begin they should be guided in their growth so as to leave room for the cultivator. Setting strawberry plants is a matter of unusual importance. You can not press them down carelessly as you do cabbage plants, but must leave the plant when well pressed into the soil so that the crown of the roots shall be exactly on a level with the level of the soil. Spread the roots over a little mound of dirt, and gently but firmly press down; draw over some more dirt and press down again; then brush over some loose dirt, leaving everything exactly level. The reason for this is that the runners when starting must not be set off on an angle of forty-five degrees into the air.

The choice of varieties is a puzzle to an amateur; but I have grown nearly all the novelties for forty years, and have reduced my selections to a very small number. I remember a long succession of wonderful ber-



First Impressions Are Best

The entrance to your home gives your caller the impression of dignity and hospitality when its construction is honest and its design is in good taste.

Morgan Doors

make most impressive entrances. Not only are they designed correctly according to the best ideas in doors, but they are built honestly from the best grade of hard wood and by workmen who know how to make good doors.

Morgan Doors are all stamped "Morgan" which is a guarantee—one we stand by—to replace any Morgan Door if it fails to give satisfaction. They are guaranteed not to crack, warp, or shrink.

Morgan Doors are made in all architectural styles, mission, chateau, empire, colonial, etc., and for inside or outside use.

"The Door Beautiful" Book Free Send us your name at once and you will receive a copy of this beautiful 80-page book which shows and describes the beauties of Morgan Doors.

Morgan Company, Dept. A. Oshkosh, Wis.

Distributed by Morgan Sash & Door Co., Chicago, Ill. Morgan Company Oshkosh, Wis. Morgan Company, Baltimore, Md

516 Pages, 107 Engravings

NOW READY

Price, Four Dollars

Industrial Alcohol

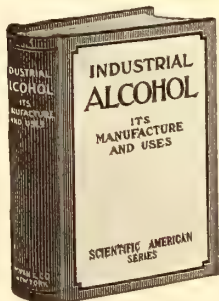
ITS MANUFACTURE AND USES

A Practical Treatise based on Dr. Max Maercker's "Introduction to Distillation" as revised by Drs. Delbrück and Lange

COMPRISING

Raw Materials, Malting, Mashing and Yeast Preparation, Fermentation, Distillation, Rectification and Purification of Alcohol, Alcoholometry, The Value and Significance of a Tax-Free Alcohol, Methods of Denaturing, Its Utilization for Light, Heat and Power Production, A Statistical Review, and the United States Law

By JOHN K. BRACHVOGEL, M.E.



THE value and significance of a tax-free alcohol have been so widely discussed in the press and periodical literature of the entire country, that it is unnecessary to emphasize the great importance of the subject, especially to our agricultural and industrial interests. For years we have been far behind the nations of Europe in this regard, and in consequence our literature has been sadly lacking in authoritative works covering this phase of industrial activity. This book was designed with the especial purpose of filling this want, and it is the latest and most comprehensive work of its kind which has been published in this country.

Few in number are those to whom this book would not prove of interest and value. The farmer, the manufacturer, the power-producer, the householder, will all find that denatured alcohol is of such importance to them, that its use and introduction will effect savings and economies which were hitherto impossible of accomplishment.

FOR SALE AT ALL BOOKSTORES

BUILD IT YOURSELF



SUMMER COTTAGE

Easy to Build with Our Perfect Sawed and Fitted Knocked-Down House

and no tool but a hammer needed. An amateur—in fact, anyone who can hit a nail with a hammer—can put up our perfectly-sawed-out, complete

"Aladdin" Knocked-Down House

Aladdin Summer Cottages are made in four styles—from \$98 to \$298. The above is a five-room cottage: sitting-room, 10 x 16 feet, and four 8 x 10 rooms.

Aladdin Auto Garages.....\$69 to \$230

Aladdin Boat H uses.....\$49 to 129

Aladdin Dwelling House, six rooms complete, including patent lath and plaster, windows, doors, paint and hardware..... 492

SAVE CONTRACTOR AND LABOR BILLS

These houses are sawed out complete; every stick cut to right length and dressed—best clear lumber—and fitted in our mill, then knocked down ready to be erected. Sent anywhere with complete instructions and blue prints of every step. Cost, erected, 30 per cent. less than contractor charges.

Send to-day for Catalog 11. Please enclose stamp. NORTH AMERICAN CONSTRUCTION CO. BAY CITY, MICH.



THE ASHLEY SYSTEM OF SANITARY SEWAGE DISPOSAL

without sewers is a practical application of a scientific principle. Once installed, it rarely needs attention, is automatic, safe and absolutely sanitary. Suburban homes, summer cottages, factories or private institutions easily equipped at small cost with the **ASHLEY SYSTEM**. Tell us the conditions which must be met in your case. We will advise you without charge and send our *Free Booklet*.

House Sewage Disposal Co., 6520 Normal Ave., Chicago, Ill.

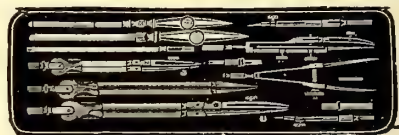
St. Louis, Mo.

Baltimore, Md.

F. Weber & Co.

1125 Chestnut St., Philadelphia, Pa.

Architects' and Engineers' Supplies



"FABRIANO" Hand-Made Drawing Papers

Superior to any other hand-made paper

F. Weber & Co.'s Illustration Boards, Air Brushes and Materials

OWN A FACTORY

and make \$10.00 a day making Concrete Building Blocks. Experience unnecessary. Big demand for blocks everywhere and immense profits.

Pettyjohn Machine

for \$33.25 and only up.



Guaranteed and sent on trial. Sand, water and cement only materials required. If you intend to build it will pay you to buy a Pettyjohn Machine and make your own blocks. Beautiful booklet on this great industry—FREE.

The Pettyjohn Co., 617 N. Sixth St., Terre Haute, Ind.



BRISTOL'S RECORDING THERMOMETERS

For automatically registering indoor or outdoor temperatures

ARE USEFUL AND ORNAMENTAL

Our Catalogue B sent on request

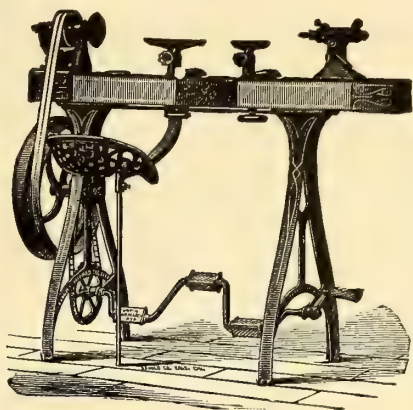
The Bristol Co., Waterbury, Conn. New York, 114 Liberty St. Chicago, 753 Monadnock Bldg.

ries, and nearly all of them have been forgotten. Among those that have retained their popularity we note especially the first big berry that we ever got, the Sharpless, the Bubach, the Jessie, the Michel Early; and we ought to remember the Cumberland Triumph, the best berry I ever grew to take care of itself. I asked Mr. Crawford, one of our strawberry kings, to name the three best strawberries, and he gave me Senator Dunlap, Kitty Rice and Latest. This was three years ago, and I am not sure that he names any one of these as the best to-day—unless it be Kitty Rice. This Kitty Rice is proving to be a great berry in the South and the West.

M. T. Thompson, a great berry grower, names, and very justly too, as among the very best his own Nos. 1, 2, 3, 4, Mark Hanna, Deidler. My own experience with Mark Hanna is that in my grounds it is about the best thing that I ever planted. Among my seedlings I have three or four that are hard to beat, and one of them gave me large double flowers. The following will be a pretty good list of fairly selected cosmopolitan berries: Climax, Commonwealth, Gandy, Glen Mary, Kitty Rice, Mead, Miller and Mrs. Miller, New York, Sample, Senator Dunlap, Texas, Mark Hanna, William Belt and Bubach. Mr. Munson, of Texas, has a new berry of great promise called Goree, which I am going to try. I have left out three or four specially good market berries, like Clyde, Crescent, Warfield, and a few more because of their extreme acidity. I exclude Excelsior for the same reason, although it is a remarkably good berry in light soil. Climax in the South is rivaled mainly by Klondike and Lady Thompson. Parker Earle, which does not satisfy us in our northern gardens, is a capital southern berry, as also Hoffman. Gandee holds its own fairly well yet as the best of all late berries, although several new rivals are entering the fields. Of the greater new berries just now beginning to compete, Mr. Allen, who is highest authority, recommends Cardinal, Chesapeake and Virginia. The Chesapeake is a very stout grower and very promising, while Cardinal is praised by everybody who has grown it. Sample and William Belt are two remarkably trusty berries. I have no inclination as yet to omit them from my grounds. Mr. Munson speaks well of Splendid and Challenge. But I am already outrunning my limit. My habit of growing a test bed inclines me to include many sorts that the common garden can not grow. You will be very happy with Kitty Rice, Mrs. Miller, Sample, Mark Hanna, William Belt and Bubach. Add Gandy for very late.

The continuation of a strawberry bed depends partly on variety and partly on what they are grown for. Large growers, as a rule, prefer to replant every second year; and in the southern states I find, especially in Florida, that strawberry beds are allowed to burn out during the summer, and are replanted early in the fall. As a rule those who grow small beds for home use can avoid this frequent replanting by heavy mulching. Cover your bed all around the plants with a good compost of half rotted straw or weeds, or whatever may be in your pile. Cut off all the runners that you do not need for plant making, and keep your bed clean. In the South I cover my bed almost entirely with a thick mulch, and in this way a strawberry bed may last for three or four years in pretty good shape.

Until recently I have been able to avoid most of the strawberry enemies, but now the borer has succeeded in getting a footing in my grounds, and I have to move my beds every year. The most troublesome enemy of the strawberry is the grub of the May beetle. It lives in the ground two years and emerges



Complete Outfit Hand and Foot Power Machinery

Our No. 3 Wood Turning Lathe
can be speeded from 1,000 to 2,000
revolutions a minute with perfect ease.
Stopped or reversed at will of operator.

WRITE FOR PARTICULARS

W. F. & John Barnes Co.

567 RUBY ST. ROCKFORD, ILL.



RIGHT GREENHOUSE CONSTRUCTING

This building of greenhouses is now an exact science—we say science because upon an accurate knowledge of plant requirements depends its success.

Light in abundance, heat and ventilation under a nicety of control, are absolute essentials. But of equal importance to you is endurance, a freedom from constant repairs. Our Iron Frame Greenhouses meet these conditions. Let us talk it over with you.

HITCHINGS & COMPANY

1170 BROADWAY, NEW YORK

RIGHTLY ROOFED BUILDINGS



CORTRIGHT METAL SHINGLES



When
you build
a home

don't forget that the roof
is all-important, and that

THE BEST ROOFING MATERIALS ARE
Cortright Metal Shingles

For *Beauty, Durability and Efficiency* they are unequalled,
and the price is within your means.

Send for our free illustrated booklet

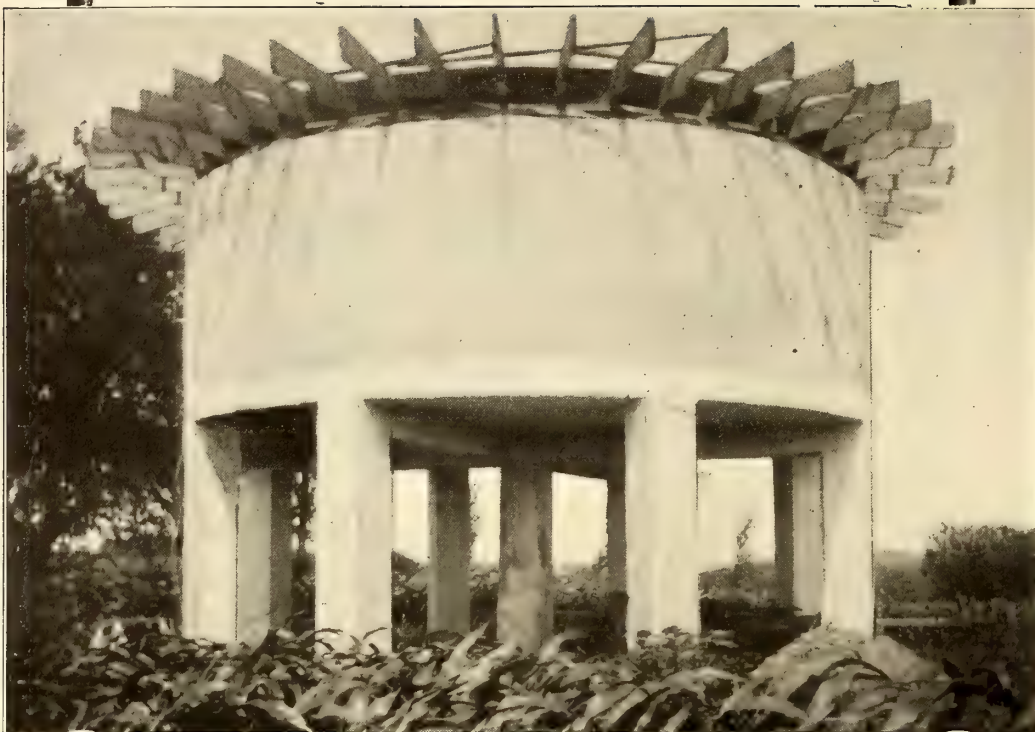
CORTRIGHT METAL ROOFING CO.

PHILADELPHIA and CHICAGO

FLOORS



ROOFS



A concrete tank erected on estate of Edmund Tatham,
Katonah, New York

Frederick J. Sterner, Architect - - New York
De Lancey A. Cameron, Builder - - New York

Tank designed for storage supply of 15,000 gallons,
built entirely of concrete reinforced with Clinton welded
wire. Before roof was placed over tank, and during
winter months, ice 10 inches thick formed on water
stored therein. No cracks or leakage have developed.

Clinton Wire Cloth Company
CLINTON, MASS.

Ceilings

FIREPROOFING DEPARTMENT
ALBERT OLIVER
1 MADISON AVE., NEW YORK

WASHINGTON: ROSSLYN SUPPLY CO., COLORADO BUILDING
SYRACUSE, N. Y.: PARAGON PLASTER CO.
ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
SAN FRANCISCO: L. A. MORRIS, 835 MONADNOCK BUILDING
SEATTLE: L. A. MORRIS, 909 ALASKA BUILDING

Partitions

ANY BEAM

ABUTTING ITS SUPPORT IS
BEST HELD ON OUR



JOIST
HANGERS

Made in over 100 listed
sizes and any modification
to order.

LANE BROS. CO. (The Door Hanger Manufacturers) 434-466 PROSPECT ST.
POUGHKEEPSIE, N. Y.

on the third. When these appear in full force the havoc is astounding. If moles undertake to assist you in cleaning them out, do not disturb them at their work—although they may destroy a few plants. The crown borer is a pest of the worst sort. This is a member of the curculio family, and the grub eats its way into the crown of the plant, just when the berries are about to ripen. In the southern states a small black beetle attacks the buds and the blossoms, destroying the stamens. For all of these pests white hellebore and kerosene emulsion are recommended; but the real truth is, you will have to pick up your strawberry bed and run to some other part of your ground. For fungus diseases on the leaves apply Bordeaux mixture. Begin the spraying early in the spring and repeat it frequently. If you retain your bed for several years, you will do well to burn it over after bearing to destroy the insects.

Of all fruits nothing should go on to the market to make an impression for its beauty superior to the strawberry. A mussy lot of berries will never bring a compensative price. Compel your pickers to handle with delicacy and sympathy. The strawberry happens to be a fruit which must be frequently shipped a long distance, and to do this successfully needs very tidy work. It is not altogether in the variety, but in the picking and the packing. As soon as a crate is filled, if it cannot be immediately shipped, it should go to a very cool and dry cellar. The small grower of strawberries should have a home market. He should go directly to customers of his own, and he should serve them so perfectly that they will want his berries year after year, and no others.

I am writing more particularly for home makers, and for this reason shall say very little about market. Yet I hold that all these little country homes that are being made up—and I am glad to say that they are more and more being created on the intensive principle—should pay their own way. That is, while they are planted or created first for the home idea, they should soon produce a surplus, which, going to market, should pay all the expenses of running the home. The strawberry surplus, as I have suggested, should go to a near market, made up of consumers. I remember well my first surplus after establishing my country home. It was only seven dollars above expenses, and this came almost wholly from strawberries. However, I will not recommend to home-makers any large amount of experimenting with this berry. It is delicious, and it is captivating, but it makes lots of work and takes lots of time—which means expense. I can grow ten times the value of raspberries, blackberries, cherries, pears, etc., from the same area, with the same labor and time. I can manage the enemies of other plants with a greater certainty, and I have seen a lot of strawberry bankrupts. So I say, plant a few varieties on well-prepared soil; and if you find it profitable as compared with other things, you can enlarge your future plantations.

Ornamental Waterfowl

SWANS DUCKS GEESE

Show Birds and Animals
of Every Description :: ::

LOUIS RUHE, 248 Grand Street, NEW YORK



Cattle Manure
in Bags Shredded or Pulverized

Best for all indoor and outdoor work. No bad odor. Easily applied. Delivered east of Missouri River. \$2.00 per bag (100 lbs.) Write for circulars.

The Pulverized Manure Co.
21 Union Stock Yards, Chicago.



AMERICAN HOMES AND GARDENS

Price, 25 Cents. \$3.00 a Year



CONTENTS FOR JUNE, 1908

	PAGE
HOMEWARD BOUND	216
MONTHLY COMMENT	218
NOTABLE AMERICAN HOMES—"Casa-del-Ponte," a Summer Home at Tokeneke Park, Rowayton, Connecticut	<i>By Barr Ferree</i> 219
SCIENTIFIC POULTRY BREEDING	<i>By Day Allen Willey</i> 225
RESIDENCE OF HENRY M. KNEEDLER, ESQ., Chestnut Hill, Pennsylvania. <i>By Walter Williams</i>	229
THE ROSE AS A SUMMER BEDDER.....	<i>By Eben E. Rexford</i> 232
THE GARDEN OF WINTHROP SARGENT, ESQ., Fishkill-on-Hudson, New York.....	234
RESIDENCE OF JOHN M. CHAPMAN, ESQ., Rock Ledge Road, Montclair, New Jersey. <i>By Francis Durando Nichols</i>	238
PRIVATE AUTOMOBILE GARAGES	<i>By Benjamin A. Howes</i> 242
"ROCKSYM," the Summer Home of Burt L. Syms, Esq., Greenwich, Connecticut. <i>By C. W. Whiteway</i>	249
CORRESPONDENCE:	
PROBLEMS IN HOME FURNISHING.....	<i>By Alice M. Kellogg</i> 254
GARDEN WORK ABOUT THE HOME.....	<i>By Charles Downing Lay</i> 254

Among the Strawberries.

The Garden in the Temporary Home.

The Quince.

New Books.

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada, \$3.50 a year

Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



Homeward Bound

Photograph by A. H. Davis

AMERICAN HOMES AND GARDENS



Volume V

June, 1908

Number 6



"Casa-del-Ponte"—The Entrance Front Rises Directly Above the Native Rocks

Monthly Comment



NEIGHBORS' children constitute one of the most delicate and intricate problems of country house ownership. It is a question of never-ending complexity and of quite infinite variety. It is a difficulty that is seldom settled, and is quite liable to break out into an acute stage immediately after an apparently lasting peace has been signed, sealed and delivered. It is a question of such a varied nature that it may be approached both from the standpoint of constant delight and endless annoyance. Its phases are more unstable than the weather, and it is one of those things that is with us constantly. The mosquitoes and the flies may pass away with the season, the hardest days of the coldest winters may, in time, yield to the softening influence of spring, but one's neighbors' children are always at hand, and even at times when they may be supposed to be safely housed within doors offer fresh subject for dispute. The controversies they provoke pass on from one stage to another; and if, by natural law, any of these precious beings advance in age, they offer, in each succeeding period, new problems, or there is an invariable new crop in which the old difficulties are presented anew with the latest of modern forms.

CHILDREN, as a rule, and neighbors' children especially, have very small regard for the rights of property. If they have been accustomed to walk across your lawn while your property was awaiting a tenant, they acquire, so they think, an inalienable right to trespass at any and all times when their free souls feel the need of disporting in your open spaces. If your house wall has been used as a target for catching ball, there is never the smallest reason for discontinuing this sport because you happen to have moved in; while the proximity of a window but adds a fresh zest to this harmless pastime. They are persuaded, in a manner that leaves no room for argument, that your small fruits and berries, your cherries, pears, apples and watermelons exist, grow and have their being for no other reason than to administer a pleasing comfort to their inwards whenever they feel the need of physical refreshment, or even at times when, having no space to spare within, they arrive at a conviction that you have too much or too many for your own domestic consumption. If you possess a choice flower there is every reason why that, too, should be appropriated, and its structure dissected in a way that leaves nothing at all to be thought of in the art of complete destruction. Some of these depredations are, it is true, accomplished by children of a larger growth; but the solemn fact to you is, that ruin has been wrought, and damage accomplished, without any means soever of redress. All these little circumstances add greatly to the regard with which you view your neighbors' children, regard that sometimes extends to the parents, to the great undoing of friendships and the vast mental disturbance of a neighborhood.

ON the other hand there is the perfectly well established fact and well-known truth that one's neighbors' children can do no wrong. Parents have been known to seem to have no especial regard for their offspring, who vigorously resent any suggestion from a much tried neighbor that their children are not so well behaved as they should be. It is extremely unwise to convey any suggestion of this sort to any parent, whether a neighbor or otherwise. It is sure to create bad feeling, and this state of mind should be avoided at all costs. If the realization that this may be the case becomes too keen to be retained, it is better to dig a hole in the ground and whisper it to the earthworms, than to proclaim

it aloud to any living soul. It is not even safe to unburden oneself to a sympathetic neighbor who may harbor a similar idea. That instantly puts you in another person's power, and may lead to your own undoing in some unanticipated moment.

FOR, of course, all children are good, and the closest thing to angels we have on earth. They are the most interesting little objects, too, full of a youthful vivacity of a thoroughly varied kind. They never mean any harm, and they never do any mischief. There is nothing so charming as a happy child, and who is there so heartless as to deny a child a few apples or berries if their acquisition or their possession makes them happy? Why hem in one's grounds, especially if one has no children of one's own, and keep out these charming little beings that would add so much to the gaiety of your landscape if they but disport themselves upon your choicest bit of lawn? Surely the most costly statue or the most precious vase does not approach in interest, or even in value, the charm of a young child, even though he is never so happy as when he is where he ought not to be!

THE problem of neighbors' children does not cease with growing years. From quite young children they advance to a stage of not so young. The process is often accomplished with a great loss of personal interest, but the problem itself does not diminish; it merely takes on a new aspect. Do not imagine for a moment, therefore, that because a child grows older you will have less bother from him. You look forward, of course, to an epoch when he may acquire some discernible degree of mental penetration and realize that you and yours do not exist solely for the gratification of his caprices. Just so long as he remains in the happy period of childhood all sorts of things are liable to happen, and when he reaches young manhood, and even maturity, he may carry into these older periods impressions and views of yourself that are left over from the earlier epochs that he has never taken the trouble to cure himself of.

THERE are quite a number of things one should not do to one's neighbors' children; they are, in fact, so numerous, that it were better to seem unaware of their existence rather than to run the danger of taking any note of them. Never dislike them. Never tell them not to do anything to your property. Never tell them to stay away. Never ask them to do anything for you. Never offer them pay for anything they might do for you. If you ignore them altogether they will haul out this circumstance at even the remotest epochs of their lives and cite it as convincing evidence of your innate unpleasantness. This may be true enough, but no one likes even a child to detect a defect in one's character. But the most dangerous of all things, when children reach an askable age, is to ask a favor of them. Never ask that they convey a package for you to the post office. Never suggest they might earn an honest quarter by mowing your lawn. Never even think they might be useful. Even if the child is searching for a job, and perhaps needs one, it is better that he should go elsewhere than that you should put any money-making opportunities in his way.

THE guides to country life contain no chapters on this important and engrossing subject; yet it is a chapter of real moment, and is concerned with circumstances and human beings that may do much to make life in the country enjoyable and peaceful. Yet the countryside without children would be a barren wilderness of stupid houses and old people. Obviously one's neighbors' children have their compensations, even if they be not always observable.

Notable American Homes

By Barr Ferree

"Casa-del-Ponte," a Summer Home at Tokeneke Park, Rowayton, Connecticut



AFTER you have seen how it is done it seems easy enough to design and build a charming house; at all events one can not but wish there were more houses of real and penetrating charm, houses agreeable to look at, houses delightfully environed, houses that, by their mere exteriors, suggest and proclaim their evident livability as their most positive characteristic. There are, of course, many such houses, but few enough they seem in the course of a long walk, or even in a day's drive with the automobile. Very certainly there are few such delightful houses as the one designed by Messrs. Slee and Bryson, architects, of Brooklyn, N. Y., at Tokeneke Park, Rowayton, Conn.

One need spend no time in seeking the causes of the charm of this little house. Its beauty speaks aloud on every side: in its form and silhouette, in the fine manner in which the solid stucco walls hold and retain the windows; in the roof, which so amply and obviously covers the building; in the grace and beauty of the subsidiary parts, the balustrades, the pergolas, the trellised window in the rear, the firm, strong entrance doorway, and, above all, in its delightful situation. A quiet, peaceful house this is, brooding serenely above a creek, with the deep waters of Long Island Sound in the not far distance.

The "Casa-del-Ponte" owes its name to a bridge which must be crossed before the house is reached by the road from the railroad station. As already stated, it is a stucco house, and is of a creamish-white color, surmounted with a roof of red shingles. Severely rectangular in plan, it is without projecting parts save on the rear, where an extended window and a pergola, which is practically an integral portion of the house, relieve its

somewhat rigid outlines. But because a house is square or rectangular it is not necessarily formal, and certainly it need not be without interest. Both these facts are amply set forth in every part of this exterior. Thus, for example, the door and window spacing of the entrance front is as free and as irregular as you please; wherever a door was needed it was placed, and when a window was required it, too, was cut through the wall, and given the shape, form, size and position that best met interior requirements. Translating these conditions into exterior architectural form gave a peculiarly harmonious result, although so far as the entrance front is concerned of regularity and symmetry there is none at all. That such ideas should be looked for only shows how difficult it is to get away from preconceived and basic traditions. There is actually no reason why a house of any style should be designed in a symmetrical manner, in which the parts of one-half are accurately reproduced in the other. On the contrary, there are few things so absurd in domestic architecture, since no interior half of a house is ever put to the

identical use that the other half is. Our architects, however, are not always bold enough to reject traditional usage, and it is only when this has been frankly set to one side, as in the "Casa-del-Ponte," and successfully set aside, that one realizes completely how unnecessary such a convention is.

It is interesting to note what highly effective results have been obtained by the use of the simplest forms and the emphasizing of strict constructional lines. The main doorway is a good example. It is emphasized by a slight projection; scarce more than a double thickening of the walls, but being the only projecting feature of the whole front except the two balconies, it is quite enough for its purpose. The two steps and their inclosing piers are structurally a part of the



An Outlook Across the Pond and Meadow



The Pergola of the Terrace and Its Outlook

house, and are surmounted by an ample platform, a quite sufficient space on which to stand while awaiting the opening of the door. A third step forms the sill, and it, too, is a part of the house structure. The doorway projection is surmounted by a simple flat band without moldings; the doorway itself is seemingly cut through the stucco walls, and is likewise without ornament; and hence the garland swung above it has the greater ornamental value in its leaves and flowers and in the grotesque mask from which it hangs. The door itself is equally simple and restrained; it is made of strips of cypress battened together. Below is a great wrought iron hinge; above is an iron grille, glazed within, and an antique knob and knocker. Structurally, there-



The Trellised Window of the Kitchen



The Steps t

fore, nothing could be simpler, yet sundry ornamental objects close at hand add much to the effect of this simple entrance; such are the vases and the tubs of bay trees on each side of the steps; such is the old Italian lantern hanging on the house wall to one side; such, again, are the Della Robbia reliefs let into the wall above the door. The reliefs are borrowed from the famous Cantoria, now preserved in Florence, and constitute the single piece of pure ornament, of ornament without structural relationship, in the whole front. An exception should, however, be made for the balustraded balcony in the second story to the left of the doorway, but this is an architectural feature, designed in a somewhat formal manner, and itself an orna-



The Sculpture Garden Under the Trees



The Italian Garden



The Terrace and Pergola



The Pergola of the Terrace and Its Outlook

house, and are surmounted by an ample platform, a quite sufficient space on which to stand while awaiting the opening of the door. A third step forms the sill, and it, too, is a part of the house structure. The doorway projection is surmounted by a simple flat band without moldings; the doorway itself is seemingly cut through the stucco walls, and is likewise without ornament; and hence the garland swung above it has the greater ornamental value in its leaves and flowers and in the grotesque mask from which it hangs. The door itself is equally simple and restrained; it is made of strips of cypress battened together. Below is a great wrought iron hinge; above is an iron grille, glazed within, and an antique knob and knocker. Structurally, there-

fore, nothing could be simpler, yet sundry ornamental objects close at hand add much to the effect of this simple entrance; such are the vases and the tubs of bay trees on each side of the steps; such is the old Italian lantern hanging on the house wall to one side; such, again, are the Della Robbia reliefs let into the wall above the door. The reliefs are borrowed from the famous Cantoria, now preserved in Florence, and constitute the single piece of pure ornament, of ornament without structural relationship, in the whole front. An exception should, however, be made for the balustraded balcony in the second story to the left of the doorway, but this is an architectural feature, designed in a somewhat formal manner, and itself an orna-



The Sculpture Garden Under the Trees



The Trellised Window of the Kitchen



The Steps to the Italian Garden



The Terrace and Pergola



The Entrance Passage and Stairs to the Second Floor

mental device that adds both to the variety of the front and to the individuality of the whole building. Exception should also be made for the large round arched window further on to the right, whose doubly recessed head is supported by a couple of lion heads, from which depend ropes of carved foliage.

At the beginning of this review special mention was made of the very simple lines on which this house was designed; an analysis of a single front discloses how much interest has been brought into it by a true feeling for the value of ornamental detail, and how, even when following the simplest of structural lines, restraining as far as may be the ornamental features, it may still be possible to endow a building with a genuine variety of interesting parts, and how, by using ornamental features where they are needed, and only in such places, a very great deal of interest may be created. Certainly there are no dull spots in this front, which is an extraordinarily clever combination of solids and voids, of simple construction, and of fine bits of ornamental detail.

So delightful is this exterior that one quite naturally lingers long without the house before going within. In its structural lines and form and number of its window openings the entrance front discloses a delightful variety and disregard of conventionality. Structurally the rear, the garden or water front—for here the house overlooks the Sound—is much more formal in its general design, a



The Living End of the Great Interior Room

contrast that at first sight seems startling enough, for if ever a house may have a right to informality surely it is on its garden front, which is really the private and intimate side of the house. But here, instead of irregular windowing and varied forms, is a symmetrical row of windows in the second story, with more Della Robbia reliefs, this time reproductions of the Bambinos from the Ospedale delgi Innocenti at Florence, spaced between them. Below the story is different: in the center is a rectangular projecting window, surmounted with a sloping roof; on one side is the great trellised window of the kitchen—which no one would suspect—and on the other the great balustraded terrace and pergola, with its rock-cut steps and piers rising above the native rocks that project boldly from the ground.

Here one is ushered at once into the open-air features of the house. Below on one side two slender Doric columns stand at the top of a flight of steps that lead to the Italian garden. There is a charming mingling of the formal and informal in gardening here, the rocky landscape readily lending itself to each kind, and in a way that permits a development of each without conflict. The terrace is a structure of some size, supported on a stone foundation, and with massive stone piers surmounted with large pottery bowls. A portion of it is covered with a pergola, and is really an outdoor room where the great external beauties of the neighborhood may be both seen and enjoyed.



The Fireplace with Old Italian Brackets and Sculptured Circle.



The Dining End of the Chief Room of the House

There is so much to see without this house, so much of interest in the structure itself, so much that is charming in its immediate environments, in the gardens and outlooks, that one may well hesitate before going within, lest some outward joy be overlooked or not sufficiently enjoyed. Yet an agreeable exterior presupposes an equally agreeable interior, and the anticipations raised by the outside of this house are speedily realized within. Here a surprise awaits one—although what house interior is without its surprises?—in the fact that it contains but one room. Not literally, of course, for there is the inevitable butler's pantry, and the equally quite essential and inevitable kitchen; but aside from these rooms the whole of the first floor is given up to one large apartment, which serves the double purpose of living-room and dining-room.

And what more can one want? The house is a summer home, used in the summer only. The demands made upon its structure are, therefore, of the briefest. A place to sit and rest in, a place to eat in, and sleeping-rooms on the floor above contain all the essential requirements of the country home. Walls and passages, doors and corridors form quite secondary features in such houses, and all have been omitted here, with a great resultant advantage in space and arrangements, in convenience and in effects.

The one great room has, of course, its own special parts. One end serves as a living-room, the other as the dining-room. It is paneled throughout in rough plaster of rich old brown color, separated by frames of wood, which, as a matter of



A Reminiscence of Italy

fact, are strips of yellow pine stained Flemish brown. This wood and this treatment is used throughout the first floor, and forms a fine harmony with the rich brown body color of the walls. At the living end of the rooms is a concrete fireplace. A circular panel in relief is let in above the opening, and on either side are great antique Italian supports of carved wood which carry the mantel shelf. The rug is Oriental, in red, blue and green, and window curtains are of a golden green net; and the furniture is what may be looked for in any modern home of the better sort, partly old, partly new, but in every article comfortably adapted to every-day use.

The further end constitutes the dining-room, if a portion of a room set aside for dining purposes may be so described. Just behind the dinner table is a fine piece of old tapestry, and the table and chairs here, as well as the sideboard and serving table, are good types of the

antique. The room is actually entered toward this end, a partly inclosed space serving as a vestibule, with stairs rising at one side, and partly open to the dining-room. Above are the sleeping-rooms and bathrooms. The woodwork of the second story is painted white throughout, and the walls are rough plastered. The hall is colored mustard yellow, while a charming individuality is given in the treatment of the bedrooms and their appointments. Nothing has been neglected here to give charm and variety to this beautiful country home, that is at once so agreeably situated and to which so much special interest is due to the design and equipment of the house.





Chicken Houses and Runs

Scientific Poultry Breeding

By Day Allen Willey



THROUGH the use of an incubator system and the construction of buildings especially designed and equipped for breeding, colonizing, etc., it has become possible for a poultry raiser to send to market a thousand fowls, where by the old-time haphazard methods he could sell but a few dozen. In fact, poultry raising has become a regular industry, tracts of land being devoted entirely to it, the plant, for it may be called such, being owned by a company, and the chickens and ducks

produced as if turned out from a factory. Some of these modern poultry raising plants send from two hundred and fifty thousand to three hundred thousand chickens a year to market, in addition to a hundred thousand or more ducklings, saying nothing of enormous quantities of fresh eggs, for these plants are capacious enough to hatch fifty thousand eggs at one time on account of the size and number of the incubators.

The site of the industry may be a tract of land covering only a few acres, or it may be of the dimensions of



A Flock of Ducks and the Building in which They Are Housed



Interior View of the Chicken House

a large farm—two hundred and fifty or three hundred acres—but it lies so it is naturally drained, although artificial drainage as well is usually provided. Most of the incubator houses are located at least half way underground, and for this reason are sometimes termed incubator cellars. An excavation to the depth of three feet is generally made and lined with cement so that it will be moisture proof. The side walls are usually of brick or concrete, except two or three feet in the upper portion, which consists of wooden siding, into which windows are set for light and air. The average height of the incubator cellar is about seven feet, its other dimensions being proportioned, of course, according to the number of

incubators which it is to contain; for further protection, however, earth is usually banked against the lower portion of the outside walls.

So many different kinds of incubators have been designed, each giving good results, that it is needless to describe any particular one in this article. The brooders, however, may



Brooder House Where Seven Thousand Chickens Can Be Kept



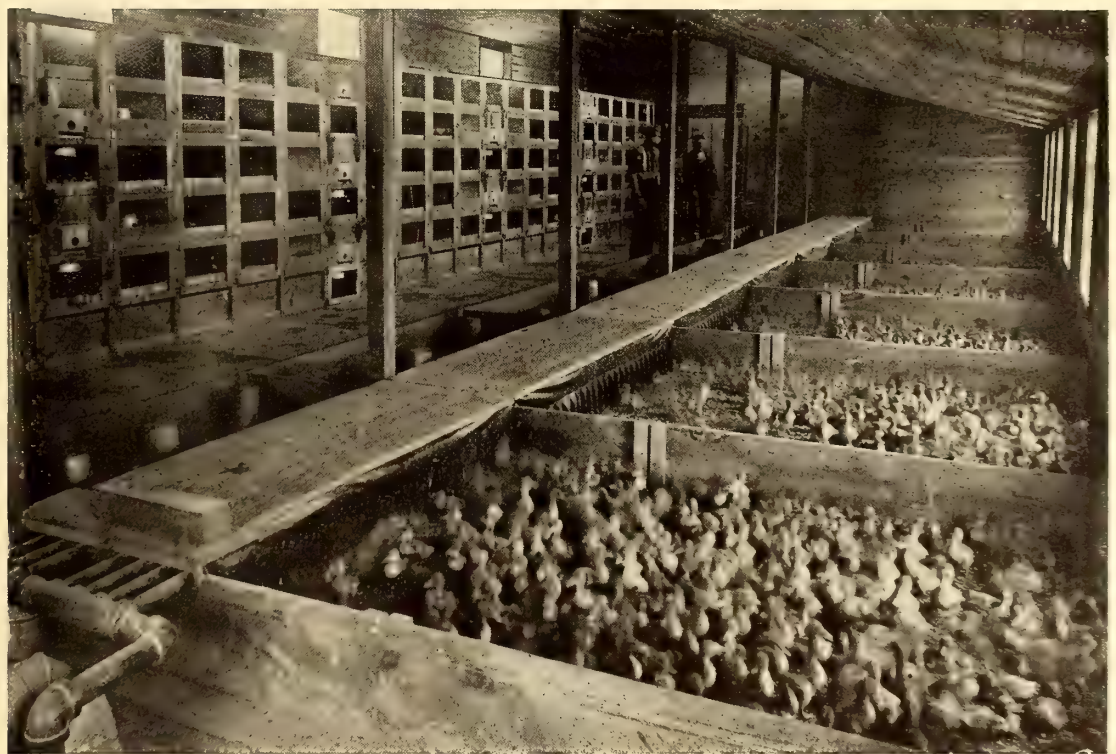
The Colony System of Raising Poultry, Showing How Small Flocks Are Kept in Individual Houses

be of a portable character, but heated with lamps, or buildings equipped especially for the purpose and heated by steam or hot water. In the establishment illustrated the brooder house is kept at a suitable temperature by coils of pipe in which water heated to a suitable temperature is circulated. In the modern brooder house twelve hundred chickens can readily be provided for in a space of sixteen by one hundred and twenty-five feet. As a rule eight

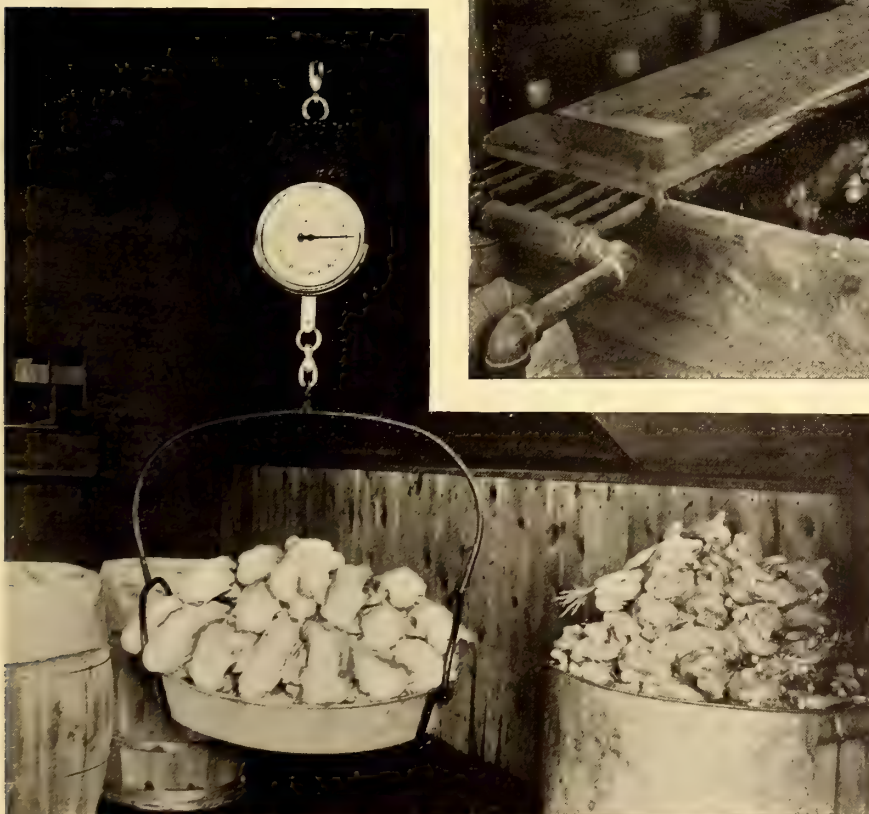


Duck Breeding House, with Flock of Ducklings in the Foreground

weeks are ample time to keep them in the warm brooder house, when they are placed in cold brooders in the colony houses. Care is taken, however, not to transfer them to the colony houses until the nights in the spring become fairly warm, as artificial heat is seldom provided in connection with the colonies.



Section of the Nursery Brooder House for Hatching Ducks, Showing an Arrangement for Maintaining an Even Temperature



Weighing Fowls for Market

The dimensions of the colony houses differ considerably, but in many of the larger establishments buildings are erected each of which will accommodate at least one hundred chickens.

The modern poultry raisers appreciate the profit in sending eggs to winter markets, and this feature of the industry has greatly expanded in recent years. A layer house on one of the large poultry farms may contain five hundred pullets in a space two hundred and fifty feet long and sixteen feet wide. The layer houses are usually divided into pens, in each of which about twenty-five fowls are placed. Each pen contains a gate, which opens upon an alley along the side of the building, and opposite each pen is an opening by which the pullets can go into the yard or "park" provided for them. The parks are fenced off from each other by means of wire netting, and are well surfaced with sand or dry earth where vegetation is not provided for food. Apparently pullets which average six months old are the best layers for the winter market. If care is taken to hatch them out in the spring so that they will reach this age by November 1 they will lay with remarkable regularity provided they are properly sheltered and fed.

In addition to suitable houses for fowls

of different ages, care is taken to see that they are provided with pure water and food that improves their condition.

Some of the poultry farms which are operated by scientific methods yield a remarkably large profit considering the investment. A farm in northern New York, on which thirty thousand dollars was expended for land, buildings and stock, pays its owners a profit of from twelve to fifteen per cent. on the investment annually, after deducting all



General View of a Scientific Chicken Hatchery, Showing the Arrangement of the Houses, with Flocks Feeding

expenses of operation as well as of taxes and other charges. The hatcheries on this farm have produced as many as thirteen thousand three hundred eggs in one month, a thousand pullets being reserved for laying. The annual output of spring chickens averages about four thousand. Of the eggs about sixty per cent. are sent to market, the balance being placed in the incubators. Although the place is located upon less than ten acres of land as many as six thousand fowls can be counted in its inclosures at one time.

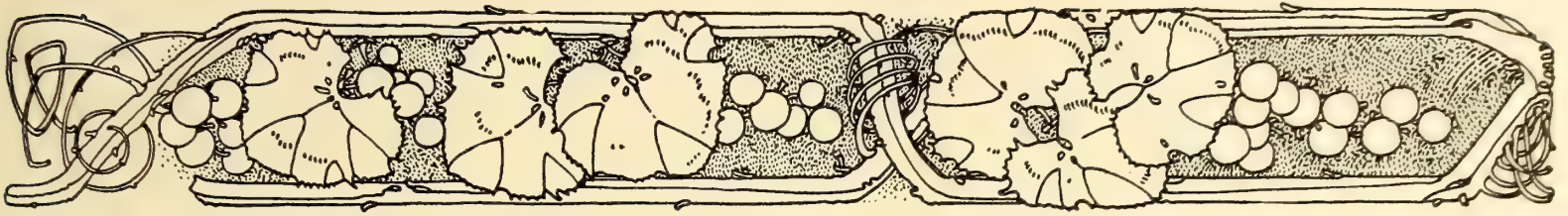
One of the largest poultry farms in the country is located at Aurora, New York, and is illustrated in the accompanying photographs. This place occupies a site of two hundred and sixty-nine acres, but only a portion of it is at present used for poultry raising, thirty acres being covered with timber and another section is devoted to growing grain partly for poultry feed. The buildings include ten laying houses, having a capacity for no less than five thousand seven hundred hens. The incubator cellar contains one hundred and forty-six in-

cubators with a total capacity of about fifty-five thousand eggs. The colony and brooder houses also provided are of such capacity that the company can take care of one hundred thousand young birds at one time, while its annual output is two hundred and fifty thousand chickens for broiling and roasting and over one hundred thousand ducklings. Most of this poultry is sold in the larger eastern cities, as well as the eggs, which are hatched from fifty thousand hens kept specially for this purpose.

The results attained at this establishment show that the average hen will lay at least eleven dozen eggs a year at a total cost of but one dollar and a half annually for food and care. The price for the eggs is such that the average profit per fowl is one dollar and a quarter. From the eggs alone the company owning this plant secures a profit of sixty thousand dollars a year, while the profit on the chickens raised for broiling and roasting amounts to thirty thousand dollars more.



Inspecting the Stock in the Open Ground



Residence of Henry M. Kneedler, Esq.

Chestnut Hill, Pennsylvania

By Walter Williams



THE picturesque house illustrated herewith is an interesting example of the old English type. Mr. Kneedler's house is a successful treatment of that particular style of architecture combined with all the modern requirements. The plot upon which it is built rises gradually from the Boulevard in front and forms a very open and attractive site.

The front of the house is marked by an attractive porch placed at the entrance. A broad terrace, inclosed with a narrow wall, forms a connecting link between the porch and the piazza at the side of the house, which is so isolated that it can serve as a private outdoor dining-room for the family. The detail of the porch, the gable ends and windows have been executed with great care. The main walls of the house and the terrace are built of rock-faced Chestnut Hill stone of a soft gray color, with limestone trimmings. The gables are beamed, with stucco panels. This half-timber work and all the trimmings are stained a soft brown. The roof is covered with red slate, harmonizing well with the gray walls and brown trim, and giving a touch of color to them.

The entrance to the house has a vestibule, and beyond this is the hall, which is trimmed with quartered white oak, finished in old English style. It has a paneled wainscoting, above

which the walls are covered with a mustard-yellow wall covering. The openings between the hall and the library and dining-room have dull green velour curtains. The ceiling is beamed and ribbed, and the ornamental staircase of quartered oak is lighted effectively by a great cluster of leaded glass windows, which shed a soft and pleasant light over both the upper and lower halls. An archway, supported on columns, forms the entrance to the parlor, which is treated in the Louis XV style, with white painted trim and walls decorated with molded panels in old rose and green. An open fireplace has facings and a hearth of Tiffany brick and a mantel of the Louis XV period. The furniture is of the

same style, and the curtains are of coral pink brocaded silk. The floor is covered with a coral pink rug worked out in a design of green, pink and white.

The library is trimmed with quartered white oak and is finished in old English. It has a paneled wainscoting and bookcases built in, above which the walls are covered with a dull crimson burlap. The ceiling is beamed; there is a paneled seat in the bay window, an open fireplace finished with mottled green tiled facings, and a hearth and mantel of English character.

The dining-room, which is on the left of the hall, is a handsome room, and its white enameled and painted trim, with its ivory white painted strips, with which the walls are covered, is quite a



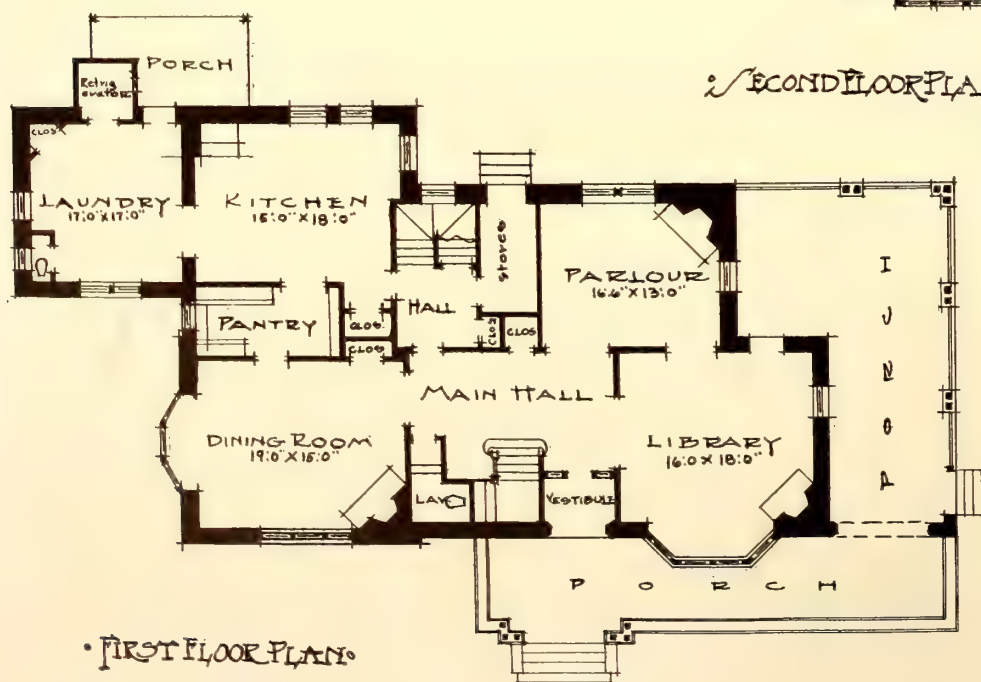
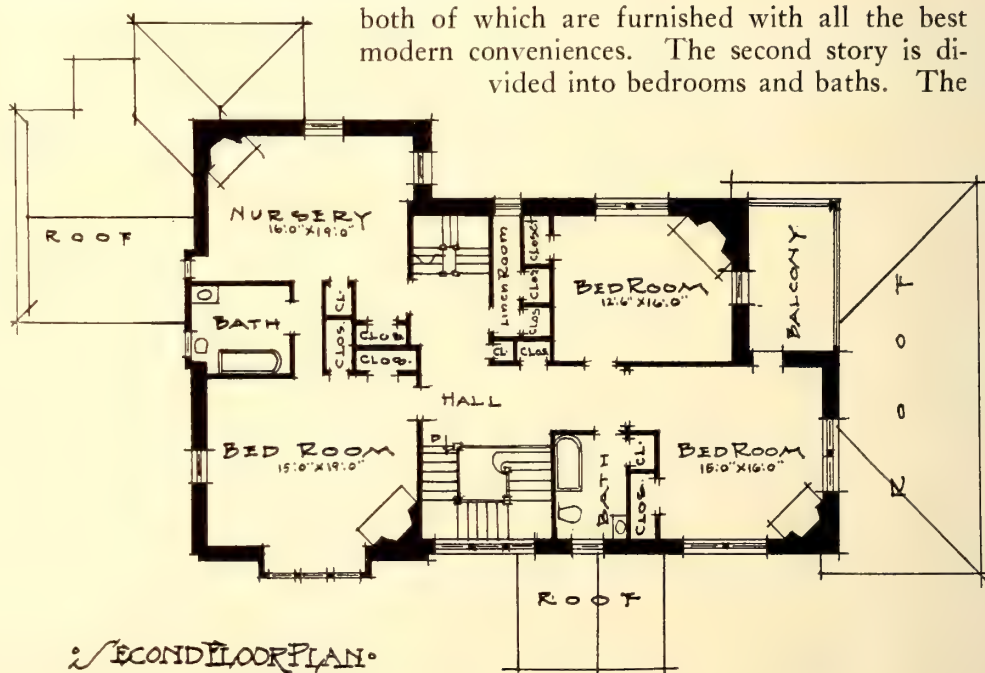
English Characteristics Are Well Defined in the Front



The House Is Built of Rough-faced Chestnut Hill Stone with a Red Tile Roof

unique feature. The panels formed by this striping are covered with a dull green bur-lap, while the walls above the plate rack, which forms a cap to these stripings, is covered with a tapestry effect in blue and green. Opposite the entrance to the dining-room is a bay window with window seats. The win-dows are hung with soft white lace net cur-tains. The fireplace, which is in one corner, is built of brick with facings and hearth of similar brick, and the whole finished with a Colonial mantel. A small china closet, with latticed door, completes the room. A door opens into the butler's pantry, fitted with sink, drawers and dressers. A second door opens into the kitchen, while a broad opening into the laundry creates one large apartment,

both of which are furnished with all the best modern conveniences. The second story is di-vided into bedrooms and baths. The



owner's suite extends from the front to the rear of the house, and consists of two rooms, bedroom and nursery, with a bathroom placed in between and reached from a private hall-way. There are also two guest rooms and bath on this floor, besides ample closet room and linen closet. Each bedroom is treated in one color, and all have open fireplaces finished with brick facings and hearths and mantels.

Mrs. Kneeder's room has a green striped paper in two tones, with soft draperies and cretonne covering for the windows and fur-niture. One of the guest's rooms is finished with a white and gray striped wall covering with an olive-green ribbon border, while another has a wall covering in white and pink



The Hall Is Furnished with a Paneled Quartered Oak Wainscot and an Attractive Staircase



The Library Is Trimmed with Quartered Oak Finished in Old English Style

with a rosebud pattern in festoons. The bathrooms have tiled walls and floors, and are furnished with porcelain fixtures and exposed plumbing. The third floor is devoted to the servants' bedrooms, trunk room and guest rooms. Mr.

Walter F. Price, of Philadelphia, Pa., was the architect of this house, and it might be of interest to mention the fact that the design received first mention from the T-Square Club of Philadelphia, at its recent exhibition.



The Dining-room Has a White Painted Trim and Is Striped with the Panels Covered with a Dull Green Burlap

The Rose as a Summer Bedder

By Eben E. Rexford



HIS article is written for the benefit of the amateur gardener, therefore it will not apply to the gardens of wealthy people who can afford the services of a skilled man. It is seldom that no roses are to be found late in the season, for the gardener knows how to secure them. Roses the amateur may have from June to November if he is willing to take a little trouble for them. We have, in the tea, the Bengal and the Bourbon sections of the great rose family, the material from which it is easy to secure a constant supply of flowers throughout the season. These are generally catalogued as ever-bloomers. These roses can be made to bloom at intervals, after the first profuse crop of June and July. They are not perpetual in their habit of bloom. Hybrid occasional would be a better term to use in connection with them. Neither are the so-called ever-bloomers true to the term which the florists have applied to them unless given peculiar treatment. In order to grow this class of roses well one must understand something of their habits. They send out new branches, and these generally bear several buds. When these buds have developed into flowers no more can be expected from that branch, unless it can be coaxed to send out other branches. In order to keep up a succession of bloom it is absolutely necessary to keep the plant producing new branches, as the flowers are only borne on new growth. Therefore such treatment must be given as will constantly keep it renewing itself. So long as new branches are produced so long will there be flowers.

These roses, like all other members of the family, are great eaters. Therefore, it naturally follows that one of the im-

portant features of the treatment given consists in manuring them liberally, not once in the season, but several times. What should be aimed at is keeping them growing all the time, and growing so vigorously that they will be able to produce large and perfect flowers.

The second important item to be considered is this: When a branch has developed all its flowers, most of it should be cut away. Cut it back to a strong bud, or "eye." This will generally leave but two or three inches of it, close to the base of the plant. If the plant is stimulated to active growth, as it should be, by liberal feeding, a new branch will soon develop from the bud left at the base of the old branch, and this, in its turn, will bear flowers. As soon as these flowers have faded, apply precisely the same treatment to the branch that bore them as was given to the first branch. Keep up this treatment during the entire season, applying fertilizers to the soil at least once a month. In this way the plant is always renewing itself—always going ahead—and the result is roses in abundance up to the coming of cold weather. Of course, plants so treated never attain much size. But who cares for large bushes if he can have large flowers and plenty of them?

The flowers from the teas, Bengals, and Bourbons are never as large as those of the June and hybrid perpetual classes, and, as a general thing, they are not as brilliant in coloring.

La France is one of the best I have ever grown.

Duchesse de Brabant is an old variety, popular years and years ago, but all the better for that, for its continued popularity proves it the possessor of exceptional merit. It is of free growth, with flowers of a silvery pink.



Maman Cochet



Duchesse de Brabant



Viscountess Folkestone

Viscountess Folkstone—a hybrid-tea, like La France—is an excellent bloomer. It is a creamy pink in color, with reflexed and curling petals, and a rich, June-rose fragrance.

Maman Cochet is one of the best of its class, all things considered. It blooms in wonderful profusion. It is a



C. Mermet

strong grower. Its color is a deep pink, with a silvery luster on the inner side of the petal. It is very double, and quite as lovely in the bud as in the expanded flower.

Caprice is a peculiar sort, its thick, waxy petals of rosy carmine being heavily blotched and striped with dark red, shading to crimson. It is most beautiful when just beginning to expand.

Hermosa is an old favorite. It is always in bloom, when well cared for, and its rich pink flowers are produced in prodigal profusion.

Perle des Jardins is a beautiful rose, of as rich a color as



Caprice

bloomer of all. Its flowers are produced in clusters of ten to twenty. It is very double, of delicate pink, fading to almost pure white at the outside of the flower, deepening to rosy carmine at the center. Best results are secured from this variety by removing at least half the buds from each cluster. If all are allowed to remain, the last flowers to open will be small and inferior in all respects.

I would advise the purchase of two-year-old plants always. Younger plants will give a few good flowers, but they can not be expected to make as strong a growth as those with heavier roots. The older plants cost a little more, but they are well worth the difference in price.

Order your plants in April, and get them into the ground about the first of May. Have the soil in which you plant



Ivory



La France

Maréchal Neil—a deep, glowing yellow—and a very free bloomer. It should be included in all collections.

Sunset—another good bloomer—is a tawny yellow in color, flamed with fawn and coppery tints. It is a lovely rose.

Clothilde Soupert—a polyantha—is the most profuse

them well spaded to the depth of at least a foot, and make sure that whatever fertilizer you use is thoroughly worked into it. The ideal fertilizer for the rose is old cow manure, black and friable. But bone meal suits it very well, if it can not have the other.

The Garden of Winthrop Sargent, Esq., Fishkill-on-Hudson, New York

Photographs by Alman & Co.



The Splendid Outlook Over the Valley to the Mountains Beyond ; a Sumptuous View of Open Spaces and Woods Over which the Light Performs Daily Miracles of Beauty and Mystery



The House, Porch, Conservatory and Terrace Are Handsomely Grouped Amid a Massing of Trees, Some of which Are of True Forest Growth



The Great Conservatory Forms One Wing of the House and Is Practically an Integral Part of It



The Temple Walk Has the Effect of a Long Straight Avenue Bordered and Inclosed on Either Side with Flower Borders and Hedges that Completely Set It Apart from the Other Portions of the Grounds



The Domed Temple Is Easily the Most Notable Feature of this Garden. It Is Designed in the Classic Style, and Standing Quite Alone at the Head of Its Processional Path, Has a Quiet Beauty of Real Distinction



The Formal Garden Has Its Inclosing Wall of Brick and Is Splendidly Surrounded Without by a Fine Overhanging of Trees and Foliage



The Superb Tree Growth Is a Distinguishing Feature of this Fine Estate, and Is as Marked in Small Groups as in Extended Woods



There Is a Rich Flowering in the Formal Garden which Is in Delightful Contrast with the Stately but Simple Development of the Open Parts of the Estate

Residence of John M. Chapman, Esq.

Rock Ledge Road, Montclair, New Jersey

By Francis Durando Nichols



HE many readers of AMERICAN HOMES AND GARDENS are quite well aware of the fact that it is not the purpose of the magazine to design houses, but to present the best finished work of the best architects. The aim of the magazine at all times is to help its readers in every possible way, and the signal instance of the sometimes unexpected manner in which it serves this end is supplied by the house built for Mr. John M. Chapman on Rock Ledge Road, at Montclair, N. J.

Those of our readers who may recall the very beautiful cover design supplied with the issue of AMERICAN HOMES AND GARDENS for January, 1906, will immediately recognize it as the model on which the very charming house of Mr. Chapman's is based.

The cover in question reproduced no real structure, but was the imaginative work of a well-known artist. More than one inquiry to the publishers for plans and details was met with the response that they could not be supplied, since they did not exist. This deficiency can now be remedied, for Mr. Chapman, through his architect, Mr. Albert F. Norris, New York, has made the unreal real, and at the same time has secured a very delightful residence.

The exterior is a very careful development of the original design, as will be seen by a study of the original design illustrated on the cover, and reproduced herewith, together with a photograph of the house as it is now built.

A study of the view, taken from practically the same point of perspective as the original, will show how closely Mr. Norris has kept in touch with the original, for in detail the same number and the same kind of windows are used, as well as the same doorway, which opens from the dining-room to the terrace. Mr. Norris has very ably demonstrated

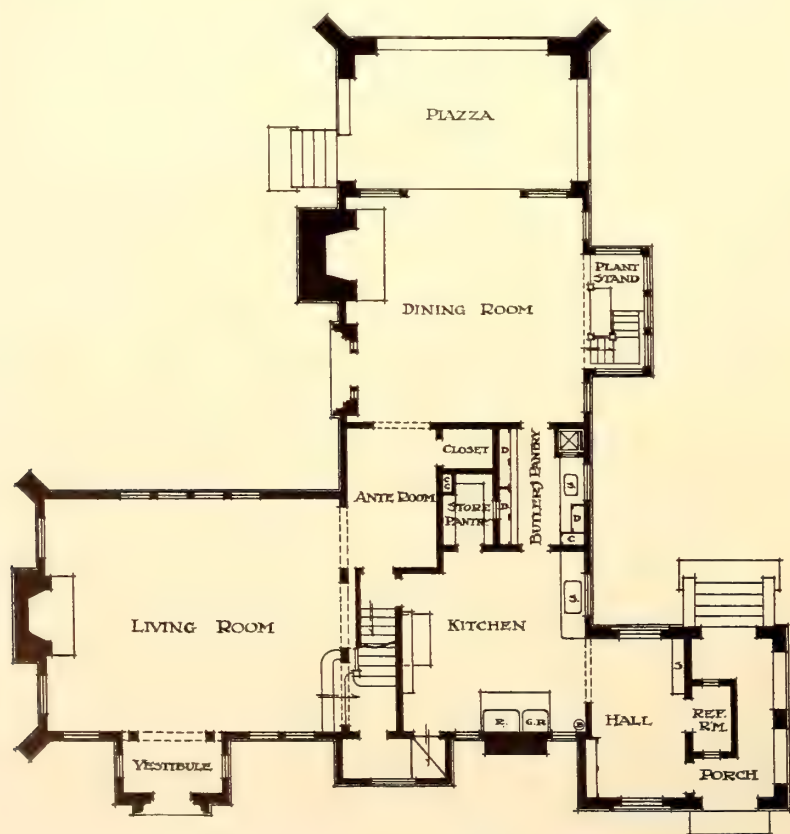
his keen perception and imagination as to what might be an interior arrangement of rooms for the house, and has carried out his ideas accordingly, as shown by the accompanying plans.

The site upon which the house is built slopes sharply toward the east. This feature, taken together with the fact that the building is on the easterly side of the road, required very careful consideration of general lay out, to secure best results as to convenience of room arrangement and outlook therefrom, and yet avoidance of a barren or barn-like front on the street; which, as it happens, commands the least desirable outlook. In fact, the street front of the house, aside from the main entrance porch, is given over to stairways, kitchen and service entrance porch; but, by skilful treatment, these drawbacks were overcome, and the result is a pleasing entrance front.

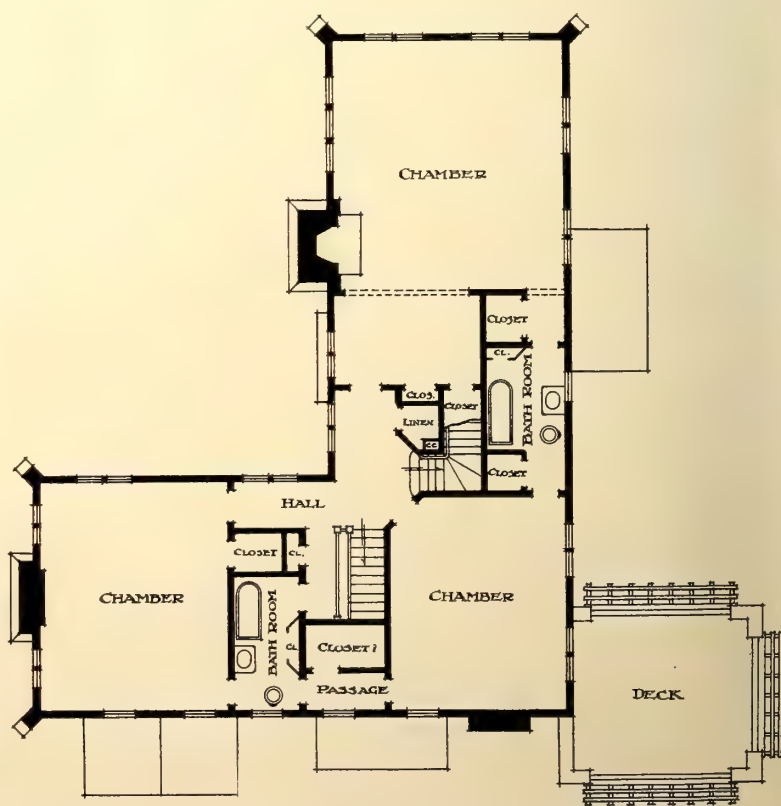
The really artistic effects are, however, to be seen from the garden at the rear, because, as will be found by consulting the plans, the building lines are arranged in such a manner as to secure full value of roof and wall masses and artistic groupings of windows and other openings. Here, too, the chimneys and the corner buttresses, by their rugged yet graceful lines, convey a sense of strength, toned to harmonize with their surroundings.

Above the foundations, the building is of frame construction, the exterior walls being sheathed with rabbeted sheathing boards, waterproof building paper and floated stucco of Atlas Portland cement, on galvanized wire lath. The half-timber gables are stuccoed in like manner, care being taken by the architect, in proper details, to insure perfectly weather-tight joints.

The novel treatment of roof shingles, as the courses approach the gables, gives a graceful skyline, not unlike that



First Floor Plan



Second Floor Plan

produced by the humble thatched roofs of England, and helps carry out the effect of the original. This treatment of roof shingling, while inexpensive, is very effective, and requires only the careful work of any carpenter of ordinary intelligence.

The building measures forty-eight feet and eight inches front by sixty-two feet from main, or street, front to the rear of the dining-porch. The kitchen, hall and entrance porch projects six feet and four inches beyond the face of the main front, and seventeen feet and two inches beyond the side of the building, making the total frontage sixty-five feet and ten inches. The heights of stories are nine feet in the bungalow, and eight feet throughout balance of basement and cellar; ten feet and six inches in first story, nine feet in second and third stories.

The approaches to the front steps of both the main and service entrances are laid with cement. The front main entrance, owing



Cover of "American Homes and Gardens" for January, 1906

to its northerly exposure, is a large alcove or recess off the living-room, adapted to transformation into a vestibule during the winter months by the introduction of removable inner doors.

The living-room is comfortably large and well lighted. At one end is the mantel and fireplace of brick in severely plain lines. Opposite the fireplace, the main staircase occupies the whole of the other end of the room, but by clever treatment it is just sufficiently screened from view to lend privacy to the stairway and yet add to the apparent length of the living-room. The service stairs join the main stairs in such manner that the kitchen is fully screened from view.

The living-room, vestibule and main staircase are trimmed with red oak, stained dark brown, with beam ceiling to match the trim, as also do the columns and arches screening the staircase. Between the living and dining-rooms is an ante room, with an outer door opening on to the gar-



The Exterior of the House Is a Very Careful Development of the Original "American Homes and Gardens" Cover Design



The Porch Has a Pleasant Outlook into the Garden and Over the Surrounding Country



The Garden and Pool

den and with closet for coats, wraps, etc. From here is a passage conveniently connecting the living-room with the kitchen, and yet completely shutting off both view and sounds of the kitchen.

The dining-room is unique in form, accessories and ornamentation, with large fireplace, suitable for an old-fashioned back log. The porch opening off the dining-room is connected with it by an extra wide opening with four doors, all glass, which when opened nearly double the size of the room. This porch is so arranged that in summer it may be inclosed with screens, while in cold weather sash may be substituted for the screens, and radiators are provided for heating it. It has a nine by nine inch red quarry tile floor. Steps lead from the porch to the garden, as does also a doorway in the dining-room. A butler's pantry, finished in white enamel and with dressers, table, leaf closet, towel dryer, and sink, connects the dining-room with the kitchen.

Opposite the fireplace a stairway leads from the dining-room to a room twenty feet and four inches by thirty-three feet and one inch in the basement. This staircase is inclosed with sash, and has a stand or platform over it in the dining-room for plants, etc., and a built-in seat. The dining-room walls are wainscoted eight feet high. The woodwork is red oak stained chestnut-brown. The walls above are sand finished, tinted a deep, dull red. The large room in the basement to which this staircase leads is called "The Bungalow." It serves admirably for a music or amusement room. There is a dumb-waiter from the bungalow to the butler's pantry. This room has



The Dining-room Is Unique in Form, Accessories and Ornamentation



The "Bungalow" in the Basement

The Exterior of the House Is a Very Careful Development of the Original "American Homes and Gardens" Cover Design



View from the Porch



The Entrance Front of the House, Showing Outdoor Sleeping-room Over the Rear Lobby

brick mantel, with a fireplace even larger than the one in the dining-room. The heating here is secured by series of pipes at the ceiling and near the walls. This was necessary in order to allow the condensation to flow back readily to the boiler in the cellar.

To screen these pipes from view and yet secure full heating efficiency, a trellis of wooden slats was arranged in such manner as to give an arched arbor effect to the ceiling, tending all the more to make the name "Bungalow" appropriate. The Bungalow woodwork is cypress, stained a medium dark brown. A wainscot five feet high extends around the room, and the walls above are covered with figured matting. The general scheme is Japanese.

A basement hall, with outside entrance, extends the full width of the Bungalow and between it and the laundry and cellar. In addition to the Bungalow staircase there is another stairway from the first story to the laundry and cellar, directly under the main stairs. A clothes chute extends from the second story to the laundry. The kitchen has all the conveniences, such as gas and coal ranges, sink, dressers, etc., and a servants' hall and well-lighted and ventilated refrigerator closet. The kitchen walls are tiled five feet high, and the woodwork is enameled white. The walls are painted and stippled a light buff—in fact it is a model kitchen.

The house is thoroughly lighted by electricity, and is also equipped with a complete system of electric bells and house telephone. The steam-heating plant is thoroughly up to date, being what is known as the "Vapor Vacuum System."



Used as an Amusement Hall



The Stairs Rise Out of the Living-room, which Is the Feature of the House



The Porch Has a Pleasant Outlook into the Garden and Over the Surrounding Country



The Garden and Pool as Seen from the Porch



The Entrance Front of the House, Showing Outdoor Sleeping-room Over the Rear Lobby

den and with closet for coats, wraps, etc. From here is a passage conveniently connecting the living-room with the kitchen, and yet completely shutting off both view and sounds of the kitchen.

The dining-room is unique in form, accessories and ornamentation, with large fireplace, suitable for an old-fashioned back log.

The porch opening on the dining-room is connected with it by an extra wide opening with four doors, all glass, which when opened nearly double the size of the room. This porch is so arranged that in summer it may be inclosed with screens, while in cold weather sash may be substituted for the screens, and radiators are provided for heating it. It has a nine by nine inch red quarry tile floor. Steps lead from the porch to the garden, as does also a doorway in the dining-room. A butler's pantry, finished in white enamel and with dressers, table, leaf closet, towel dryer, and sink, connects the dining-room with the kitchen.

Opposite the fireplace a stairway leads from the dining-room to a room twenty feet and four inches by thirty-three feet and one inch in the basement. This staircase is inclosed with sash, and has a stand or platform over it in the dining-room for plants, etc., and a built-in seat. The dining-room walls are wainscoted eight feet high. The woodwork is red oak stained chestnut-brown. The walls above are sand finished, tinted a deep, dull red. The large room in the basement to which this staircase leads is called "The Bungalow." It serves admirably for a music or amusement room. There is a dumb-waiter from the bungalow to the butler's pantry. This room has

a brick mantel, with a fireplace even larger than the one in the dining-room. The heating here is secured by series of pipes at the ceiling and near the walls. This was necessary in order to allow the condensation to flow back readily to the boiler in the cellar.

To screen these pipes from view and yet secure full heating efficiency, a trellis of wooden slats was arranged in such manner as to give an arched arbor effect to the ceiling, tending all the more to make the name "Bungalow" appropriate. The Bungalow woodwork is cypress, stained a medium dark brown. A wainscot five feet high extends around the room, and the walls above are covered with figured matting. The general scheme is Japanese.

A basement hall, with outside entrance, extends the full width of the Bungalow and between it and the laundry and cellar. In addition to the Bungalow staircase there is another stairway from the first story to the laundry and cellar, directly under the main stairs. A clothes chute extends from the second story to the laundry. The kitchen has all the conveniences, such as gas and coal ranges, sink, dressers, etc., and a servants' hall and well-lighted and ventilated refrigerator closet. The kitchen walls are tiled five feet high, and the woodwork is enameled white. The walls are painted and stippled a light buff—in fact it is a model kitchen.

The house is thoroughly lighted by electricity, and is also equipped with a complete system of electric bells and house telephone. The steam-heating plant is thoroughly up to date, being what is known as the "Vapor Vacuum System."



The Dining-room Is Unique in Form, Accessories and Ornamentation



The "Bungalow" in the Basement Is Used as an Amusement Hall



The Stairs Rise Out of the Living-room, which Is the Feature of the House

Private Automobile Garages

By Benjamin A. Howes



GIVEN the automobile, the question immediately presents itself how it shall be taken care of. Many private garages have already been built, of handsome and economical construction, and using these as a basis I shall attempt to cover the main problems of construction and design.

It is generally considered desirable that the chauffeur be housed in connection with the machine which he operates, thus giving him at once a protective watchfulness over it and easy access to it at all times.

The chauffeur's quarters are largely a matter of special design for the special needs, and range from a simple sleeping-room to a suite of three or four rooms and bath for one chauffeur and his family, or a series of rooms to provide for several chauffeurs. The placing of living quarters in connection with the garage is desirable, as it insures the proper operation of a heating plant, which may heat the living quarters at the same time as the garage.

In the preliminary design of a garage, having settled the extent of living quarters, a decision should then be arrived at as to the number of machines to be stored, locker space required, location of wash stand and pit, the methods of lighting, and the arrangement of power-driven tools, if any are to be provided. Due consideration should also be given as to whether it is desirable to house all machines in one room or to provide a separate stall for each.



Garage Design in Harmony with the House

A large modern automobile requires as a minimum space seven feet by sixteen feet by nine feet high, and it is generally in the interest of economy to provide somewhat in excess of these figures, especially as the increasing size of wheels promises to increase the extreme height. Ample head room should be provided in the garage, not only to allow of the lifting of bodies, engine parts, etc., from the machine, but also to allow smoke and vapors to rise clear above the line of vision.

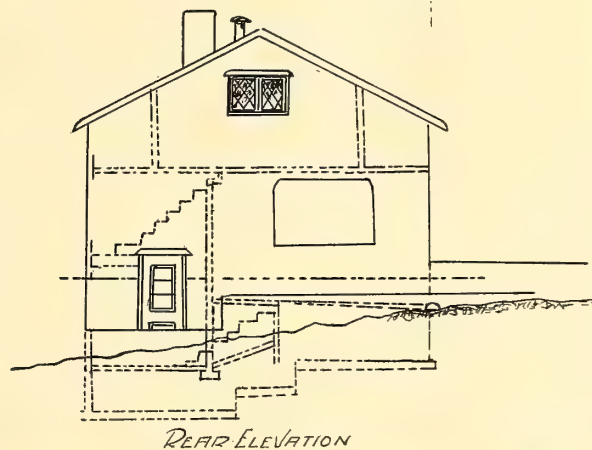
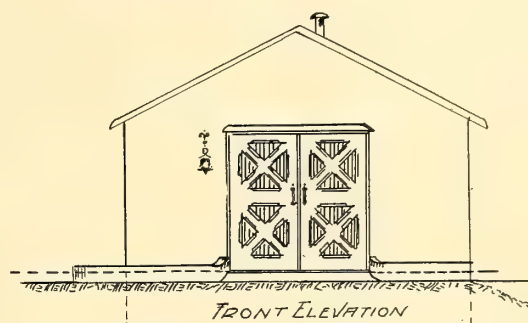
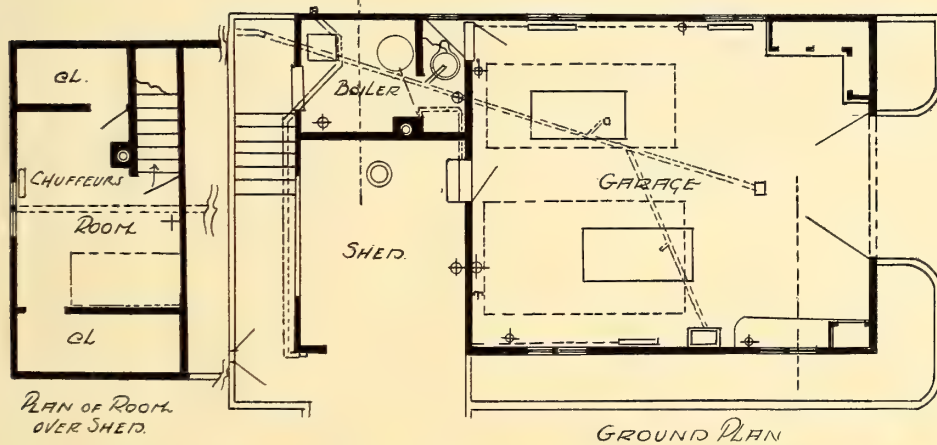
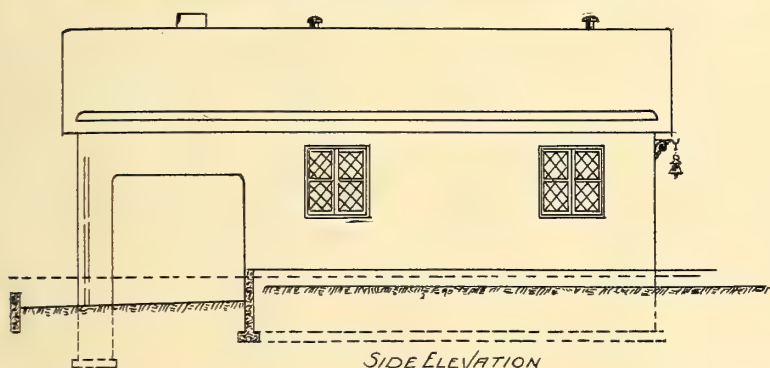
Good ventilation should likewise be arranged for.



A Large Garage Is an Indispensable Building on a Large Estate



There Should Be Simplicity in the Concrete Garage



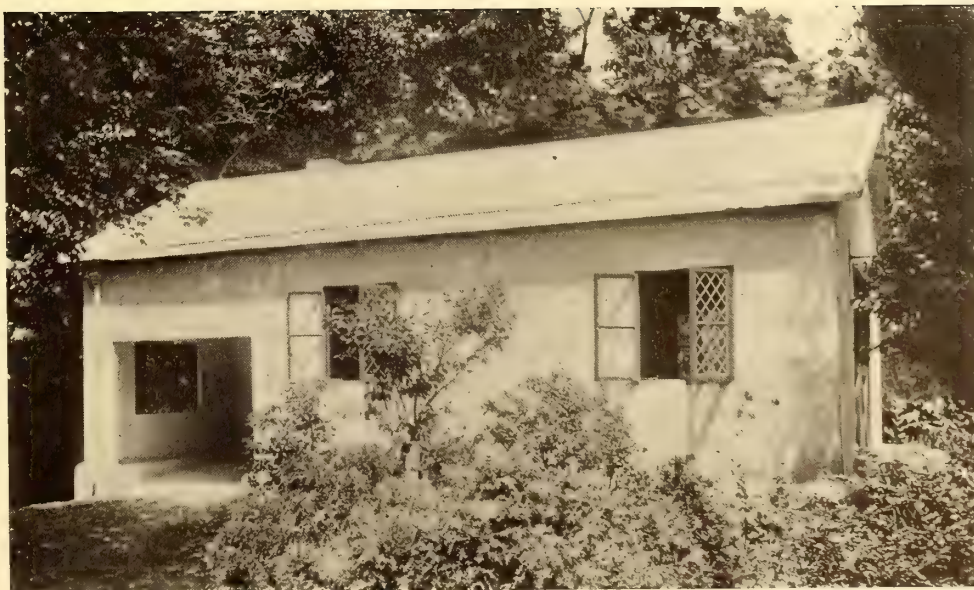
In deciding the question of separate stalls or a single room for housing the machines, the possibility of fire and its communication from one machine to another, and the possibility of unauthorized use, should be considered.

The next question is the material of which the garage is to be built. Concrete in its many forms is by far the best material, when reinforced with its proper quota of steel, making reinforced concrete.

If the concrete construction, as subsequently described, is for any reason considered undesirable, the concrete garage may be finished with a facing of brick or stone, or of any other building material which may be preferred as more in harmony with the surroundings or the architectural treatment of neighboring buildings.

Of course, concrete construction is unburnable, which is very necessary in connection with the storage of automobiles. When properly made and placed it is non-porous, which is very desirable, as it prevents the absorption of gasoline and oil. Its cost as a structural material is moderate, the raw materials are easily obtained, and the building work is easily done by unskilled labor under competent supervision. A number of enthusiastic automobile owners, in building themselves concrete houses, have set apart a portion of the cellar for the garage, especially the portion under the kitchen. This effects an economy without resultant fire risk, as the whole house construction is then unburnable, and a fire or the storage of gasoline in the cellar does not endanger the structure of the house.

Having settled the preliminary work, the actual building operation requires decision as to form of construction. The walls may be built of solid or reinforced concrete, the reinforcement serving to economize in the thick-



Concrete Construction Readily Lends Itself to Simple Design



A Garage Set Against a Hillside



A Spacious Garage of Quiet Design



The Simplest Design May Have Real Interest of Its Own

ness of wall required and binding the wall together where openings for doors and windows are left, as well as preventing the occurrence of shrinkage cracks. Or the wall may be built of rough stone backed with concrete to make it weather proof and to give a smooth surface on the interior. Concrete blocks also make an excellent wall, especially if they are of any of the standard hollow forms.

A construction which has found favor in factory work and which gives an admirable building, especially for a more or less temporary construction, is illustrated in an accompanying sketch (C). In this case the building was roughly framed of wooden joists and metal lath nailed to the exterior. The exterior metal lath is plastered on both sides, as shown, with Portland cement mortar of the usual consistency, after which the interior metal lath is nailed up and plastered on the inside. This gives a very substantial and dignified appearance if the work is well done, but has the disadvantage of requiring high-priced special labor, and can not be expected to wear well near salt water, where changes in barometric pressure will inject salt air into hollow spaces, with the resultant rusting of the metal lath.

The various methods outlined above will each have its desirable and economical forms, according to the special local conditions and problems. In some cases very satisfactory walls may be built, as economically as any of the above, of rough brick, laid to leave an air space in the center of the walls, and plastered both inside and out with Portland cement mortar. (Sketch A.)

In cement block construction, blocks may be made with rough faces to be finally plastered, thus giving a smooth wall without joints. Or, if the joints are to show, probably nothing is superior to the plain face, accepting frankly its concrete block construction. In any case, concrete, which naturally has a bluish-gray cast with the use of any standard Portland cements, may be finished with a wash or spatter of any tint.

Needless to say, the various problems of placing door frames and window frames will differ with the several forms of construction, as also the various provisions for making a joint between the frame and the wall water and weather-tight. In the use of reinforced concrete, plank frames with three-inch lag screws placed about eighteen inches apart may be cast directly into the concrete, as the walls rise, as shown in the accompanying sketch (B), making a weather-tight job for all time. With the other less substantial constructions the problem of making a lasting weather-tight joint between the frame and the wall increases in difficulty.

Walls of reinforced concrete, which need not be as massive as masonry walls, have been found to be absolutely water-tight and, although solid, they do not sweat.

The problem of the roof next requires our attention. In a garage the living quarters may be adjoining the garage or over it. If above, the floor for the living quarters should be of reinforced concrete, as fire protection is here most necessary owing to the rapidity with which conflagration would spread in the garage. This floor should be most carefully made in order to prevent any possibility of leakage and thereby damage to the machines below.

The roof is, first, to keep out the elements, and, second, to be strong in order to provide support for the hoists and tackle used in lifting bodies and other heavy weights in process of repair. It is desirable, although of course not necessary, to have a roof of unburnable construction. The questions of porosity and inflammability are not as serious in the case of the roof as in the case of the walls and floors of the garage. A wooden frame roof covered with slate, or asbestos shingles, makes a lasting, effective roof. For a very small garage the roof may be nearly flat and built of carefully made reinforced concrete without special water-proofing. If the roof is larger and more complex in character, a concrete roof would need to be water-proofed with the usual elastic felt treatment of at least three-ply in order that the inevitable shrinkage cracks might not allow the water to penetrate.

A wooden roof may be sheathed inside with metal lath and this plastered with Portland cement mortar, thereby making the roof practically unburnable. The roof timbers thus encased in plaster are liable to rot if care is not taken to provide them with ventilation, but this is easily accomplished during construction.

A very charming and attractive appearance is obtained by using red or green tile roofs. This tile may be laid on the wooden roof frame, or may be secured to a concrete roof either by wires or nails before the concrete is hard; or the roof may be constructed of ribs of reinforced concrete with a filling of cinder concrete, to which cinder concrete the tiles may be readily nailed. It should be borne in mind that a roof of concrete can not be easily cast if it is steeply pitched, that is, concrete of the usual consistency will run down the incline of a steeply pitched roof, so that the use of concrete lends itself specially to a flat roof.

In considering an automobile garage there are many appliances and labor-saving devices which will prove, in actual use, very great helps in keeping a machine in good appearance and ready for use at all times.

It is well to equip the large door through which a machine may be taken out with a standard type of lock, which can be unlocked only by the use of its key, the idea being that at times it may be desirable to prohibit the exit of the automobiles contained in the garage, although workmen and attendants have access in the course of



The Floral Setting Should Not Be Overlooked



Exterior Walls of Field Stone Are Highly Effective



Residence of Reinforced Concrete with Garage in Cellar Under the Kitchen

their duties through the smaller door usually provided. This will also prevent theft of the machine if entrance is made through a window.

In connection with reinforced concrete construction it is easy to use heavy metal sash with metal frame and containing

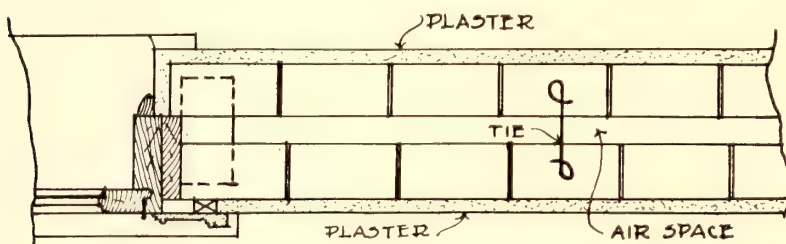


Garage with Three Rooms and Bath Attached for Chauffeur's Family
Reinforced Concrete Throughout

small lights of glass in such way as to practically prohibit the entry of thieves.

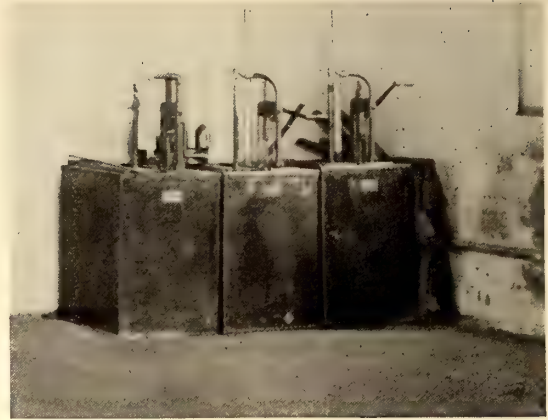
A washstand should be provided with an overhead swivel washer with both hot and cold water on tap.

A gasoline tank of several barrels capacity should be



Sketch A, Wall Construction with Rough Brick Plastered

buried out of doors, with a pump for drawing only as much gasoline as is wanted at a time. The pump, according to circumstances, may be located just outside the entrance door, or just inside. At any rate it should not be located at a dark

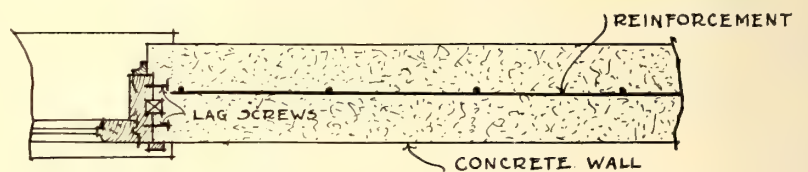


Group of Gasoline and Oil Tanks with Measuring Pumps Attached

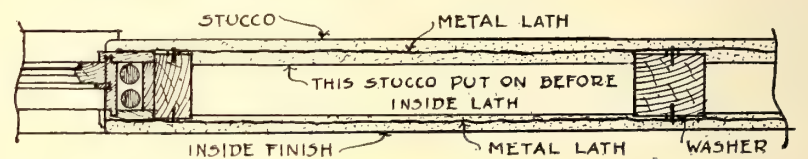
or obscure portion of the garage, as this places a premium on the possible accumulation of gasoline on the floor.

One or more good hoists should be provided in the ceiling or roof for lifting up the heavy portions of the auto for repair.

A pit about three feet by five feet is a great convenience.



Sketch B, Wall Construction with Reinforced Concrete

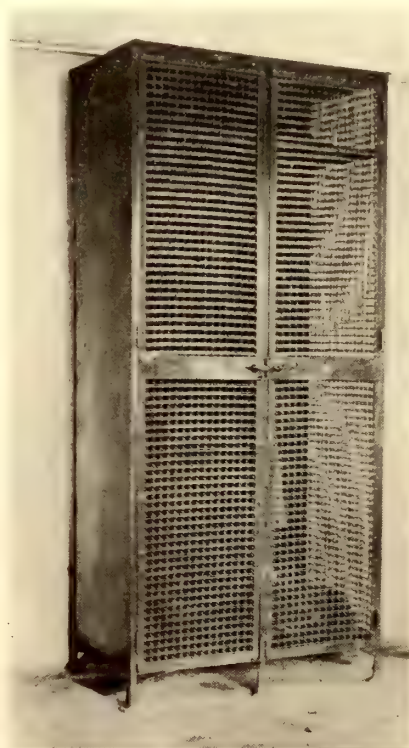


Sketch C, Wall Construction Using Wooden Frame with Stucco on Metal Lath

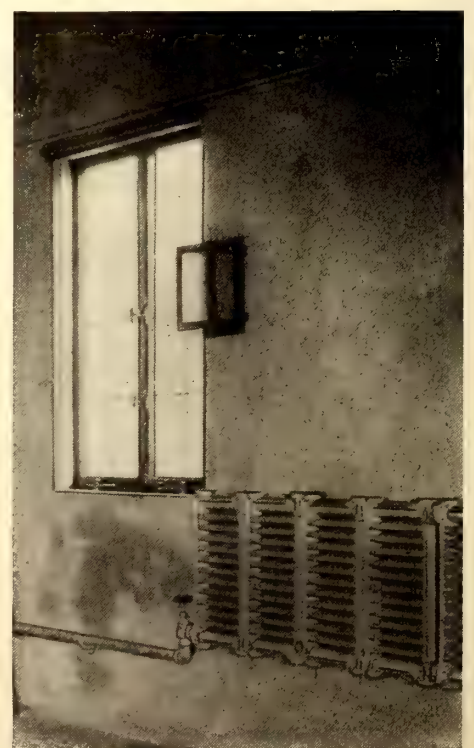
This should have a substantial cover, and should be thoroughly drained, with provision for an automatic periodical filling of trap in order that gasoline and oil may not



Gasoline Pump for Drawing Fuel from Tank in Ground Outside



Steel Lockers, an Improved and Sanitary Type



Steam Radiator and Inclosed Acetylene Light on the Wall

collect, and in order that the trap may not dry out and fill the garage with sewer gas. The pit is sometimes combined with the washing table, being then provided with a grating, and the drain acting to carry away the water from the table with no fear of its drying out from time to time. As the pit would naturally be made of concrete, it does not become water soaked, so its frequent wettings will not prevent its use as a pit if necessary.

A turntable is often a great convenience, but if it is possible to arrange the doors so as to obviate the necessity of one, this is advisable. The most vicious source of trouble with a turntable is that it provides a drainage spot for the collection of grease and gasoline—two materials against which the automobilist must always take the greatest precaution.

The heating equipment, whether of hot water or steam, which seem to be the only rational methods of heating a garage, must have its boiler in a separate detached room which does not open into the garage proper. If a hot water heating system is used, a non-freezing mixture may be used in it, thereby preventing the freezing of pipes and consequent troubles if the fire is allowed to go out during the absence of the chauffeur with the machine.

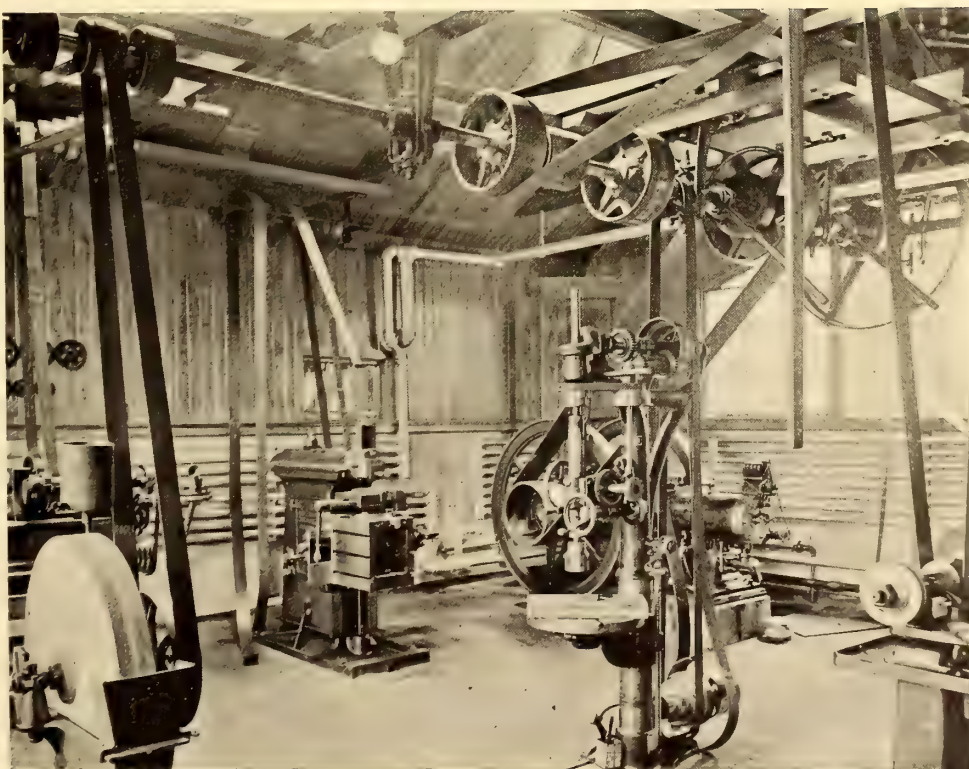
It is most impor-



A Spacious Garage with Autos in Place



Modest, but Ample



The Workshop of a Large Garage

tant that plenty of safe light be provided, as the chauffeur is constantly called upon to do repair work at night, and at all times the presence of generous light is a great help. Electricity is the ideal light, and it should be used wherever possible. Very satisfactory lighting may be obtained by inclosing acetylene burners in cages or lanterns made of heavy wired plate glass, having ventilation not into the garage itself, but outside.

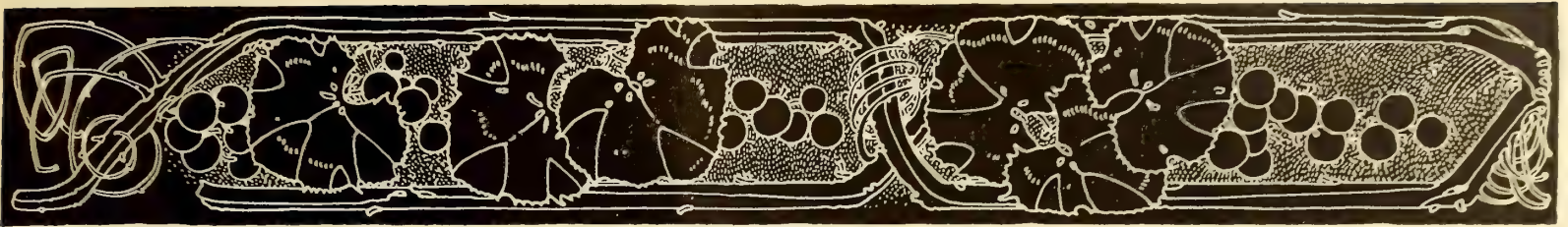
In the garage proper there should be a sink with hot and cold water, and a workbench. This workbench should have an oiled top of three-inch maple plank.

Woodwork of all sorts should be avoided as much as possible in the garage. Very satisfactory metal lockers, with locks, with enamel finish in green, maroon, or black, two feet square and six feet high, may be bought for ten to fifteen dollars each.

In addition to a complete equipment of the usual machinist's tools, it is desirable to provide a small machine-shop equipment. This might comprise a small shaper or planer and a machine lathe. The power to drive the machinery may be a gasoline engine, but should preferably be an electric motor, as the amount of current used will be very small, and all aids will repay their investment in better service from the auto and decreased cost of repairs.



"Rocksym"—The Porch on the South Front of the House Faces the Sea



“Rocksym”

The Summer Home of Burt L. Syms, Esq., Greenwich, Connecticut

By C. W. Whiteway



IN THE north shore of Long Island Sound, in that “Newport of Connecticut,” Greenwich, which during late years has become famous for its beautiful houses, stands the residence of Burt L. Syms, illustrated in this article.

The house is situated on a high knoll about a mile from the station, in the section of the town known as Rock Ridge, and has one of the most commanding, and hence one of the finest, sites in Greenwich.

From the broad stone terraces the town spreads below on all sides, and a view can be had across Long Island Sound of the purpled hills of Long Island, and for many miles to the east and west spreads a beautiful panorama of woodland and shore.

The house is a fine example of what an architect can do to enhance a naturally beautiful location by adapting the building to the form of the land. It seems to grow easily out of the earth and become a part of the natural surroundings.

The effect is carried out in the material and color used on

the exterior. The stonework of the terraces and foundations is composed of stone taken from old walls which formerly divided the farm lands in the vicinity. Great care was taken in laying these stones so that the weather-beaten and moss-grown faces were not marred in handling. The surfaces were laid to show, and the joints of the stonework were recessed so that the walls have the appearance of having stood for years.

The shingles at the sides of the building were left to turn their natural silver-gray, but the roof shingles were stained a soft olive-green. It will be seen that through this blending of natural colors in the building itself a harmonious result is achieved that could be arrived at in no other manner.

The rounded out feeling of the hilltops is carried out in the building through a clever application of a Colonial gambrel roof, with gables, which disguise the utilitarian necessity of the second story without marring its use-



The Colonial Hall Contains a Broad Staircase with a Mahogany Rail



A Broad Terraced Wall of Fieldstone Stretches Across the South Front of the House

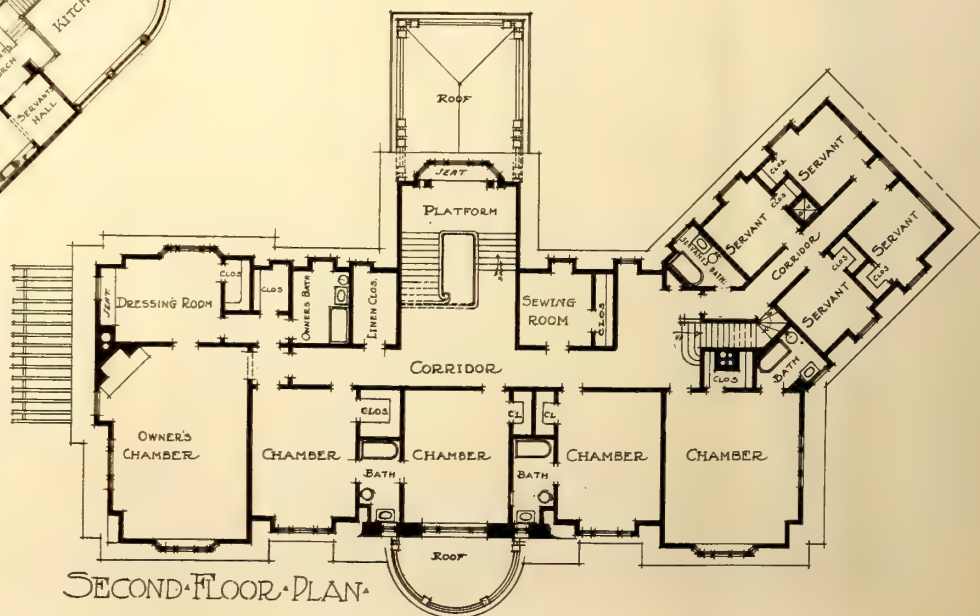
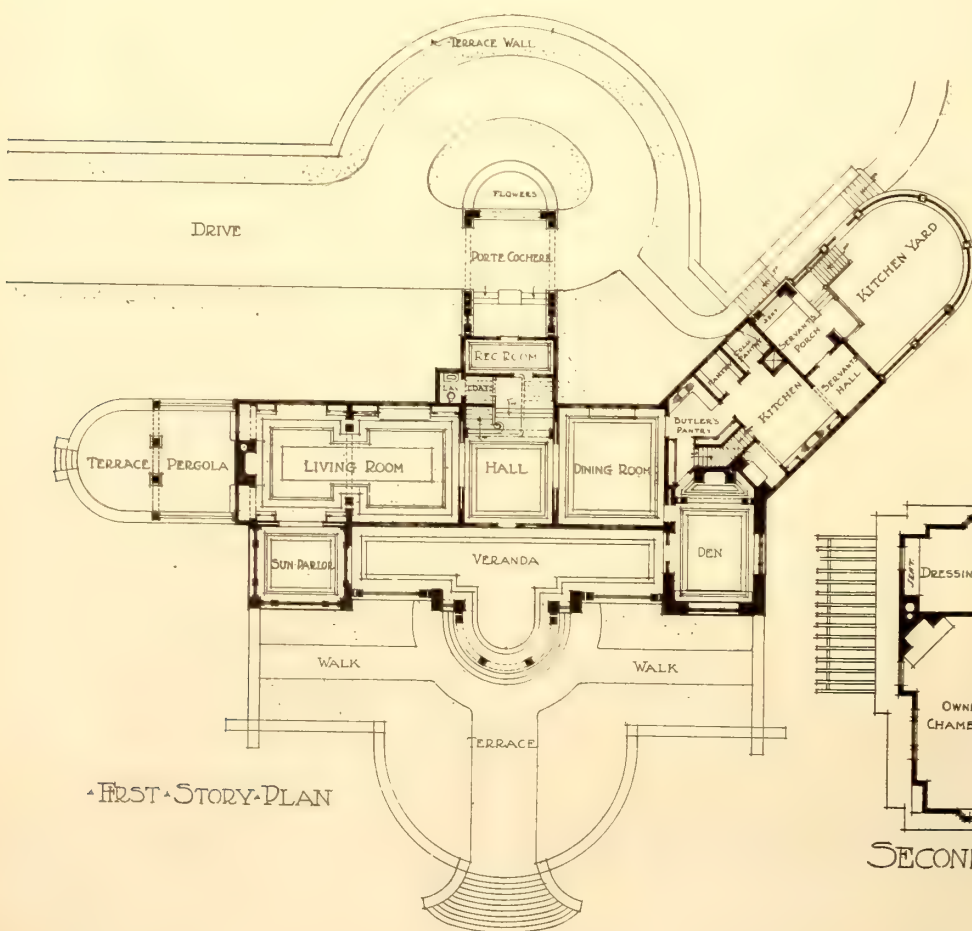
fulness. Deep shadow values are secured for the building by wide projecting cornices and the gables.

A long, well shaded veranda stretches across the entire front of the house, formed by the overhanging roof, which is broken out at the center and forming the main feature of this elevation. A semi-circular Colonial porch at this point gives greater width to the veranda and ornaments the main gable. This semi-circular feeling is carried out in the terrace also,

thereby giving greater emphasis to the central feature. A servants' wing has been broken out at an angle to the main axis, so as to conform to the nature of the ground at this point.

There are stone terraces at both the front and entrance sides of the building. The terrace at the front is reached across the veranda, and is laid out with grass plots and beds of flowers, separated by brick walls.

The central walk leading to the veranda is flanked by bay trees. Flowers and vines are planted against the wall at the inside of the terrace. Broad steps lead from this terrace to the lawn below. The grounds below the terraces have been left in their natural state, it being the intention of the architect to keep the setting of the house, as far as possible, exactly as he found it, and to emphasize the cultivated





A Brick Walk Leads to the Porch from which Entrance Is Made to the House



The Dutch Den Has a High Wainscot and an Inglenook



The Walls of the Living-room Are Covered with Japanese Leather of a Soft Brown Color Blending with the Cream White Painted Trim



The Walls of the Dining-room Have a Covering of Red Tapestry Up to the Plate Rack with a Hand-painted English Tapestry Frieze

garden as a part of the building by retaining it within the terrace walls. A broad roadway leads from the entrance gates through the grounds with a gentle rise to the entrance terrace, which is about forty feet above the ground at this point.

The entrance to the house is marked with a broad porte cochère, the upper portion being supported on Colonial Doric columns, which rest on rough stone foundations. Leaving the veranda, the visitor enters the house through a large vestibule, the walls of which are lined with Spanish leather, bronzed and formed into panels with heavy iron flat-head nails. The floor is red Flemish tile and the ceiling is painted a dark parchment color. The woodwork is dark Flemish oak.

From the vestibule one passes under the staircase into a broad Colonial hall, from which opens a large living-room and the dining-room. The hall contains a wide Colonial staircase with deep landing and seat at the second story. The woodwork of the hall is painted cream-white. The large Colonial doors and the stair railing and balustrade are mahogany. Opposite the stair end of the hall large casement windows lead to the veranda. The walls are covered with a heavy dark green paper on which an ornamental frieze containing the family crest is painted in oil. The ceiling is painted cream-white.

The living-room is also Colonial in style, and is divided by columns and pilasters to form a library end to the room.

This end contains a large fireplace and bookcases. The fireplace is paneled to the ceiling; facings and hearths are of ochre mottled unglazed tile. The woodwork of this room is cream-white, and the walls are covered with a light brown Japanese leather paper. The Colonial furniture is in harmony with the room, and expensive Oriental rugs adorn the floor.

From this room a large arched opening leads into the sun-parlor, three sides of which are formed by casement sash to the floor. On the other wall the idea of the casement windows is cleverly carried out with mirrors, formed into small panes to match the casements, which reflect the palms and plants. The walls between the windows are painted to represent an outdoor scene.

The dining-room contains a bracketed plate shelf and white enameled woodwork. The heavy carved black oak furniture in this room harmonizes well with the red tapestry below the plate shelf and the hand-painted English tapestry frieze. Red coloring predominates in the large Oriental rug. A high grouped window, containing light tinted leaded glass, forms an attractive feature over the low sideboard at one end of the room.

The billiard-room, or den, is entered from the dining-room. This room is designed in the Dutch period, with high oak wainscot and deep paneled jambs at the windows, which contain wide seats. Secret closets are let into the wainscot on



The Elongated Effect of the Living-room Is Broken by the Archway and Columns

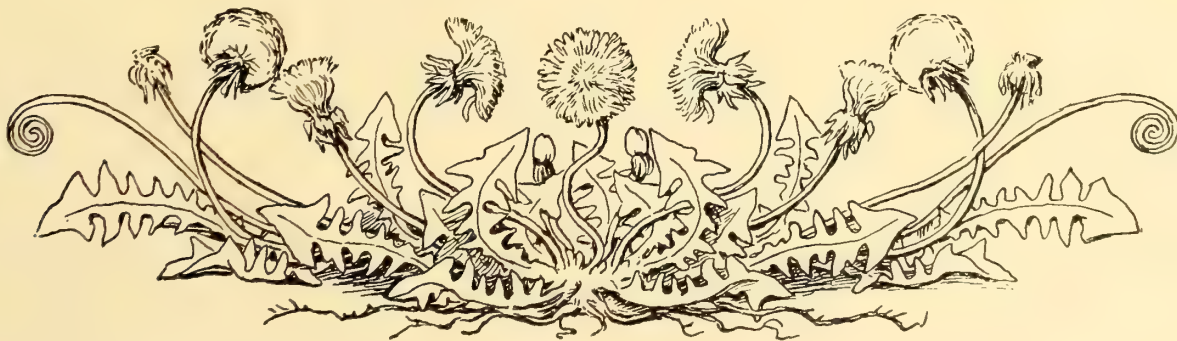
both sides of the room. There is an angle, containing an old-fashioned Dutch fireplace, at one end of the room.

The entire ingle floor is laid with large Flemish tile. The heavy square columns and pilasters with heavy sawn brackets separate the ingle from the main room. The Dutch style of this room is harmoniously carried out through the introduction of old pewter mugs, plates and ornaments about the fireplace, and the old mugs and steins which are placed on the plate shelf around the room. A painted frieze above the wainscot, depicting scenes from the Netherlands, affords the necessary finishing touch to make the room complete in its style.

The upper part of the house contains large rooms and

many baths. The owner's suite extends across the entire end of the house, and contains a very large bedroom, with fireplace, and a large dressing-room, from which opens a private passage to the owner's bath. All the bathrooms have high tile wainscots and tile floors, and are fitted up with modern solid porcelain fixtures throughout. There are extra guests' rooms and a guests' bath in the attic, besides servants' rooms and bath in the kitchen wing of the house, the equipment of the house in all these matters being very complete and ample.

A combination trunk-lift and dumb-waiter from cellar to attic is a commendable time-saving feature of the house. The house is heated with hot water from twin boilers in the cellar. The architect was William Neil Smith, of New York.





CORRESPONDENCE



The Editor of *American Homes and Gardens* desires to extend an invitation to all its readers to send to the Correspondence Department inquiries on any matter pertaining to the decorating and furnishing of the home and to the developing of the home grounds.

All letters accompanied by return postage will be answered promptly by mail. Replies that are of general benefit will be published in this Department.

Problems in Home Furnishing

By Alice M. Kellogg

Author of "Home Furnishing: Practical and Artistic"

SOME IDEAS FOR A GIRL'S ROOM

"I AM a girl nineteen years old," writes H. M. W., "and I would like to know what to put in my bedroom to furnish it tastefully, serviceably and inexpensively. The size of this room is thirteen feet by fourteen feet, and there are two windows on the west side and one on the south. The wood finish is hard pine; the floor is not good enough for rugs."

The floor problem may be overcome without very much expense by using green cordoman over a carpet lining. The cordoman is some-

Garden Work About the Home

By Charles Downing Lay

VINES FOR THE HOUSE

THE twelve vines, with their varieties, named in the following *catalogue raisonné*, should be enough to satisfy the most extravagant desires, and the list will, I trust, answer several correspondents who have asked for the names of "the best vines." I think it will seldom happen that all will be used, even on a large place.

BOSTON IVY, *Ampelopsis tricuspidata*, is a coarse, rugged vine, very useful for covering large expanses of brick wall, such as one sees in



A Doorway Problem

thing like heavy denim, and costs forty-five cents a yard, and the width is thirty-six inches. Carpet lining costs ten and twelve cents a yard in the three-quarter width. A pretty addition would be rag-cotton rugs in yellow and white to lay beside the bed and in front of the bureau and washstand. The cost of these rugs may be reckoned at about one dollar a square yard.

A bedstead and bureau may be bought in white enamel, the cost varying with the quality of the material and its construction. Odd pieces may be added for the writing desk and chair, night stand and work table. A plain stool may be found for a slipper chair, and splint side chairs and rocker may be painted white to decrease this part of the expense. (These chairs may be had for one dollar each in the unfinished wood.) An English toilet set in an all-over star pattern in olive green may be bought for four dollars and a half. The wall treatment may be made very attractive if a yellow texture paper (at twenty-five cents a single roll) is carried from floor to

(Continued on Page xii)



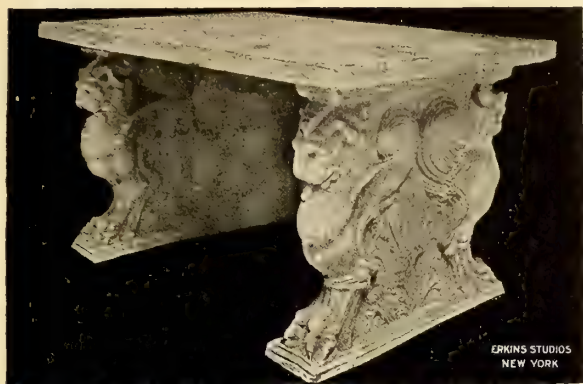
The Climbing Rose, Tausendschön

cities or on warehouses, but it has no place on buildings of any architectural beauty, because it covers them too completely in a waving mass of green. The young shoots are exceedingly beautiful with their small shining red leaves gracefully sprawling about, but they soon lose their delicacy and become very rough. In the autumn the leaves drop off before the stems, leaving for a week or more an ugly stubble covering the vine. It grows rapidly and has few enemies. In cities it is indispensable, but anywhere else we prefer the

VIRGINIA CREEPER, *Ampelopsis quinquefolia*. This is a common native vine. It does not grow well on brick or stone, but clings to wood with great tenacity. The individual leaves are always beautiful in shape, and their masses are varied in texture and picturesque in outline. It has a refinement lacking in its Japanese relative, the Boston Ivy.

The inconspicuous yellow flowers have a slight fragrance and attract the bees; I believe it has nothing to offer undesirable insects. In

(Continued on Page xiii)



POMPEIAN TABLE FROM THE HOUSE OF CORNELIUS RUFUS

An example of the many unusual replicas of the Erkins Studios which visitors have often compared to foreign art galleries. Our Studios are open all day and visitors will always find a cordial welcome.

FOUNTAINS, STATUARY, COLUMNS, PERGOLAS, BALUSTRADES, STANDARDS, SUN-DIALS, PEDESTALS, BENCHES, TABLES, VASES, WELL HEADS, WALL FOUNTAINS, LIONS, SPHINXES, ETC., IN MARBLE, STONE, AND POMPEIAN STONE WHICH SUCCESSFULLY WITHSTANDS THE AMERICAN CLIMATE

Illustrations and Sun-Dial Booklet upon request. Our Catalogue of Garden Furniture, containing 400 illustrations of Italian and Classical Models, sent upon receipt of 25 cents.

THE ERKINS STUDIOS
3 West Fifteenth Street, New York

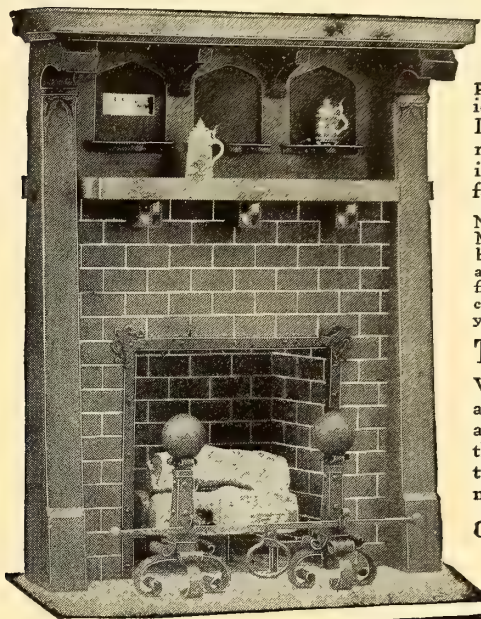
Save 1/3 Your Mantel Money

To add just the right atmosphere to a room, adorn it with a tasteful mantel. Most harmonious effects and finest workmanship are combined with most reasonable prices in

LORENZEN MANTELS

Because we "know how," have the most modern plant, and do business on a large scale, we can turn out a product unexcelled in quality and priced one-third lower than any other. Our reputation is world-wide, so we can't afford to put the name "Lorenzen" on a mantel that is not absolutely perfect.

We make mantels in all styles—Craftsman, Colonial, Mission, etc.; all woods, all finishes. If you have any original ideas we will execute them just as you order.



FREE CATALOG, 9x14

Our 1908 catalog—finest work on mantels ever printed—gives splendid ideas on interior decoration. If you want to save on mantels you ought to have it. Sent free if you write for it at once.

NOTE.—We are so sure Lorenzen Mantels are all a mantel ought to be that we send them anywhere and pay the freight. If you don't find any Lorenzen Mantel all we claim, ship it back to us. You see you take no risk.

Tile & Mosaic Work

We also do all kinds of Tile and Ceramic Mosaic Work and Tile Mantels. Send us the sizes of spaces you wish to cover and we will submit designs and estimates.

CHAS. F. LORENZEN & CO.
303 No. Ashland Ave.
CHICAGO



A RESIDENCE
OF
CONCRETE

GARDEN CITY, LONG ISLAND

WHEN you build a home use **CONCRETE**. It is durable, inexpensive and fireproof, needs no paint, repairs or fire insurance, is warmer in winter, cooler in summer than any other style of construction, and is adaptable to any style of architecture. We have just published a second edition of

Concrete Country Residences (Second Edition)

which contains photographs and floor plans of over 150 COMPLETED CONCRETE HOUSES, designed by the best architects in the country, which should be of immense value to you in planning your house.

A copy of this 160-page book (size 10x12 inches), will be sent express prepaid upon receipt of \$1.00

THE ATLAS PORTLAND CEMENT CO., Department 10, 30 BROAD STREET, NEW YORK



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.

Denver

CHICAGO

Trenton

PROBLEMS IN HOME FURNISHING

(Continued from page 254)

ceiling, with a flower border—yellow blossoms with green leaves—pasted just below the ceiling. Such a border costs about eight cents a yard. A white dimity spread for the bed will be the most economical; or yellow cotton crepe may be chosen instead, at twelve cents a yard. A touch of color may be given some white muslin curtains for the windows if a coin-spot pattern is selected and the disks embroidered with yellow linen thread. A wooden box for shoes and one to hold shirtwaists will help to furnish if they are upholstered with a flowered cretonne in the yellows and greens that appear in the other decorations in the room.

A DOORWAY PROBLEM

An apartment dweller in Chicago (M. H. S.) has a very ornate grille fastened in the opening between her parlor and dining-room. "I find it impossible," she writes, "to remove this object, and its hideous design and glaring finish of varnish are very distressing to me. Can you suggest any way to help me with this difficulty?"

A simple device for concealing the grille is to make a valance for both the front and the back, using a light-weight, opaque fabric. On a brass rod below the valance two lengths of the same material may be used as a portiere. Of course, the artistic success of the plan depends upon the color of the texture. Something to follow the general tones of the wall paper is suggested. For example, with a two-toned green paper a plain green material would look well.

WALL PAPER FOR A GUEST ROOM

"My guest room," writes an inquirer, A. G. T., from Pennsylvania, "is unfortunately filled with left-overs from other parts of the house, and while it is comfortable it has none of the attractive qualities that I enjoy in my friends' guest rooms. A complete refurnishing is impossible for the present, but if you can tell me how to make even a little improvement without great expense I would undertake to follow your advice."

With the conditions described by this correspondent a change for the better may be easily effected by repapering the wall, using a decorative frieze on the upper section, and a two-toned paper below. An English picture border of ships on a reflected water would be interesting, and would take the attention from the inharmonious furnishings of this room. The price of this border by the roll of eight yards is four dollars; or, by the yard, fifty cents. The color of the boats, a warm green, may give the key for selecting the wall paper for the lower wall. A picture molding, painted to match the green paper, should cover the joining of the two papers.

CHANGING THE HALL WOODWORK

M. C. C. writes from Maryland: "My hall is twenty feet by nine and has a winding stairway to the third story. The woodwork is grained walnut, the floors are stained walnut, with oak balusters and walnut hand rail. I would like to change the woodwork, painting it white, but do not know how much of it to leave dark."

Woodwork in the grained effect is not followed now in the best interior work, and it is wise to change this imitated finish for genuine paint. As the hand rail is probably solid walnut it is best to leave this as it now is. The balusters, base boards and doors may be painted white, but the floor and the stair treads may have the plain walnut finish.



GAS FOR COUNTRY HOMES

Clubs, hotels, churches, laboratories. **Economy Gas Machine** gives a clear, steady, brilliant light and supplies gas for cooking, water heating, etc. Cheaper, cleaner and more satisfactory than acetylene, kerosene or electric light.

Economy Gas Machine

Automatically generates gas as consumed. None stored, so no danger. Self operating. Lighted the same as electric light, but without batteries. Eleven years success proves its merit. Write for booklet "LIGHT."

ECONOMY GAS MACHINE COMPANY

Stationary Gas Engines for Every Purpose
437 MAIN STREET EAST, ROCHESTER, N. Y.

What it Means

to have your shingles stained with

Cabot's Shingle Stains

It means that they will not rot; that the colors will be soft and beautiful; that they will wear as long as colors can, and grow old gracefully; and that the cost will be so per cent. less than that of paint. Made in all colors, with Creosote, "the best wood preservative known."

Samples on wood, and color-chart, sent on request

SAMUEL CABOT, Inc., Sole Manufacturers

131 Milk Street, Boston, Mass.

AGENTS AT ALL CENTRAL POINTS



Hoppin, Koen & Huntington, Architects, New York

WINDOW CURTAINING

M. T. S., of Oklahoma, inquires about window curtains that are suitable for her use. "The dust here is very bad and the curtains require washing so often that they last only a short time. What material would you select? How should it be made up?"

Under the conditions described by this correspondent no material would prove very lasting. The practical need, however, may be met by using one of the new grenadines, a madras, a scrim, fish net or muslin, as any one of these may be easily laundered in the home. The grenadine comes in wide widths, forty-eight and sixty inches, and costs from eighty cents a yard upward; the madras is thirty-six and forty-five inches wide, and the price begins at twenty-five cents a yard. Fish nets come in various widths, at twenty-five cents a yard or more, according to the width. The domestic muslin in a narrow width costs as little as twenty cents a yard, and in a wide width in the French or Swiss as much as one dollar and a half a yard. A plain scrim may be made up prettily by hemstitching two rows of drawn work around the sides and across the bottom, finishing with a wide hem.

COVERING FOR A SOFA

A South Carolina correspondent, J. C. C. B., is puzzled about selecting a new covering for an old mahogany sofa.

If the wall covering and carpet show much of a pattern and a variety of colors, a plain material will look the best on this sofa. If the seat is to be tufted, a plain fabric is desirable. If, however, there is a lack of design in the other parts of the room and the sofa is to have its covering applied smoothly, a tapestry or other figured material will be the most appropriate.

Among the plain materials a linen velour in dark red or olive green will look well with the mahogany frame of the sofa. The price of this fabric varies with the quality, but it may be had for one dollar and a half a yard. A shaded velour is newer but costs more. Striped velvet in two or more tones of one color is another durable fabric.

Cotton tapestries in quaint effects may be had from a dollar and fifty cents a yard upward, and this material is especially recommended for the covering of an old-fashioned sofa.

SIMPLE FITTINGS FOR DRESSING TABLES

"Please suggest something simpler for the dressing tables in my summer cottage other than the silver and lace that we use during the winter." (F. H. D., New York City.)

A neat cover for the top of a dressing table, and one that is easily laundered at home, may be made from coarse white linen, hemstitching the edges. Another material that is useful for this purpose is the white pique with a swan's down backing that is sold in the shops for infants' bibs. This may have the edges scalloped and finished with a buttonhole stitch, or a narrow white cotton lace may be sewed around the edges as a finish. If a plain white cover is too severe, it may be embellished with a border of flowers and ribbon cut from cretonne or taffeta. The border should be carefully cut out and basted upon the material, and the edges secured by a coarse buttonhole stitch, using linen floss. Cretonne with a striped design is especially adapted for this work. If the pattern is too intricate to cut out and apply in this way, the border may be used as a plain strip, with the edges stitched with the machine.

In a room where there is no white-painted woodwork or light furniture, and where the beds are not covered with white spreads, a cover for the dressing table looks better made

of ecru or brown linen. On this material a stencil pattern may be painted around the edges as a border, or the corners and center may have each a detached design. Of course, the proper fluid must be used with the paints to allow the cover to be laundered.

The toilet pieces may be selected from the imitation celluloid that is now on the market—brush and comb, clothes brush and hat brush, nail cleaner, file and scissors, hand mirror, shoe horn and shoe buttoner. In a guest room these articles are often kept in the drawer of the dressing table, leaving the top free for the individual supply.

A suitable pin cushion, a china tray for hair pins and a china holder for hair combs are among the needful fittings for the dressing table. A tiny bowl for collar buttons and a receptacle for jewelry are often provided by the thoughtful housewife. Sometimes a pair of candlesticks ready for use with candles and shades are an advantage in the country.

"Daffodils, that come before the Swallow dares"



FROM NOW UNTIL

July 1st, Not Later

There is no more useful garden material than what are known as Dutch Bulbs, Hyacinths, Tulips, Narcissi, Crocus, etc. They give for a small outlay of time and money an abundance of flowers in the house from December until April, and in the garden almost before the snow is off the ground in the spring until the middle of May. These Bulbs are grown almost exclusively in Holland, and in enormous quantities, where they are sold at very low prices. Usually they pass through the hands of two dealers, and more than double in price before reaching the retail buyer in America.

By ordering from us **now** instead of waiting until fall, you save from 20 to 40 per cent. in cost, get a superior quality of Bulbs not to be obtained at any price in this country, and have a much larger list of varieties to select from. Our orders are selected and packed in Holland, and are delivered to our customers in original packages immediately upon their arrival from Holland, perfectly fresh and in the best possible condition.

If you wish to take advantage of our very **low prices**, we must have your order **not later than July 1st**, as we import Bulbs to order only. They need not be paid for until after delivery, or taken if not of a satisfactory quality. (References required from new customers.)

Our import price-list, the most comprehensive catalogue of Bulbs published, is now ready and may be had for the asking.

A Few of the Prices:

	Per 100	Per 500
Fine Mixed Hyacinths	\$3.00	\$14.00
" " Tulips	.80	3.50
Extra Fine Mixed Tulips	1.00	4.50
Narcissus Poeticus	.65	2.50
Double Daffodils	1.85	8.50
Narcissus Bicolor Empress	2.50	11.00
" " Emperor	2.75	12.00
" " Golden Spur	2.50	11.00
Narcissus Mrs. Walter T. Ware, splendid free flowering	3.50	16.00
Spanish Iris, splendid mixture	.30	1.25

ELLIOTT NURSERY CO.
PITTSBURGH

GARDEN WORK ABOUT THE HOME

(Continued from page 254)

autumn the leaves turn crimson, perhaps the most brilliant color that our woods can show.

It is a good vine for arbors and fences, and is often seen to great advantage on a cedar tree or clinging to the trunk of a great elm.

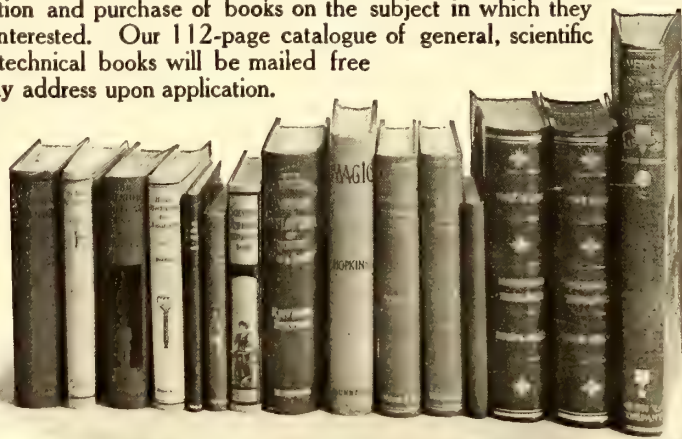
TRUMPET VINE, *Bignonia radicans*, will grow to great heights on a tree, reaching the top and flowering there, or it will grow to the top of a house with a little help.

It clings to wood, and should be grown on trellises, arbors, etc., rather than on wires. Its large orange-scarlet flowers attract the humming birds. If it is grown on a post three feet high in the garden it makes a handsome bush, supporting itself when the post rots away.

Sometimes it will winter-kill north of the latitude of New York, but it is otherwise hardy and free from insects and disease.

Our Book Department

WE OFFER our patrons and subscribers the advantages of a long established and widely experienced department, devoted to the publication and distribution of modern, up-to-date books pertaining to all branches of Engineering, Mechanics, Chemistry, Science, Industrial Arts, Trades and Manufactures. We shall be glad to aid our patrons in the proper selection and purchase of books on the subject in which they are interested. Our 112-page catalogue of general, scientific and technical books will be mailed free to any address upon application.



Some of the Scientific American Publications

The Scientific American Reference Book, compiled by A. A. Hopkins, 12mo, cloth, 516 pages, illustrated.....	\$1 50
The Scientific American Boy, by A. R. Bond, 12mo, cloth, 317 pages, 320 illustrations	2 00
Home Mechanics for Amateurs, by Geo. M. Hopkins, 12mo, cloth, 370 pages, 326 illus.	1 50
Experimental Science, by Geo. M. Hopkins, 2 volumes, 1100 pages, 900 illustrations...	5 00
The Scientific American Cyclopedia of Receipts, Notes and Queries, edited and compiled by Albert A. Hopkins, revised edition, containing 15,000 selected formulas, 734 pages.....	5 00
Magic, Stage Illusions and Scientific Diversions, by A. A. Hopkins, 8vo, cloth, 556 pages, illustrated.....	2 50
The New Agriculture, by T. Byard Collins, 8vo, cloth, 374 pages, 106 illustrations...	2 00
Industrial Alcohol, Its Manufacture and Uses, by John K. Brachvogel, 8vo, cloth, 516 pages, 107 illustrations.....	4 00
Practical Pointers for Patentees, by F. A. Creese, 12mo, cloth, 144 pages.....	1 00
American Estates and Gardens, by Barr Ferree, quarto, 11x13½ inches, 340 pages, 275 illustrations.....	10 00
The Design and Construction of Induction Coils, by A. Frederick Collins, 8vo, cloth, 400 pages, 125 illustrations.....	3 00
The Technological Dictionary, Spanish-English, { Vol. I, Ingles-Español, \$8.50 { Two	16 00
English-Spanish, by N. Ponce De Leon, { Vol. II, Spanish-English, 7.50 { vols.	

Full descriptive circulars of the above books will be mailed free upon application

MUNN & Co., Publishers, 361 Broadway, New York

ENGLISH IVY, *Hedera helix*, is the finest evergreen vine, and there is no one who has seen it clinging to old ruins in England who will not wish to grow it here. It grows slowly, taking fifty years before it flowers and bears fruit, but it is worth waiting for. No vine clings to stone so well. On the south sides of buildings in this climate its leaves will sometimes be killed in very hard winters, but it will ordinarily recover and in three months look as well as ever. On the north side of a building where the sun does not reach it is perfectly hardy.

Cuttings from old vines which have stood the winters here are more likely to be hardy than plants brought from abroad. There are many interesting forms of ivy, and there is a considerable variation in the shape of the leaves.

Euonymus radicans is an evergreen Japanese vine which is reliably hardy. The leaves are small (one inch long), a bright green with reddish tinges in the winter. It is sometimes variegated with white veinings and streaks, a form not so good as the pure green. The habit of the plant is interesting, and its texture, in mass, is good. It clings by small rootlets to wood and to stone.

It is good on rough walls and fences, and, like the ivy, is beautiful growing on an old tree.

HONEYSUCKLES, *Lonicera*, in many varieties are the most useful of vines. Their sweet fragrance makes them pleasant to have on the house, and their dense masses of green leaves provide a perfect screen for laundry yards, tennis courts and the like. It can be grown on a wire fence, making a green and impenetrable hedge. It is nearly evergreen in protected situations. Hall's Japanese Honeysuckle is the commonest and most useful for growing on lattice or wires, and it will also do very well in the shade of trees or of a building.

L. capri, the woodbine, and *L. periclymenum* are the best to hold steep and sandy banks where grass will not grow; the latter is the best for shady places.

The trumpet honeysuckle, *L. sempervirens*, has a fine coral red flower, but is often attacked by the aphids.

The honeysuckle and all which follow are twining vines, and have no clinging rootlets like the ivy and the others named above.

Clematis is a large family, with many varieties of great beauty to tempt and delight the horticulturalist.

C. paniculata is the best small-flowered white one. It is a strong grower and a good root will in one season grow almost as much as the annual vines which people commonly plant about summer cottages. It is covered with starry white flowers in September. The foliage is clean and brilliant, and it is every way desirable for piazzas, lattice and pergolas.

C. jackmanni is a large-flowered blue variety which does well on the north side of a house.

C. virginiana, the wild clematis, is the best vine for shrubby tangles, rustic fences and similar places. It is found growing in swamps and thickets. The seeds, with their feathery wings, hang on long into the winter.

The leaves of all clematis are eaten by a black beetle, which should be caught and dropped in a can with a little kerosene in the bottom. The Japanese varieties sometimes suffer from a mysterious blight, which makes them wither and die in less than a day.

THE GRAPE, *Vitis*, is the best vine in some ways for arbors and pergolas. The cultivated varieties should not be grown on pergolas, however, because there they can not be pruned as they should be, or have the care which is necessary to make them yield good fruit.

The wild grape, *V. riparia*, is a good one for pergolas, but *V. heterophylla* is perhaps better, as its fruit is insignificant and the leaves are irregular and deeply cut.

The fruiting wild grape, *V. labrusca* (Northern Fox Grape), is most lovely growing over old walls or rail fences, on trees, or over rocks, and the fragrance of its blossom is the most spicy odor of the woods, and no less delightful is the odor of the ripening fruit in October. These are the grapes to use for real grape jelly.

Actinidia arguta is a large, fast-growing vine of considerable value, superficially resembling the celastrus. It bears a greenish-yellow fruit an inch long, with a fig-like flavor. It is free from the attacks of insects and disease. Like the next, it comes from Japan.

Akebia quinata is a vigorous grower and desirable because it holds its leaves very late in the fall. It has more refinement than the actinidia and more of the graceful qualities of a vine than the honeysuckle, which sometimes seems an overgrown and weak-backed shrub.

The flowers are chocolate colored, but the showy, edible fruit does not often mature here. It should have a sunny position and is very good on pergolas.

CLIMBING BITTERSWEET, *Celastrus scandens*, is one of our handsomest native vines. It has abundant dark shining leaves, and the berries, which mature in October and hang on all winter, are a striking contrast of scarlet and orange.

The Japanese *C. orbiculatus* is a more vigorous grower, but the fruit is not so fine.

WISTARIA, *W. chinensis*, is an excellent vine for large arbors where the shade should not be dense and where the blossoms can hang down gracefully, and for trees, or wires on the house, carrying it up to a window or balcony. Its beauty is not so long continued as that of the trumpet vine, which it resembles somewhat in foliage. This is also good as a standard in the garden. There is a white variety and several double ones which are not desirable. It flowers in May, giving a few scattered blooms again in September.

W. multijuga is more often used in Japan, but is less hardy and a shy bloomer here.

In growing vines on the piazza do not use poultry netting, which has too fine a mesh and makes the pruning of the vines nearly impossible, but run single wires from the ground to the eaves about six inches or a foot apart. One stalk should be trained to each wire and there should be no crossing from one wire to



"WILWEAR"

NIAGARA LAWN SPRAY

A new Spray for lawn and garden. Made in "Wilwear" fashion, nickel-plated on heavy brass. No loose or movable parts to get lost or out of order. Stamped into three angles to produce "Niagara Spray," so fine it will not wash dirt or injure flower beds. Great grass saver from effects of sun. Direct for \$1.00 if dealer cannot supply. Catalog of "Wilwear" metal goods and bathroom fittings upon request. NOVELTY MFG. CO., 215 Maple St., WATERBURY, CONN.



Take off your Hat to the
Write for Circulars
and Prices to
F.E. MYERS & BRO.
Ashland, Ohio

MYERS

THE PUMP THAT
PUMPS
HAY
TOOLS
BARN DOOR
HANGERS
MAY RACK
CLAMPS



Rowboat \$20.00

20 Different Designs
Can ship immediately in any quantity.
Need No Boat House. Never Leak. Rust.
Check, Crack or Rot. Every boat has watertight compartment, so cannot sink. Write for FREE Illustrated Catalog and Special Prices.
Michigan Steel Boat Co., 262 Bellevue Ave., Detroit, Mich.



All features of LANDSCAPE WORK handled to produce pleasing, lasting and quick results
Write for free booklet, "The Landscape Beautiful"
H. R. COTTA, Landscape Architect, Rockford, Ill.

Plan the right heating

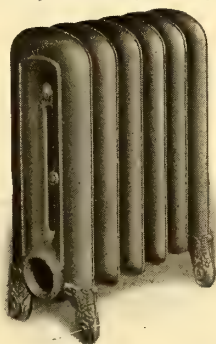
If you are newly building, don't discredit your property at the start by putting in old-fashioned forms of heating. Whether planning a new house or intending to move, don't overlook the great importance of a modern heating equipment. There isn't any other feature of the home which will save you so much or give you equal comfort as



AMERICAN & IDEAL RADIATORS & BOILERS

These outfits for Low-Pressure Steam or Hot Water will soon repay their cost

in coal savings, lessened labor, absence of repairs, and low insurance. All ash-dust, smoke, soot, and coal-gases are kept out of the living-rooms—reducing house-cleaning one-half and saving the wear on carpets, decorations, and furniture.



This small, plain, perfectly smooth Radiator is one of several thousand patterns and sizes of AMERICAN Radiation made to fit any architectural needs. It is so clean and cleanable—suited to narrow halls, bathrooms, nursery, etc.

If property is sold you get back their full value, or they attract and hold best tenants at 10% to 15% higher rental. The saving of but one ton of coal in a year will meet the interest upon \$100, and this sum will nearly cover the difference in the cost of IDEAL Boilers and AMERICAN Radiators as compared with a hot-air furnace for a good-size cottage.

IDEAL Boilers and AMERICAN Radiators are annually replacing thousands of hot-air furnaces and stoves that have been found wasteful and wanting in OLD cottages, houses, stores, churches, schools, etc. Ever heard of any one going back to other forms of heating once they have tried our way? Any argument in that to you?

Please let us tell you the full *why, how, and present attractive price.* No tearing-up necessary—and in these less hurried months you get the services of the most skillful, quickest fitters! Ask for free valuable booklet. Inquiries cordially welcomed.

DEPT. 6

AMERICAN RADIATOR COMPANY

CHICAGO




THE "GLOBE" Ventilator

Is built on honor and sold on merit

In Galvanized Iron, Brass and Copper Also with Glass Tops for Skylight

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. *Smoky Chimneys Cured.*

"GLOBE VENTILATED RIDGING"

Manufactured by
Globe Ventilator Company :: Troy, N. Y.

Patented and Trade-Mark
Reg. U.S. Pat. Off.



Artistic Practical Houses, 1908

A NEW book for 1908 has been prepared, showing the latest designs of houses of modern cost. This volume contains practical and skilful arrangements of floor plans, and shows artistic exteriors equal to those of the most expensive work in the suburban architecture of America. If you want a house costing from \$5,000 to \$10,000, complete and convenient and yet unusual and the opposite from the commonplace, you will be interested in this new book. Price, \$2.00, by express prepaid.

MUNN & CO., 361 Broadway, New York



COUNTRY HOUSES

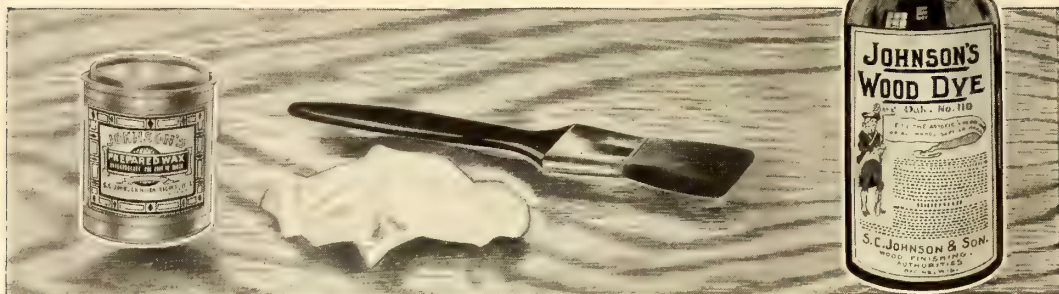
that represent the best in artistic, up-to-date home architecture—houses that are fireproof, economical and permanent. Apply for booklet to

BENJAMIN A. HOWES ENGINEER and CONTRACTOR
1193 Broadway, New York City

All buildings, interiors and exteriors of reinforced concrete; also walls, walks, pergolas—all garden work.
We would like the privilege of referring you to satisfied clients.

House of Reinforced Concrete in process of construction at Short Hills, N. J.

The Home Beautiful



The Easiest and Most Economical Way to Make and Keep Your Home Really Beautiful Is By

following the complete, explicit, and very simple directions and suggestions contained in "The Proper Treatment for Floors, Woodwork and Furniture," which we will gladly send to you, free of charge, postpaid, for your name and address on a postal.

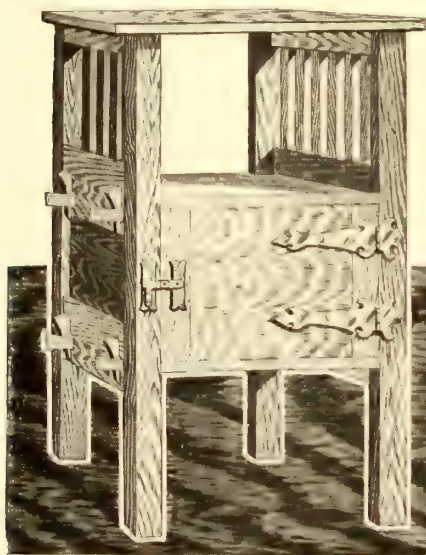
This interesting, valuable and handsome book of 48 pages is profusely illustrated in colors. It tells you how you can easily do the work yourself at trifling expense. It tells you how to change the color of wood to make your furniture, woodwork and floors harmonize and have all finished in modern style and kept in perfect condition with the least labor and expense.

Just send us your name and address on a postal now.

S. C. JOHNSON & SON,

Book Edition HG-6, Racine, Wisconsin
"The Wood Finishing Authorities."

Johnson's Wood Dyes for the artistic coloring of woods (14 shades) half-pint cans 30 cents, pint cans 50 cents.
Johnson's Prepared Wax—10 and 25c packages and large size cans. Sold by all dealers in paint.



THE Floors, Interior Woodwork and Furniture, more than anything else, make or mar the appearance and influence of your home—they are the most in evidence and cost the most to install.

And their attractiveness depends, almost wholly, upon the finish—for nothing can lend such elegance, refinement and distinction—nothing can make the home brighter or more cheerful than finely finished woodwork, floors and furniture.

You see such things represent too much to be experimented upon and possibly ruined with poor finishing preparations.

Now there are practically two classes of wood finishes: One class consists of varnish stains, varnish, shellac and similar preparations—mere "surface coat" which hide the beauty of the wood because they are too thick to penetrate the grain and cannot wear well because they are scraped off the surface by every scratch and blow.

The other class consists of Johnson's Artistic Wood Finishes, Johnson's Wood Dyes and Johnson's Prepared Wax.

Oil stains and water stains cannot be considered because they do not penetrate and they raise the grain of the wood, leaving a slippery, splintery surface.

Johnson's Wood Dyes are really dyes—not mere stains—stains dry so quickly that it is very difficult to apply them evenly—they show laps—light and dark spots, and rub off.

Johnson's Wood Dye has peculiar penetrative power—it goes deeply into the pores of the wood without raising the grain—bringing out all its natural beauty and actually coloring the wood, so that marring does not show light spots.

Johnson's Prepared Wax is simply applied and polished with a cloth—it gives a rich, subdued, lustrous and enduring surface which cannot be produced by any other finish.

Unlike shellac and varnish, it does not show heel marks or scratches.

When any part of a varnished or shellaced surface becomes worn it is necessary to refinish the entire surface; but with Johnson's Prepared Wax all you do is go over the worn part.

The reason why Johnson's is much better than any other wax is because it contains 20 per cent more of the hard, expensive polishing wax than any other wax on the market.

Therefore it covers a fifth more space—can be brought to a more beautiful and lasting polish with less labor and kept in perfect condition with the least care.

another. If the vines are started in this way it will be very easy to prune them afterward, as there is no network to untangle. With honeysuckle, for instance, one simply cuts off all side shoots from top to bottom, and in a week the whole space is a mass of green. It is an advantage also to have the vines run from the outmost point of the eaves to the ground, as this keeps the vines from the piazza rail so that it can be painted without taking them down; and this arrangement also gives more room on the piazza.

CLIMBING ROSES

(Reply to O. L., S. S. and others.)

There are many new climbing roses which look well on posts in the garden or on arches over a walk. Trained to a lattice on the house or at the sides of a Colonial porch they give it a singular air of age and culture.

Roses need more attention than vines in the way of tying up and training, and their flowers last a shorter time, since they bloom but once a season. The foliage, too, is more likely to be injured by worms and mildew.

Crimson Rambler is the commonest climbing rose; too common one sometimes thinks; but it is not the best because the color is harsh and it has no fragrance. A better one is the Dawson rose, which is a vigorous grower with clusters of a better color and very fragrant. It is a hybrid of *Rosa multiflora* and the hybrid perpetual General Jacqueminot.

Debutante, grown by Walsh, is another good one. It is very double, delicate pink, and fragrant.

Queen Alexandra, introduced by Veitch, is pink, a strong grower.

Tausendschön, brought out by Schmidt in 1906, is pink, and turns, as the flowers open, to bright rose and carmine. The trusses are large, last a long time, and the plant is vigorous and productive.

The Prairie roses can also be trained to a post or lattice. They bloom much later than other roses, and the clustered pink flowers are very graceful, but are not fragrant. Baltimore Bell, Queen of the Prairie and Setigera are the varieties.

The Wichuraiana rose and its hybrids are very good on rocks, at the top of terrace walls or banks, where they will hang down many feet. They can be trained to pillars also. Wichuraiana itself is white with yellow stamens, deliciously scented and with dark green shining leaves.

Dorothy Perkins is very double, pink and sweetly perfumed.

Hiawatha is single, bright crimson with large yellow stamens.

William C. Egan has very double flesh-colored flowers in large clusters. This is a hybrid of Wichuraiana and General Jacqueminot, originated by Dawson in 1896.

THE GARDEN IN THE TEMPORARY HOME

By Ida D. Bennett

THE garden in the temporary home does not present the same inducement to create that is found in the permanent home, but it is not without its possibilities of development, and often this is along so original lines as to be highly interesting and instructive.

Our American people have become so accustomed to pulling up stakes and setting up their household gods for a season or two wherever business or pleasure calls them, that the permanent home—the home of succeeding generations—is practically unknown throughout the greater part of the country. When one is so fortunate as to possess their ancestral acres, inherited or acquired, like certain pedigrees, it is by no means certain that they

ARE YOU LOOKING FOR A MACHINE THAT WILL

plane out of wind, surface straight or tapering, rabbet door frames, rabbet and face inside blinds, joint, bevel, gain, chamfer, plow, make glue joints, square up bed posts, table legs, newels, raise panels, either square, bevel or ogee, stick beads, work circular mouldings, etc., rip, cross cut, tenon, bore, rout, rabbet, joint and bead window blinds, work edge mouldings, etc.? If so, drop us a postal card, and we will send you a descriptive circular showing two views of our No. 62 Universal Wood Worker.

Write
209-229 WEST FRONT STREET
J. A. FAY & EGAN CO.
CINCINNATI, OHIO

No. 62. UNIVERSAL WOOD WORKER

will be occupied for more than a brief season of the year, if at all. The village lot, the city flat, or even a restricted apartment in a downtown location, may serve for a home, but there is no environment, however restricted, that does not possess possibilities for floriculture if the desire and will is present to make the most of one's surroundings.

The one indispensable condition for outdoor culture is summer weather; given this and a bit of land—or something to hold soil, for gardening need not necessarily be on the ground—and much is possible.

It is taken for granted at the start that one will not care to plant hardy shrubs, bulbs and perennials in a garden that is to be held but a season at most; not but what the creation of the nucleus of a permanent garden which those who come after us may enjoy is at all to be decried, but rather to be applauded, but the fact remains that we are not, as a rule, altruistic enough to sow that another may reap.

However, the field of annual flowers and vines and of summer flowering bulbs is so large that a very satisfactory garden, indeed, may be enjoyed by limiting our planting to these alone. Many of the annuals come into bloom very quickly from seed so that immediate returns may be realized, others, as the asters, are slower in maturing, but follow close upon the footsteps of the earlier blooms so that little, if any, hiatus in the garden's bloom will be discernible.

If one has but a narrow strip of land along a division fence to devote to flowers one may still make an effective planting, especially if it is desired to mask the fence and adjacent view with a screen of foliage and bloom. In this case choice will wisely be made of the taller growing ricinus for the mass of shrubbery, massing it well back against the rear end of the fence and interspersing the planting with the tall growing cannas as it approaches the house. In this nearer planting the caladium esculentum may be introduced with excellent effect, and among the rear plants the tall, tropical-looking nicotiana sylvestris may be used. This is one of the most effective plants for sub-tropical planting I know. Its flowers, which remain open all day, are borne aloft on tall scapes, and the plant is not injured by quite sharp frosts, so if it is grown to fine proportions it will fill up the gap caused by the loss of the ricinus, which usually succumb to the first sharp frost, and should be at once cut out, and so render the garden attractive for some time to come.

Scarlet salvias combine delightfully with the nicotianas, and should be planted liberally. Scarlet zinnias, dwarf nasturtiums, white candytuft and purple ageratum, all make attractive plantings, and the whole may be bordered with a mixed border of Phlox Drummondii, or only one or two colors may be employed. Such a border in the rear of a twelve-foot lot will give an abundance of flowers both for effect and for cutting.

But one need not confine their gardening operations to the border alongside the fence; there is usually room about the foundations of the house and outbuildings for beds of low growing plants and vines, and there are many bedders and annual vines which may be employed with excellent effect. Geraniums are one of the most reliable bedders, being practically droughtproof, and bloom the more freely the more they are neglected; the only imperative requirement being that the withered flowered heads should be removed and not allowed to seed.

Of the vines which may be used to ornament and hide there is none more attractive and useful than the cœæ scandens with its wealth of lovely flowers so ornamental on the vine and so useful for cutting. This is a

GRAND RAPIDS CORRUGATED ASBESTOS TABLE PADS

Patent applied for

How nice to keep your dining table's beautiful top unmarred by heat-scorching, scratches and moisture! How handsome it is when service and cloth are removed! The one perfect protection is the

GRAND RAPIDS CORRUGATED ASBESTOS TABLE PAD

The only pad having absolutely heat-proof air spaces formed by a corrugated centre board and top and bottom sheets of hard-pressed asbestos. Removable white flannel envelope, downy-soft, thoroughly shrunken, bound and tied with tape, prevents the slightest scratch on the table. Ribbon hinged to fold and place in sideboard; easiest to handle. Most necessary to perfect, noiseless service and preservation of the table finish.

48-inch, round or square, \$5.00 54-inch, round or square, \$6.00
60-inch, round or square, \$7.00

Proportionate prices on other dimensions, or special sizes quoted on request. 54-inch extension leaves, \$1.20 each.

See the **GRAND RAPIDS PAD** at Your Furniture Dealer's

Price refunded on any pad not wholly satisfactory and returned to dealer, or express collect to us if bought direct, within 30 days.

Neat booklet, Edition No. 4, mailed free

Agents wanted in every city and town. Liberal commission. Write for full information.

THE VEACH ASBESTOS COMPANY, OIL CITY, PA.

Hardware and the House

"FAIRFAX"
(Colonial)
Wrought
Bronze

The selection of the hardware trimmings for your new house is of equal if not of greater importance than the choosing of the wall-paper or other decorative features. Hardware is purchased as a permanent ornamental utility, and by consulting your architect when making its selection, you may not only secure hardware that harmonizes perfectly with any architectural design but also express your own individual taste in the choice.

SARGENT'S Artistic Hardware

presents unusual opportunities for effective ornamentation. The many different patterns were designed to accord with any architectural motif and to accentuate the artistic appearance of any style of finish.

Sargent's Book of Designs—Sent FREE

No matter what the style of your new home, you can find designs of hardware in our free book that will exactly suit your requirements. The Book of Designs offers a choice of seventy patterns—all different—and is invaluable to all planning or building a home. We send it free to those interested. Address

SARGENT & CO.,
156 Leonard St., New York.



Overlooking Lake Champlain

Just placed on the market—beautiful residence occupying the most slightly location in Port Henry, N. Y. Has an unobstructed view of Lake Champlain and the Adirondacks for over fifty miles, with another view of the Green Mountains. Three-story-and-basement house, first story pressed brick. First and second floors are finely finished in quartered oak and other woods. Large finished basement contains well-equipped laundry; parlor, library, reception hall, dining-room, kitchen, etc., on first floor; six bedrooms and bath on second floor; two bedrooms, billiard hall, study

and storerooms on third floor. House is supplied with gas and electricity. Property includes a fine brick stable and beautiful grounds. An ideal modern summer or all-the-year home, and a splendid value. Price, \$20,000. Address **O. S. Presbrey, Port Henry, N. Y.**

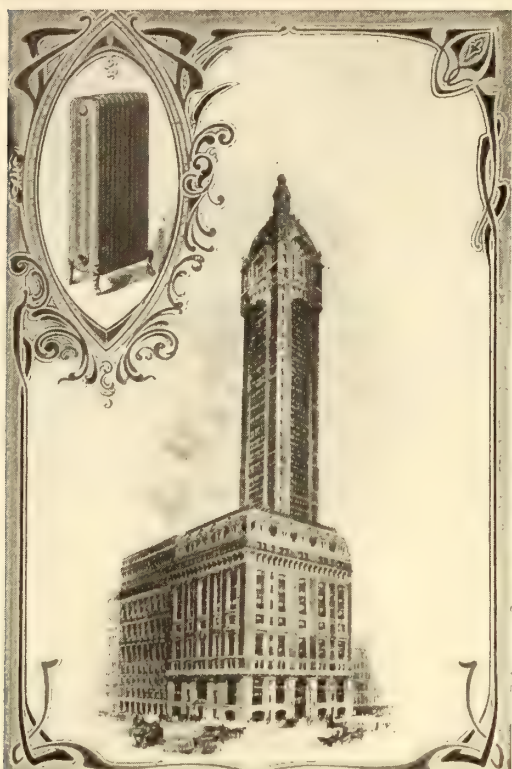


The expense and annoyance of painting will not recur every year or two if you use

DIXON'S SILICA-GRAPHITE PAINT

the "Proven Shield for Steel Work." Durability records in all climates; write for a few.

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.



Kinnear Pressed Radiators

Selected for

THE SINGER BUILDING, NEW YORK

Ernest Flagg, Architect

THE TALLEST BUILDING IN THE WORLD

These Radiators were chosen only after the most rigid examination and exhaustive test of all the radiators in the market, the tests thoroughly demonstrating that Kinnear Pressed Radiators exceeded every possible requirement for efficiency and durability.

In the Tower alone the use of these Radiators effects a saving of 100 tons in weight.

The economy of enormously valuable space was another consideration, no radiation on earth requiring so little space as Kinnear Pressed Radiators.

What applies to the Singer Building applies to any other structure, regardless of size. The small office building, store or residence that installs these Radiators (weighing less than one-third as much as cast-iron) reduces cost of construction and gains materially in space required.

And remember that when desired, Kinnear Pressed Radiators may be placed

**On the Wall—Off the Floor
Out of the Way**

If you are building you owe it to yourself to investigate this modern radiation before deciding what you will install.

Write for Catalog "D" for any desired information.

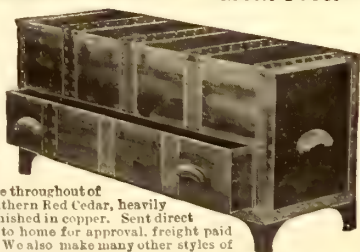
**THE PRESSED RADIATOR CO.
PITTSBURGH, PA.**

RED CEDAR CHEST GUARANTEED "Moth Proof"

Our old fashion Treasure or Dowry Chest is an ideal wedding or birthday gift—a work of art and a jewel of utility.

Made throughout of Fragrant Southern Red Cedar, heavily bound and finished in copper. Sent direct from factory to home for approval, freight paid both ways. We also make many other styles of chests and box couches.

Write at once for pictures and prices. Dept 59
Piedmont Red Cedar Chest Co., Statesville, N. C.



Details of Building Construction

A collection of 33 plates of scale drawings with introductory text
By **CLARENCE A. MARTIN**
Assistant Professor, College of Architecture, Cornell University

This book is 10 by 12½ inches in size, and substantially bound in cloth. **PRICE, \$2.00**

FOR SALE BY

MUNN & CO., 361 Broadway, N. Y. City

very easy vine to grow, being readily started from seed sown in the house or hotbed early in the spring and transplanted out when the weather is warm; this and furnishing it something to cling to is all it requires, and when grown on trees, brick or stone work, even that is not necessary, as it will cling to anything it can get a hold on. It thrives equally well in the sun or in the shade, indeed is the best vine I know for shady situations. I grow it each year on the north side of the house, and it is covered with its beautiful bells of white, of purple and of mauve until frost has cut all the other annual vines on the place.

Another very dainty vine is the scarlet-bloomed cypress vine, *Ipomoea Quamoclit*; this and the ivy-leaved variety of the same should be much more cultivated than it is. There is a very elegant gourd that should be used more—the *Bryonopsis*; this has deeply lobed foliage and is covered with fruit about the size of a gooseberry, green striped with white when immature, but changing to scarlet when it ripens. It is an exceedingly ornamental vine and a very rapid grower and easily raised from seed. It combines well with the wild cucumber. Then we have always with us the morning glory and the sweet pea, though the Japanese form of the former is not so commonly grown.

Certain of the celosias are fine for massing, as Thompson's Superb and Magnifica, and are useful to edge beds of taller growing plants like cannas and ricinus.

But it is, perhaps, in the inventing of unusual places for flowers that the garden in the temporary home will gain its greatest interest. Often this becomes obligatory from the reluctance of landlords to have a well-sodded lawn cut up into flower beds, and if one is so fortunate as to possess a landlord with sufficient taste to surround his tenements with well-prepared lawns one should respect his feelings in the matter and give one's care to preserve and enhance rather than to disfigure and destroy.

So when there is no available land which may be devoted to the growing of flowers one must look about them for a substitute. Possibly there is a wooden dividing fence of substantial construction and not too high to be readily reached from the ground; now, if vines may not grow up this fence there is no valid reason why they should not grow down and along. Narrow boxes placed upon its crest and filled with bright flowers and trailing vines will be ornamental in the extreme. It will be advisable in constructing these boxes to make them as nearly water-tight as possible, and to supply each section of box with a bit of tube, closed with a plug, which will carry all surplus water out beyond and away from the fence that injury may not arise to the owner's property from this source; it will also be well that the boxes rest on strips of wood laid crosswise of the fence so that the air may pass beneath them and prevent the rotting of boxes and of fence; thus protected it only remains to fill with a good quality of earth and to plant. It will be well in selecting the flowers to be grown to select those of medium growth and those which will not be seriously injured by a temporary drought, as plants confined in narrow limits and exposed to the hot air and wind on all sides have much more to contend with than the same plants growing in the ground; the boxes should not be too far from the water supply, and, it is needless to say, should never be neglected. They will need a thorough soaking during hot weather every day and sometimes twice a day.

Then there is infinite possibilities in window and porch boxes, and even that most hapless architectural feature—an outside stair-

Who Said Kornlet Fritters?

My, but they're good! There's no limit to the making of tasty things with Kornlet. It is the sweet, creamy pulp of young, tender, green corn—free from hulls and husks.

Kornlet

(The Heart of the Kernel)

comes in a can; but it isn't canned corn. Unusually delicious and nutritious.

In Kornlet you have green corn the year 'round.

Look for recipes on every wrapper. Valuable book of recipes sent free on request.

If your grocer hasn't Kornlet, write us.

**THE HASEROT CANNING CO.,
CLEVELAND, OHIO,
U. S. A.**

Van Dorn Iron Works Co.



PRISON, HOUSE & STABLE WORK

**JOIST HANGERS
LAWN FURNITURE
FENCING, ETC.**

CLEVELAND, OHIO



PATENTED

Standing Seam ROOF IRONS

CLINCH right through the standing seam of metal roofs. No rails are needed unless desired. We make a similar one for slate roofs.

SEND FOR CIRCULAR

**BERGER BROS. CO.
PHILADELPHIA**

\$16.95 CONCRETE BLOCK MACHINE

WITH COMPLETE OUTFIT OF FACE PLATES, PALLETS, ETC.



FOR \$16.95 we furnish one of the best concrete block machines and outfits ever made for making standard 8x8x16-inch blocks, the equal of machines others sell at \$75.00 to \$125.00. Our marvelously low price is based on cost of material and labor, with just our own small percentage of profit added.

OUR OFFER: We will ship you one of our Wizard Machines, higher in price yet only one-third what others ask for inferior machines, on thirty days' free trial, with the understanding and agreement that you can use it for thirty days, and if you don't find that our Wizard turns out the highest grade, most perfect blocks with one-half the cost, one-half the labor,

one-half the trouble of any other machine; if you don't find it the simplest, easiest operated, by far the fastest and

most satisfactory block machine ever produced, then you can return the machine to us and we will immediately return all you have paid for freight charges or otherwise, and the trial will NOT COST YOU ONE CENT.

Write for our new Concrete Block Machine Catalogue with the machine explained in detail, copy of our binding guarantee, our free trial offer, letters from users everywhere, about the wonderful Wizard money maker; it's a great opportunity for profits, all explained in our free Concrete Block Machine Book. Cut this ad out and send to us and you will get the book and all our latest offers free by return mail, postpaid. Address

SEARS, ROEBUCK & CO., CHICAGO

way—may be rendered attractive by the use of boxes of plants and vines. These may cap the railing at the top of the stairs, and if filled with trailing vines and bright geraniums will add much to the feeling of hominess. A good way to arrange boxes at this point is to have two sets—one at the floor-line outside the railing and others on top of the rail. In the lower boxes trailing plants like the nasturtium, which is not a climber, but a trailer, and is only at its best when so grown, and in the upper boxes bright flowers and a climbing vine, which may be trained over strings or a piece of netting extending from the railing to the roof, and so furnish a screen and a modicum of privacy for those who must use this public entrance. If the landing is large enough one may, by this arrangement, have a chair or two and so enjoy a bit of outdoors with almost the privacy of a rear porch.

Still another arrangement is to fasten boxes of earth at the outside of the steps and these, when tastefully arranged, add much to the effect. Bright flowers and trailing vines, not climbers, should be used, unless it is desired to cover the side of the house where the stairs ascend with vines, when some neat growing vines may be planted and brought across under the stairs and so on up the sides of the house, but when vines are grown in this way it will be well to use netting or something that will confine them close to the wall, as vines trailing across the steps would be unhandy and unsightly.

It is almost unnecessary to add that all boxes placed in elevated positions should be very securely fastened, as the chance of deplorable accidents from carelessly placed boxes of heavy earth is apparent, and if the stairs are of flimsy construction little additional weight should be added.

But, if one wishes to carry this summer garden in a temporary home over to another season, and, perhaps, another home, then one must invest one's time and money in summer flowering bulbs, such as dahlias, cannas, gladiolas, montbretias, atamascos and the like.

These may be purchased of the florist in the spring and planted out as soon as the weather is mild enough and will give quick returns. Certain of these, as the dahlias and cannas, may be grown from seed and will come into bloom quite as promptly as the plants raised from roots and tubers; the single dahlias are especially desirable as cut flowers, being very effective both for vase and for corsage wear.

Gladiolas are so popular for cut flowers that it is not necessary to deal with the subject at length, but the montbretia, which closely resembles in contour, though not in size, the gladiola, is not so well known. It is an admirable cut flower, blooming freely from July to September, and requires the same treatment as the gladiola. It increases much more rapidly than the former, and one soon acquires a considerable stock from a very modest beginning.

Another very beautiful summer bloomer is found in the ismene—Ismene calathina; this has heavy, strap leaves and spikes of two or more large white flowers, curiously fringed and delicately throated with green. It has the rich perfume of most white flowers of bulbous character, and is altogether a very desirable summer bedder. Many of the atamascos bloom freely in the open ground, and the mila bifloras, and cooperias, will give a succession of bloom all through the summer.

But one must not overlook the dainty little summer blooming oxalis, so useful for bedding and for bordering beds of other bulbs. It is a most useful and dependable little flower, coming into bloom so soon after planting that it is always a surprise, and for this reason can be resorted to to fill vacancies caused by the failure of seeds to germinate. It should be

CREX

GRASS CARPETS & RUGS

TRADE MARK



Join THE PROCESSION

¶ If you are one of the few who have adhered to the old fashion, woolen carpets, which collect dust and retain germs,

"Don't be Different any Longer"

¶ Join the vast procession and cover your floors with CREX Carpets and Rugs, the ONLY

Sanitary Floor Covering

¶ Suitable for all rooms or on porches—at all seasons. Especially adapted for summer use.

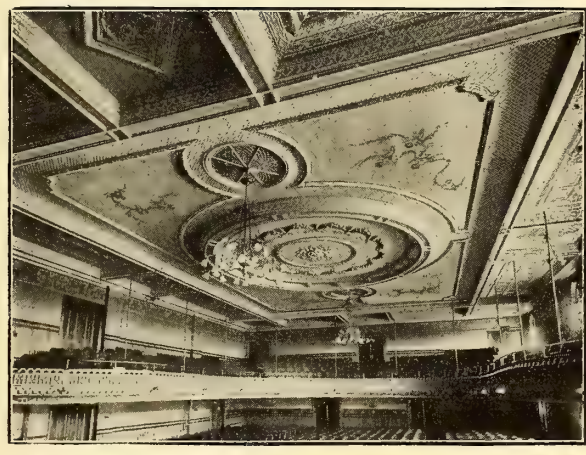
¶ CREX can always be relied upon for wear, cleanliness and lasting attractiveness. Every dealer takes pride in showing you CREX.

¶ Carpets in all widths—Rugs in a large variety of sizes and exclusive designs.

Avoid imitations: Look for the CREX trade mark

For Sale at all up-to-date Department, Furniture and Carpet Stores

American Grass Twine Company
377 Broadway, New York City



Berger's "CLASSIK" STEEL CEILINGS

cover the field so completely that suitable selection may easily be made for any class of room, whether something elaborate or something simple and low-priced is desired.

MOST COMPLETE LINE OF ARTISTIC STEEL CEILINGS IN EXISTENCE

*Have you the Catalog?
Write for it TO-DAY
Ask for D 64*

The Berger Mfg. Co., Canton, Ohio

New York Philadelphia Boston Chicago St. Louis San Francisco Minneapolis Atlanta

SPECIALTIES: STEEL CEILINGS, ROOFING, VAULT AND SIDEWALK LIGHTS, FIREPROOFING, STEEL FURNITURE, ETC.

Colonial Houses FOR MODERN HOMES

A COLLECTION of designs of houses with Colonial (Georgian) details, but arranged with modern comforts and the completeness of the twentieth century.

Written & Illustrated by E. S. CHILD, Architect

They show large, correctly drawn perspectives, full floor plans, and complete descriptions, with estimates of cost. The designs are new, original, unique, consistent, but not stiff nor constrained. Made, not by an artist, but by an architect. They combine beauty of exterior with complete and convenient interiors, with kitchens, laundries, pantries and closets carefully and skilfully considered.

If you are at all interested in the subject, you will enjoy this publication.

Price, postpaid, \$2.00

MUNN & CO., 361 Broadway, NEW YORK

planted in full sunshine and the flowers close in the shade, and to be at their best should lie in the sunshine all day long if possible. For shady borders use the lobelia, which loves just that position, but give the oxalis the sunshine.

JUST PUBLISHED

THIRD EDITION OF

KIDDER'S Churches and Chapels

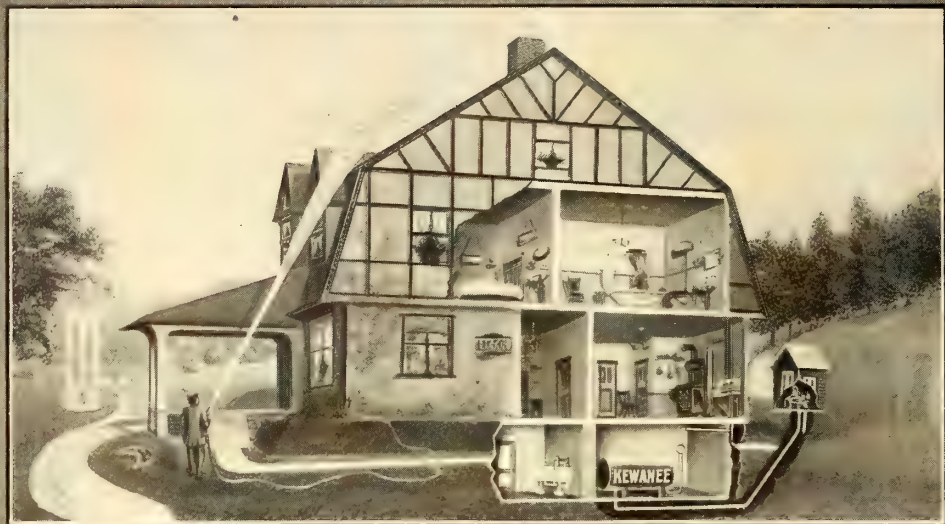
By F. E. KIDDER, Architect

This edition has been thoroughly revised by the author, and enlarged, many new designs being added, including several new designs for Catholic churches. There are 120 illustrations in the text and more than 50 full-page plates. The book contains a large number of plans and perspectives of churches of varying costs. Besides this there is much concise and practical information relating to planning and seating; details of Construction, Heating and Ventilation, Acoustics, etc., making it in its present form

*The Best American Book on
Church Design and Construction*

One oblong quarto volume. Price, net, \$3.00

Munn & Co., 361 Broadway, New York City



Perfect Water Supply Service for Your Country or Suburban Home.

YOU can have a thoroughly efficient and reliable water supply service in your home—service equal to that afforded by the best city water works system. You can have an abundant supply of hot and cold water delivered under strong pressure to the bathroom, kitchen, bedrooms, laundry, lawn, garden, barn, anywhere.

This service and first class fire protection will be yours, if you install

The Kewanee System of Water Supply

With the Kewanee System, there is no elevated or attic tank to leak, freeze, overflow or collapse. A Kewanee Pneumatic Tank is placed in the cellar, buried in the ground or located in a pump house.

The Kewanee Tank rests on solid ground, will last almost indefinitely and furnishes a fresh usable supply of water during all seasons.

The water is delivered by air pressure. Pumping water into the tank from your well, cistern, or other source of supply, creates the pressure. 40 pounds is a good average pressure and is equal to the pressure from an elevated tank 93 feet high.

Kewanee Pneumatic Tanks and complete Kewanee

Systems are imitated. Accept no tank as a Kewanee Tank unless it bears this trade mark. **(KEWANEES)** Look for our name-plate on all pumping machinery. Then you will be safe from inferior equipment.

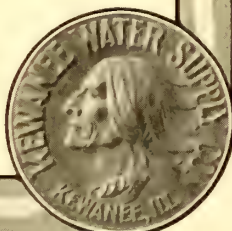
Over 8,000 Kewanee Systems in successful operation, providing water for country and suburban homes, clubs, hotels, schools, apartment buildings, public and private institutions and towns.

Our engineering service is free. No charge for specifications and estimates. Our guarantee protects you.

Our 64-page illustrated catalog explains everything. Ask for catalog No. 36.

Kewanee Water Supply Company Kewanee, Illinois.

32 Broadway, New York City.
820 Marquette Building, Chicago.
404 Equitable Building, Baltimore.
710 Diamond Bank Building, Pittsburg.



FIVE MINUTE TALK

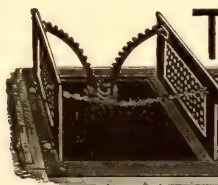
Sent Free
"HOW TO KEEP AWAY CHICKEN LICE AND MITES" by only One Application a Year
Successfully used for upwards of 30 years
CARBOLINEUM WOOD PRESERVING CO.
350 West Broadway, New York, N. Y.

MANLOVE AUTOMATIC GATE



can be attached to ordinary posts. Is opened and closed by any vehicle, including Automobiles. Machinery is all above ground. Simple, durable, inexpensive. Especially adapted for Summer Homes and Country Clubs.

MANLOVE GATE CO., 272 E. Huron St., Chicago



T.H. BROOKS & CO. CLEVELAND, O.
FLOOR & SIDEWALK LIGHTS.
OF EVERY DESCRIPTION.
SEND FOR CATALOGUE.

Cottage Designs

No. 1. Cottage Designs
Twenty-five designs, ranging in cost from \$600 to \$1,500

No. 2. Low Cost Houses
Upward of twenty-five designs, costing from \$750 to \$2,500

No. 3. Modern Dwellings
Twenty designs, at costs ranging from \$2,000 to \$5,000

No. 4. Suburban Homes
Twenty selected designs, costing from about \$3,000 upward

By far the most complete collection of plans ever brought out. Illustrated with full-page plates.

\$1 each. Sold separately

MUNN & COMPANY, PUBLISHERS
361 BROADWAY :: NEW YORK

THE QUINCE

By E. P. Powell

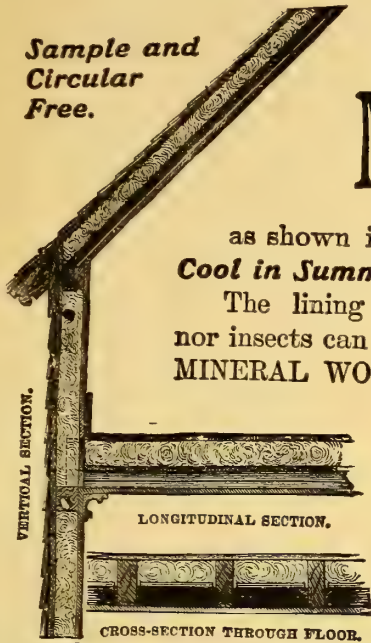
THERE is no greater wonder in horticulture than the neglect, so far, to lift the quince out of the rank of cooking fruits. It is good enough, to be sure, as a cooked fruit, both for jellies and marmalades, and for mixing with sweet apples. It is still better as a baked fruit, to be eaten, while hot, with butter and sugar. This is a creation never to be forgotten when once tasted. However, we ought to be able to have varieties of quinces fit to eat from hand. Mr. Burbank has recently sent out a variety that he calls the Pineapple, and which he claims is a good, digestible and highly flavored dessert fruit. It is said to be not quite hardy in the northern States. It thrives well with me in Florida.

The list of quinces which are thoroughly hardy, that is, for ordinary winters, in the northern States includes the Meech, the Champion, the Rea, the Fuller, and the Van Deman. The old Orange or Apple quince is, however, the one generally planted, and it is a grand quince yet. The Rea is a seedling of Orange, averaging a good deal larger. The Meech is a vigorous grower, and very popular in the southern States—it is possibly a little richer in quality than the preceding. Of the foreign sorts the Bourgeat is the only one worth planting. It is a noble fruit in size and color and quality—bearing well at three or four years of age.

The quince is propagated from young shoots, cut into six or eight inch lengths. These are planted like grape cuttings or currant cuttings, and root very readily inside a year. The cutting bed must be thoroughly cleaned of weeds, and the soil must be pressed down tightly. Root grafting is practised in the nurseries, but is hardly worth the while. Every abraided root will send out rootlets, and soon make a young tree. The quince likes clay soil, but will do fairly well in light soil; but it must be well drained in all cases. Trimming a quince bush is necessary constantly, or the strength will go very promptly to suckers. Young bushes are much more tender than older ones, and it will pay to protect them for two or three winters. I have seen whole orchards destroyed by an extra severe zero spell of weather. I lost every tree in my orchard in 1895. Yet the quince is a very profitable crop—provided always that there is extra care of the trees. The most serious danger is from a borer, almost or quite identical with the apple tree borer. It must be worked out with a flexible wire, and coal ashes piled up about the tree. The fruit is sometimes attacked by fungus enemies, which can be controlled by Bordeaux mixture, provided it is promptly applied. Scabby quinces often appear in market, and they signify neglect in spraying.

It must never be forgotten that the quince is a bush, and not naturally a tree—although it can be grown in the tree form. The difficulty then is that the death of one trunk ruins the whole thing; but if you allow four to five stems from the ground the quince bush is still in good bearing condition after one of the trunks is killed. The bearing propensity is such that the bush form is also better. A quince, well fed and well trained, will bear enormous weights, liable to break down a single stem. Keeping the quince is another matter that should be noted. If laid away carefully, without rubbing, in a dark cool cellar, you may keep the Apple quince until late in January. There are other varieties which are said to keep considerably later; but I have not tested that point. If marketed, quinces should be very carefully handled, without the least abrasion, and shipped in firm baskets. If shipped in barrels, the fruit is rubbed so badly that it does not look well to the purchaser, and it will not keep.

Sample and
Circular
Free.



A House Lined with Mineral Wool

as shown in these sections, is *Warm in Winter, Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice, nor insects can make their way through or live in it. MINERAL WOOL checks the spread of fire and keeps out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.
140 Cedar St., NEW YORK CITY.



*In Answer to the
Question—*

"Why are lighting fixtures so often incongruous and out of all harmony with their surroundings" — we will say that much depends upon the designer and manufacturer to retain refinement of line

and detail even in their inexpensive productions.

For the protection of our clients, our trade-mark will be found on each and every piece of work made by us.

The Enos Company

MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
San Francisco, 1748 California Street
Toronto, 94 King Street, West
Pittsburg, G. P. Norton, Penn at 4th St.
Chicago, W. K. Cowan & Co., 203 Michigan Bldg.
NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & Co., BOSTON



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER, TILING

An Ideal Floor Covering for Court Houses, Banking Institutions, Churches, Hospitals, Libraries, Business Offices, Restaurants, Vestibules, Elevators, Kitchens, Laundries, Pantries, Bathrooms, Steamships and Floating Property generally.

We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

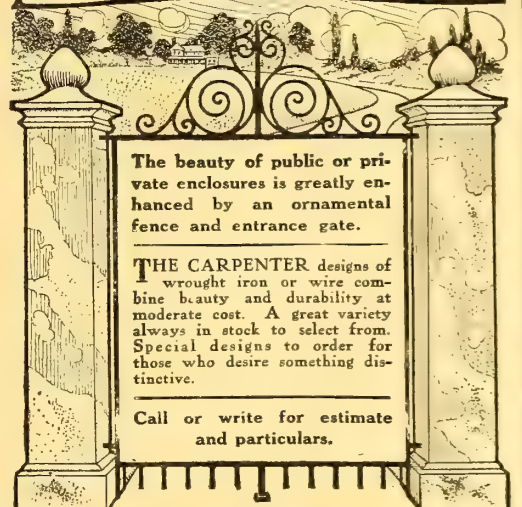
91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street

WROUGHT IRON FENCE

And Entrance Gates
WIRE FENCING
Ornamental Iron-Work, Tree-
Guards, Lawn Furniture, Etc.
TENNIS COURT ENCLOSURES A SPECIALTY
F. E. CARPENTER CO.
7 & 9 WARREN ST. — NEW YORK



The beauty of public or private enclosures is greatly enhanced by an ornamental fence and entrance gate.

THE CARPENTER designs of wrought iron or wire combine beauty and durability at moderate cost. A great variety always in stock to select from. Special designs to order for those who desire something distinctive.

Call or write for estimate and particulars.

?
**What
Do You Want
to Buy**
?

We can tell you where to buy anything you want. Write us for the addresses of manufacturers in any line of business—Novelties, Special Tools, Machinery, Equipments, new patent *Labor-Saving Devices*.

MUNN & COMPANY

Publishers of Scientific American

361 BROADWAY, NEW YORK, U. S. A.

MENNEN'S

Borated Talcum

TOILET POWDER

The Box
that Lox



"The Summer Girl"

in discarding the sun bonnet of old, escaped as well the old-time penalties paid by skin and complexion to summer's sun and winds. Her best protection **now** is

Mennen's Borated Talcum Toilet Powder

the purest of healing and soothing toilet powders. When used daily, **Mennen's** keeps the skin smooth and healthy, relieves and prevents **Sunburn, Chafing, Prickly Heat**, and all skin troubles of summer. Makes possible the attractive, evenly browned complexion without burning. After **bathing** it is delightful. It deodorizes perspiration and is a most welcome relief for aching tired feet.

For your protection the **genuine** is put up in **non-refillable** boxes—the "**Box that Lox**," with **Mennen's** face on top. Guaranteed under the Food and Drugs Act, June 30, 1906, Serial No. 1542. Sold everywhere, or by mail 25 cents. **Sample Free.**

Try Mennen's Violet (Borated) Talcum Toilet Powder—It has the scent of Fresh-cut Parma Violets. **Sample Free.**

GERHARD MENNEN CO., 67 Orange Street, NEWARK, N. J.

MENNEN'S SEN YANG TOILET POWDER,
Oriental Odor

MENNEN'S BORATED SKIN SOAP (blue wrap-
per). Specially prepared for the nursery

SENT FREE, for 2 cent stamp to pay postage, One Set Mennen's Bridge
Whist Tallies, enough for Six Tables

No
Samples

FNA
7100
A572
Hort.

Vol. V

JULY, 1908

No. 7

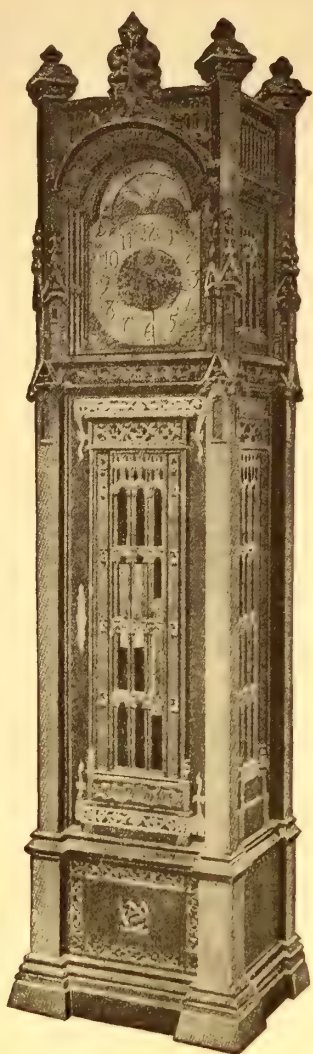
AMERICAN HOMES_{AND} GARDENS



\$3.00 A YEAR

MUNN & COMPANY, Publishers

PRICE, 25 CENTS



HALL CLOCKS

The most useful and ornamental article you can have in your home is a fine HALL CLOCK. We make many styles and kinds, with or without chimes.

The "Banjo," which is so popular for dining-room and library, is a most satisfactory clock.

We also make a full line of Marble Clocks and Regulators.

If your local dealer does not sell our line, send direct for new illustrated catalogue.

Waltham Clock Company
Waltham, Mass.



FINE OLD DRESDEN GROUP—GILDED
CARVED WOOD STAND—BY LOCKE

The A. J. Crawford Co. announce the removal of "The Little Shop" from 1 East 31st Street to 251 Fifth Avenue, corner of 28th Street. Their entire business is now under one roof.

Antiques and Reproductions.

The A. J. Crawford Co.
251-255 Fifth Avenue, New York

❑ Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

❑ The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

❑ If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY
11 to 15 East 24th Street, NEW YORK 511 Monadnock Building, CHICAGO

PLANT Sober Paragon The only Large, Sweet CHESTNUT

The nuts are large in size, being from 3 to 4 inches or more in circumference and have a sweetness of flavor equal to the native sweet chestnut.

Ornamental—Profitable.

For lawn or park its beautiful dark, rich waxy green foliage make it a most stately tree.

The Sober Paragon Chestnut is a hardy, rapid grower and begins bearing when two years old.

Prof. N. S. Davis, Bucknell University, says: "It is one of the most remarkable discoveries of this decade."



Copyrighted 1908.

To every Sober Paragon Chestnut Tree, when shipped, is attached a metal seal upon which is impressed the words "SOBER PARAGON" as illustrated herewith.

For full information, testimonials, etc., address

GLEN BROTHERS,

Sole Agents.

ROCHESTER, N. Y.

MENNEN'S Borated Talcum TOILET POWDER

"The Box that Lox"

"YOUNG AMERICA" cannot begin too early to realize the value of a well groomed appearance. Advise the daily use of Mennen's Borated Talcum Toilet Powder the first necessity in the nursery, the satisfying finish of the bath and the shave. Mennen's prevents and relieves Chafing, Prickly Heat, Sunburn, and all skin troubles of summer. For your protection the genuine is put up in non-refillable boxes—the "Box that Lox", with Mennen's face on top. Guaranteed under the Food and Drugs Act, June 30, 1906. Serial No. 1542. Sold everywhere, or by mail, 25 cents. Sample free.

Newark, N. J.

Try Mennen's Violet (Borated) Talcum Toilet Powder—It has the scent of fresh-cut Parma Violets. Sample free.

MENNEN'S SEN YANG TOILET POWDER, Oriental Odor } No Samples
MENNEN'S BORATED SKIN SOAP, (blue wrapper) }

Specially prepared for the nursery.

Send 2c. postage for one set Mennen's Bridge Whist Tallies, (6 tables.)

RIB-LATH *for* HOMES

Build Stucco Houses and Bungalows

Artistic Fire-proof Inexpensive

Specify Rib-Lath for exterior walls and interior partitions, and Hy-rib Sheathing for light fire-proof cement roofs, wall siding and solid partitions without studs. Sample and Illustrated Booklet on request.

Reinforced Concrete as applied to any form of construction work is described in "Trussed Concrete Illustrated"—write for copy.

Trussed Concrete Steel Co.
519 Trussed Concrete Bldg., Detroit, Mich.

KAHN SYSTEM

CRATHORNIAN

AUG 14 1905

LIBRARIES

CRYSTAL Domino SUGAR

5 lb Sealed Boxes Only! Best Sugar for Tea and Coffee! By Grocers Everywhere!

Cottage Designs

No. 1. Cottage Designs Twenty-five designs, ranging in cost from \$600 to \$1,500 No. 2. Low Cost Houses Upward of twenty-five designs, costing from \$750 to \$2,500	No. 3. Modern Dwellings Twenty designs, at costs ranging from \$2,000 to \$5,000 No. 4. Suburban Homes Twenty selected designs, costing from about \$3,000 upward
---	---

By far the most complete collection of plans ever brought out. Illustrated with full-page plates. \$1 each. Sold separately.

MUNN & COMPANY, PUBLISHERS
361 BROADWAY :: NEW YORK

Artistic Mantels

¶ Our Catalogues contain 130 designs, including Mission, Colonial, White, Mahogany and Oak. Everything, from the very cheapest to the best.

¶ Fireplace Hardware and Tiling of every description.

¶ Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.
Unity Building Chicago, Ill. 306 Main Street Jacksonville, Fla.
Factory, Knoxville, Tenn.

FIVE MINUTE TALK

Sent Free

"HOW TO KEEP AWAY CHICKEN LICE AND MITES" by only One Application a Year

Successfully used for upwards of 30 years

CARBOLINEUM WOOD PRESERVING CO.
350 West Broadway, New York, N. Y.

MANLOVE AUTOMATIC GATE

can be attached to ordinary posts. Is opened and closed by any vehicle, including Automobiles. Machinery is all above ground. Simple, durable, inexpensive. Especially adapted for Summer Homes and Country Clubs.

MANLOVE GATE CO., 272 E. Huron St., Chicago

T.H. BROOKS & CO. CLEVELAND, O.

FLOOR & SIDEWALK LIGHTS.
OF EVERY DESCRIPTION.
SEND FOR CATALOGUE.

BURLINGTON Venetian and Sliding BLINDS



SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont

MR. R. H. RUSSELL announces that he has again personally resumed the publication of art books, fiction, enriched and limited editions, pictorial reprints, and general literature under the imprint of:

R. H. RUSSELL

He wishes particularly at this time, because of their unique value, to call your attention to seven books by

CHARLES DANA GIBSON



who has just come back to this country, reiterating the statement that he would not return to the field of his early and remarkable success in pen and ink characterization of American types and manners.

The books listed below printed on heavy plate paper and bound in Japan vellum practically cover his work:

The Social Ladder	- - - -	\$5.00
Americans	- - - -	5.00
A Widow and Her Friends	-	5.00
The Education of Mr. Pipp	-	5.00
Sketches and Cartoons	- -	5.00
Pictures of People	- - - -	5.00
People of Dickens	- - - -	5.00

JAMES McNEILL WHISTLER

His own witty satire on the *cause célèbre* which excited and diverted Europe and America, "The Baronet and the Butterfly," with the author's butterfly signature in gold on the cover. \$1.25.

More of the famous **Wolfville Stories**, by ALFRED HENRY LEWIS, entitled "The Black Lion Inn." \$1.50.

"The Tiger and the Insect," a sequel to "Helen's Babies," by JOHN HABBERTON. \$1.20.

Write for a list of other important publications. Every direct purchase of five dollars' worth of books will entitle you to a year's subscription to

THE METROPOLITAN MAGAZINE

The Great Monthly for the American Home

The July number contains among other striking things:

"Hypnotism and Freedom—Curative Hypnotism," by Prof. Hugo Münsterberg; "The Night Riders," an Account of the Tobacco War, by Day Allen Willey; "The Passing of the Ferries," by Jackson Cross, pictures by Alvin Langdon Coburn; "The Wedding Journey of Felice Arguello," by Charles Frederick Holder, and "The Color Line," by Lucy Pratt.

15 CENTS A COPY

\$1.50 A YEAR

R. H. RUSSELL, Publisher



Dept. A., 3 W. 29th St., New York

Dustless Sweeping an Accomplished Fact

Bissell

"CYCO" Bearing Carpet Sweeper

will cleanse your carpets and rugs with 95% less effort than a corn broom requires, and at the same time completely dispose of the dust. Have you ever considered how a corn broom injures your carpets and fine rugs? You wouldn't think of using a whisk broom to clean a fine velvet gown, and yet the damaging effect is just the same in using a corn broom for sweeping fine carpets and rugs.

The rapidly revolving brush of the Bissell touches the carpet uniformly and without the slightest injury, removing all the grit and dust, and depositing same within the pans. The use of the Bissell means saving of time, carpets, labor and health, besides a **great** economy, as it will last longer than fifty brooms.

Price \$2.50 to \$5.50.

Buy a Bissell "Cyco" Bearing Sweeper now of your dealer, send us the purchase slip **within one week**, and we will send you **FREE**, a neat, useful present.

Send for free booklet.

Dept. 125
Bissell Carpet Sweeper
Co., Grand Rapids,
Michigan
(Largest
and Only
Exclusive
Carpet
Sweeper
Makers
in the
World.)



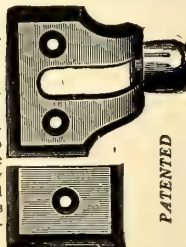
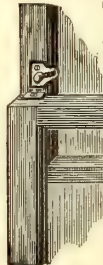
SPECIAL OFFER to Carpenters

BUILDERS AND OWNERS OF HOMES

IVES PATENT WINDOW VENTILATING LOCK.

A Safeguard for Ventilating Rooms. Pure Air, Good Health and Rest Assured.

To introduce this article, Four Ventilating Locks in Genuine Bronze, Brass or Antique Copper Finish will be mailed to any address prepaid for One Dollar. Will include a forty page Hardware Catalogue and Working Model to carpenters who wish the agency to canvass for its sale. Address



The H. B. Ives Co. NEW HAVEN, Conn., U.S.A.

BOOKS

RELATING TO
Architecture
Decoration
Furniture
Ceramics, etc.

will be recommended and supplied by our well equipped Book Department.

MUNN & CO.
361 Broadway
NEW YORK

Ornamental Waterfowl

SWANS DUCKS GEESE

Show Birds and Animals of Every Description :: ::

LOUIS RUHE, 248 Grand Street, NEW YORK



A Great Combination

*Economy Color Effect
Durability*

All these qualities are combined in

RUBEROID RED ROOFING

Trade Mark Reg. U. S. Pat. Off.

ECONOMY—Because it is moderate in price, requires no skilled labor to lay, and costs little or nothing to keep in perfect condition.

COLOR EFFECT—Its richness of color lends an air of elegance and refinement to any building.

DURABILITY—Because it outlasts any other roofing made. Will not melt, rot or corrode like tar, shingles or metal roofs.

Fire Resisting and Weather-Proof

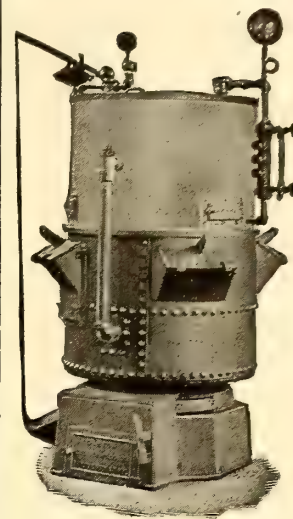
Made also in BROWN and GREEN
Write for Samples and Prices

THE STANDARD PAINT COMPANY
100 William St., New York

Chicago St. Louis Kansas City Boston Philadelphia New Orleans

GORTON

SIDE FEED BOILERS SIDE FEED



For Steam
and
Hot Water
Heating

Insure a
Warm
Building
Day
and Night in
Coldest
Weather

Send for
Catalog

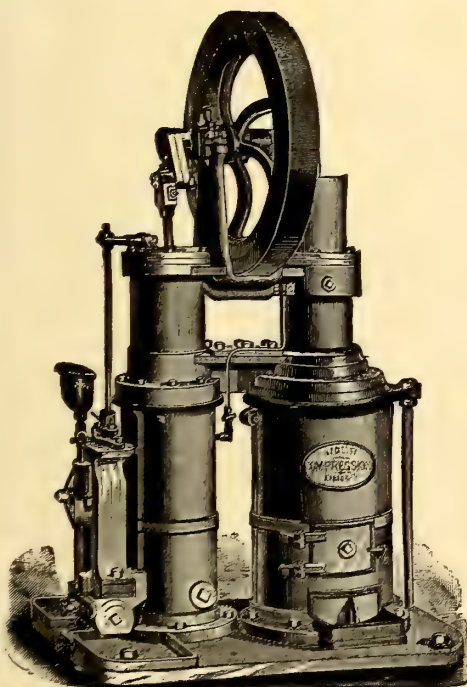
GORTON & LIDGERWOOD CO.
96 LIBERTY STREET, NEW YORK
Old Colony Bldg., Chicago 77 Oliver St., Boston



Take a
few minutes
right now and get real facts on
steel ceilings and side walls.

Call in your stenographer and simply say "Eller Manufacturing Company, Canton, Ohio. Send for catalogue." You will be more than repaid. We take such an interest—are glad to serve you, and for years everybody knows "Eller" has stood for the highest in quality.

ELLER MFG. CO.
CANTON, OHIO



Improved Rider Hot Air Pumping Engine

AND

Improved Ericsson Hot Air Pumping Engine

PRICES GREATLY
REDUCED

Send for Catalog "E" to nearest office

Rider-Ericsson Engine Co.

39 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



Our remarkable recent inventions enable us to
offer the public an intensely brilliant

Smokeless Gas

at much less cost than city gas, better, safer and
cheaper than electricity, and costing but one-
fourth as much as acetylene.

Most Durable and Least Expensive
Apparatus to Maintain

In effective perpetual operation. Gives services
of lighting, cooking and heating. Fulllest satis-
faction guaranteed, and easy terms. The very
apparatus for suburban homes, institutions, etc.
We construct special apparatus also for fuel gas
for manufacturing, producing gas equivalent to
city gas at 50 cents per 1000 cubic feet, and made
to respond to very large demands; also for light-
ing towns, etc.

C. M. Kemp Mfg. Co., Baltimore, Md.

GURNEY HEATERS

GURNEY HEATERS, measured by quality, economy and efficiency, are the standard of value.

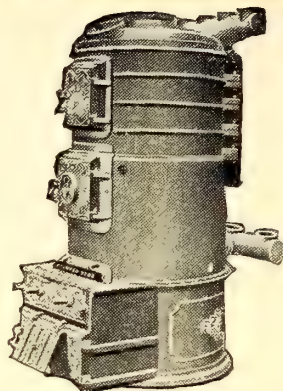
☐ They are made of the best materials and by the highest grade of mechanical and engineering skill; constructed under these conditions, they are unequalled in durability.

☐ There is also complete combustion of fuel and no waste of heat units, thus insuring great economy.

☐ The **GURNEY HEATER**, made either for hot water or steam, distributes the heat evenly and with a certainty that gives complete satisfaction to the user.

☐ Easily installed in old or new buildings they appeal to those who want to eliminate extra care and waste, or who want greatest value for amount expended.

☐ Send for illustrated catalogue.



GURNEY HEATER MFG. CO.

188-200 Franklin St., Corner Pearl St., BOSTON, MASS.
NEW YORK BRANCH, 12 East 42d Street

SEND FOR OUR CATALOG, "HOME HEATING"

HOT-WATER HEATED \$198
by **ANDREWS SYSTEM** EACH



IT IS WELL WORTH READING

Paper Patterns for Heating Plants

About 40 years ago a man named Butterick made a business of cutting patterns for men's shirts. His wife suggested that patterns be made in similar manner for women's and children's clothes. He did this, and the result is the present tissue-paper pattern used in every home. By using these patterns any woman who can sew can save half the cost and make clothes fully as attractive and serviceable as she can get from a professional dressmaker.

We make patterns for Heating Plants. Send plan or sketch of your house for exact estimate free. Our price will include best radiators, pipes cut to fit, fittings, valves, gold bronze, and the now famous Andrews Steel Boiler. Everything complete, ready for erection, with diagram and directions, so any man handy with tools can erect. Andrews Steel Boiler has double heating surface, requires less fuel, is simple, durable, easily cleaned, and needs no repairs. We furnish the hottest radiators (100 square feet

with the Andrews System will do the work of 150 feet with the others); perfect control secured by our Regurgitating Safety Valve and Group System of piping. We design, manufacture, guarantee and sell each plant direct from factory to user, giving you the lowest price for the value. Don't buy a heating plant, either water or steam, until you have sent for our catalog, "Home Heating," which explains fully how you can erect your own plant and save plumbers' charges. Send for list of our customers in your vicinity and examine their plants. We do it right in 44 States, Canada and Alaska. Plants guaranteed and sold on 360 days' trial free. (Remember we manufacture the most economical boiler, furnish the quickest circulation, hottest radiators and lowest price for the value.) Freight Rates Equalized. Cut out this ad. to-day, send names of other people going to buy and get full particulars. Old houses easily fitted.



ANDREWS HEATING COMPANY, 825 Heating Building, MINNEAPOLIS
783 LaSalle Building, CHICAGO

MANUFACTURERS CONTRACTORS CONSULTING ENGINEERS



HOMES AND BUNGALOWS

At Guaranteed Prices

☐ Send us 25 cents for the "Home-Seeker," containing 50 designs of suburban homes and bungalows ranging in price from \$500 to \$10,000, and articles pertaining to home building. Absolutely reliable.

Home-Seeker Architectural Co., Dept. H.G., 47 John St., New York



The SCIENTIFIC AMERICAN BOY

By A. RUSSELL BOND

12mo. 320 Pages. 340 Illustrations. Price, \$2.00, Postpaid.



A STORY OF OUTDOOR BOY LIFE, suggesting a large number of diversions which, aside from affording entertainment, will stimulate in boys the creative spirit. Complete practical instructions are given for building the various articles. The book contains a large number of miscellaneous devices, such as scows, canoes, windmills, water wheels, etc.

MUNN & CO. Publishers of "SCIENTIFIC AMERICAN" 361 Broadway, New York



YARD AND GARDEN. By Tarkington Baker.
Indianapolis: The Bobbs-Merrill Co.
Pp. 41.

There have been a good many books published on the garden in the somewhat ornamental and extended aspect, but the old-fashioned yard, which is the common appendage of most houses of ordinary cost, has been without its special prophet and guide. This has been a serious want in recent garden literature, and Mr. Baker is to be congratulated on preparing a book which not only fills this need but which fills it in a very complete and happy manner. The fact is, there is so much that one may do in a garden that most writers on this fascinating subject feel it essential to make their books as complete as possible. The owner of a small garden, or one who quails at extensive gardening operations, will not find nearly so much help in such books as he should, partly because of their wealth of information and partly because he does not know just where to find what he wants.

It is to meet the needs of this very large class that this book has been prepared. The scope of its contents is by no means small, since necessarily a very large number of subjects must be treated in it. But the author in no way and at no time departs from his initial point of view, which is to offer suggestions for the small garden. In other words, he gives just what the owner of the small place most needs to know. This information is given in a condensed and readable manner, supplemented with numerous photographs and views.

THE CARE OF THE SUMMER ROSE BED

By Ida D. Bennett

THE choice of roses will depend largely upon individual taste, a rose that may seem to possess all the desirable attributes of beauty to one may entirely fail to appeal to another, so greatly do we differ in taste, but there are certain roses that have become so well established in popular favor as to make their selection a matter of course even in a quite limited list. Among these may be mentioned La France, the sweetest and most beautiful of the pink roses, and remarkably well adapted to garden culture. Papa Gontier has always been a great favorite of mine, both from its freedom of bloom, immense size and ease of culture. The Bridesmaid, also, may be depended on for a profusion of choice pink roses the summer through.

Among the rich red roses no finer flower will be found than Admiral Schley, with its glowing color and unusual thickness of texture, Meteor and Jacqueminot, Madame Baden, Liberty, and above all the exquisite Virginia R. Cox or Gruss and Teplitz or Crimson Hermosa, as it is variously called. This is a persistent bloomer of most wonderful fragrance and persistent, glossy green foliage, tipped in the new growth with crimson, and much less addicted to the entertainment of insect guests than most of the summer roses—a quality not to be despised.

Kaiserin Augusta Victoria, The Bride, Frances Willard, may all be selected where a white rose is desired, with the certainty of excellent results, and there are many tinted and shaded roses of much beauty and value, and I am inclined to think that more satisfactory re-

sults will be obtained by selecting three or four good varieties of each color—pink, white, crimsons, tinted and the like, rather than a greater number.

For continuous blooming the teas and hybrid teas will give the best results, and in the North, where the winters are too severe for any but the most rugged constitutions, these may be planted as annuals, selecting the small, mail order size, which are sold singly at ten cents and may be bought by the hundred for about eight dollars. These really give better results the first year than the larger two-year-old plants which cost thirty-five cents a piece. For some reason they seem to mind the change from the greenhouse pots to the open ground much less than the older plants, which always seem to resent the disturbance and to sulk and be long in becoming established.

The bed which is to receive the roses should be prepared some time in advance of the time in which the plants are to be planted, that it may have time to become settled. It should be composed of good garden loam, clay and old well-rotted manure in generous quantity, as it is almost impossible to make the soil too rich for roses. Where no clay exists naturally in the soil it should be added, but in adding it it must be thoroughly pulverized and thoroughly incorporated with the soil.

It is always better in ordering roses from the florist to have them sent by mail, as in that case much of the earth may be left about their roots, and they do not receive the setback of plants denuded of all the earth. Plants which are received by mail should never be placed directly in the ground, but should be potted off in pots the same size in which they were grown in the greenhouse and set in a cool, shady place for a few days, when they may be brought to the sunshine and encouraged to grow, and it is only after new growth begins that they should be transferred to the open ground; they should then be slipped from the pots into a hole made by pressing the pot into the soil with as little disturbance of the roots as possible, the hole should be filled with water, the soil pressed firmly around—you can hardly pot or bed roses too firmly, and a dry mulch of earth produced over the surface of the bed by the trowel. Planted in this way these small plants will rarely fail to grow and bloom luxuriantly all summer.

Roses sent with the ball of earth intact about their roots may be set directly in the open ground, planting as directed for the smaller plants. When roses are received in a wilted condition it will be well to place them at once, without unwrapping the paper or moss about them, in a basin of cool, not cold, water and set in a cool place—a warm cellar will do excellently, until the foliage has regained its brightness, when they may be unpacked and potted or planted, as the case may be.

Long narrow beds are more desirable for tea roses or other summer bloomers than large or round beds, as it is necessary to give the plants an amount of attention impossible in beds too large to reach across.

Early in the spring, before the first buds have opened, the various enemies of the rose will begin to appear. Probably the first of these will be the ubiquitous green louse or aphid, these come in such sudden and apparently inexhaustible quantities that they threaten to annihilate the plants, leaf and stem. Tobacco in some of its forms is the universal panacea for this ill; it is, however, somewhat difficult to apply on plants in the open except in the form of tea which may be sprayed on the plant with a plant syringe, or with a gun; smoke is much more effectual but difficult to apply. Where the plants are small, a frame may be constructed to fit over

LOUISVILLE SHOW ROOMS



NEW ORLEANS SHOW ROOMS

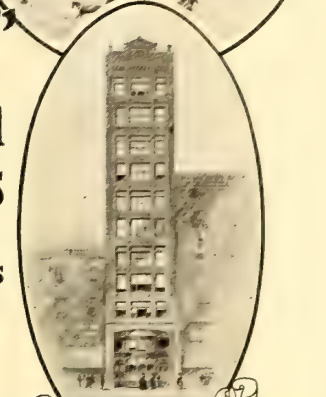
CLEVELAND SHOW ROOMS



PITTSBURGH SHOW ROOMS

"Standard" "Green & Gold" Label PLUMBING FIXTURES

Are sold by First-Class
Plumbers in every
Town and City in
the World



NEW YORK SHOW ROOMS

The magnitude of our organization is alone sufficient testimony of the superiority of "Standard" "Green and Gold" Guarantee Label Plumbing Fixtures. It is self-evident that no such organization could be created and maintained without supremacy of quality as a basis.

When purchasing the plumbing equipment for your home you should insist that every fixture bear the "Standard" "Green and Gold" label. Genuine "Standard" Fixtures are the most sanitary and the most durable equipment procurable at any price. This "Standard" label is therefore a protection you cannot afford to be without. Under no circumstances accept a fixture without the "Green and Gold" Guarantee Label, as any fixture without it is an inferior substitute.

Every householder should have our beautifully illustrated 100-page book, "MODERN BATHROOMS." This book gives you information on sanitary matters that will save you many dollars in building or remodeling your home. Write for it now. Enclose 6c. postage and give us the name of your architect and plumber (if selected).

Address **Standard Sanitary Mfg. Co.** Dept. 23, Pittsburgh, Pa., U. S. A.

Offices and Showrooms in New York: "Standard" Building, 35-37 West 31st Street.

Pittsburgh: 949 Penn Avenue.

Louisville: 325-329 West Main Street.
London, Eng.: 22 Holborn Viaduct, E.C.

New Orleans: Cor. Baronne & St. Josephs Sts.
Cleveland: 648-652 Huron Road, S.E.



NEW YORK WAREHOUSE



LONDON SHOW ROOMS



BOSTON WAREHOUSE

all or a part of the bed; this may be of light wood covered with canvas or thin cloth; it should have an opening in one side and a small box large enough to receive the pan of coals and tobacco stems should be provided to fit into or against this opening; this allows the smoke to enter the frame while keeping the heat of the burning tobacco from the plants. The frame should remain over the plant a quarter of an hour at least, and the stems of tobacco should be wet before placing over the coals, that they may produce a dense smoke and not a blaze.

One of the most satisfactory insecticides is found in a simple bath of hot water, used either as a spray or as a bath. It is entirely safe on hard wooded plants like roses, and has the advantage of not only killing all insect life, even the pestiferous red spider, but of leaving the plant in a healthy, clean condition. When used as a bath the whole plant should be immersed for two or three minutes, and the water may be used at a temperature of about 135 degrees; when used as a spray in the open air it may be increased to 145 or 150 degrees without harm. Kerosene emulsion is fatal to all insect life that is not protected with a hard shell, hence is effectual when applied

for red spider, green lice, thrips, mealy bugs and the like, but for the disgusting little green caterpillar there is no remedy so effectual as to go over the bushes and pinch the leaf in which he has taken refuge between a determined thumb and finger.

For the rose beetle or bug one must resort to Paris green, as they cannily refuse to keep still and take their medicine. If Paris green is mixed with lime in the proportion of a teaspoonful to a quart of plaster and lightly sifted over the bushes at evening when the plants are wet with dew, it will adhere and may be washed off in the morning after it has done its work. In using Paris green or other poison on roses the precaution should always be taken to label the plants plainly to that effect, as many persons have a penchant for eating rose leaves, which makes the use of poison very dangerous.

The small-sized roses should be set one foot apart in the beds, and the two year olds from eighteen inches to two feet, according to size. They should be set about the depth at which they grew in the pots or ground. Cultivation of the beds should begin at once; no weeds should be allowed to gain a foothold, but should be immediately eradicated.



First Impressions Are Best

The entrance to your home gives your caller the impression of dignity and hospitality when its construction is honest and its design is in good taste.

Morgan Doors

make most impressive entrances. Not only are they designed correctly according to the best ideas in doors, but they are built honestly from the best grade of hard wood and by workmen who know how to make good doors.

Morgan Doors are all stamped "Morgan" which is a guarantee—one we stand by—to replace any Morgan Door if it fails to give satisfaction. They are guaranteed not to crack, warp, or shrink.

Morgan Doors are made in all architectural styles, mission, chateau, empire, colonial, etc., and for inside or outside use.

"The Door Beautiful" Book Free Send us your name at once and you will receive a copy of this beautiful book which shows and describes the beauties of Morgan Doors.

Morgan Company, Dept. A, Oshkosh, Wis.

Distributed by Morgan Sash & Door Co., Chicago, Ill. Morgan Company Oshkosh, Wis. Morgan Company, Baltimore, Md

Science for the Evenings

The Heavens Without a Telescope

A MOVING PICTURE OF THE UNIVERSE

The Only Combination Sun, Moon, Star and Planet Map



Every Stellar body accurately placed for any date for the next twenty years, in the Northern Hemisphere. Indorsed by leading scientists. Requires no technical knowledge to use it. Complete mastery of the heavenly bodies in a few hours.

Most graphic way of interesting all in the wonderful planetary system of the Universe. Chart is 15 inches square, with revolving disk map showing all stars. Made of heavy cardboard.

Special Offer. For a limited time only, we offer our readers this splendid Planisphere at a special reduced price of \$3.00, postpaid. Send for descriptive circular.

MUNN & COMPANY, 361 Broadway, New York

Vudor Porch Shades

TRADE MARK

are made of thin strips of Linden wood, closely bound with strong seine twine in a lockstitch weave. They are artistically stained in weather-proof colors to harmonize with color scheme of house.



They keep out the sun, but let in the breeze.

Can be seen through from the inside, but not from the outside, giving privacy and seclusion. They are inexpensive—average equipment costing only from \$2 to \$10 according to size of porch. The shades come in various widths.

Vudor Porch Shades last for years and should not be confused with the flimsy, carelessly-made bamboo or imported screens which do not last and always look cheap.

Write for Booklet

handsomely illustrated in colors, and fully describing Vudor Porch Shades and also Vudor Re-enforced Hammocks—the Hammocks that last. With the booklet we will send you name of the Vudor dealer in your town. Address

HOUGH SHADE CORPORATION, 240 Mill St., JANESVILLE, WISCONSIN

The New Building Felt

LINO FELT

(LINEN FELT MADE FROM FLAX FIBRE)

38 TIMES AS EFFECTIVE AS BUILDING PAPER

TO EXCLUDE COLD, HEAT OR NOISES

NOT EXPENSIVE—500 Million Yards now in use. Sold by Hardware and Building Material Dealers.

Send for FREE SAMPLE



WRITE **UNION FIBRE CO.**

44 Fibre Ave., Winona, Minn.

The Philip Carey Company

Distributors, Cincinnati

Branches and Warehouses in all large cities in the U.S., Canada and Mexico.

St. Louis, Mo.

Baltimore, Md.

F. Weber & Co.

1125 Chestnut St., Philadelphia, Pa.

Architects' and Engineers' Supplies



"FABRIANO" Hand-Made Drawing Papers

Superior to any other hand-made paper

F. Weber & Co.'s Illustration Boards, Air Brushes and Materials

Build with Concrete Blocks



Make them yourself and save half the cost. Experience unnecessary. A

Pettyjohn Machine

and equipment for only

\$33.25

Every machine guaranteed. Sent on trial. Sand, water and cement only materials required. Buildings handsome and durable. Big money making blocks to sell. Beautiful booklet FREE.

THE PETTYJOHN CO., 617 N. Sixth St., Terre Haute, Ind.



BRISTOL'S RECORDING THERMOMETERS

For automatically registering indoor or outdoor temperatures

ARE USEFUL AND ORNAMENTAL

Our Catalogue B sent on request

The Bristol Co., Waterbury, Conn.

New York, 114 Liberty St. Chicago, 753 Monadnock Bldg.

During dry periods the beds should not be allowed to dry out, the evaporation of moisture from the wet soil under the influence of a hot sun produces much the same atmosphere as that they enjoyed in the greenhouse and results in magnificent bloom. In wet weather less water will be needed but more cultivation, and the ground must be frequently stirred that it may not become sour or musty. In hot muggy weather it is better to water early in the evening, or so that the foliage shall have time to dry off before dark, as there will, then, be less danger of mildew—a prevalent trouble with the tea rose.

Frequent doses of liquid manure will be needed by the rose beds if notable blooms are to be produced. This may be prepared by filling a kerosene barrel with manure, first placing a spigot in one side near the bottom and placing an armful of straw in the bottom of the barrel—enough to come up above the end of the spigot and act as a filter. The barrel should then be filled with water, and will be ready for use almost at once; this may be drawn off and applied to the rose bed twice a week through the season.

Young rose bushes rarely need pruning the first year, and the frost may be trusted to attend to the matter the second. Should this, however, not be the case, they may be lightly trimmed before commencing growth in the spring. There is no fixed rule for trimming roses, but it may be considered safe to remove all weak, broken and dead branches; any branch that crowds against another to its injury, and to thin out plants that have grown too close so that the sun and air cannot reach every part of it. In cutting back roses shorten to where the new leaf buds present a plump and strong appearance. Plants that bloom during summer should be freely cut from, and if in cutting the roses a generous length of stem is removed each time, little if any pruning will be necessary.

It is doubtful if there is any absolutely safe manner of protecting tender roses during winter; certainly I have never found one. If one could know just what the winter would be one could protect accordingly with some hopes of success; unfortunately this is seldom the case, and our most carefully devised scheme of protection may prove a death trap for our treasures. The banking with earth to the tips offers as scientific a scheme of protection as any, but even that fails at times, and also involves an immense amount of labor. Covering with evergreen boughs is often successful, especially when it is further protected with a blanket of snow, and the snow alone is an ideal protection when it remains all winter, but snow that comes and goes plays havoc with all the garden's treasures.

Probably the safest and surest protection is found in the large span-roofed garden frames which are made large enough to cover the entire bed, are wind and water-tight, and may be taken apart and removed when the need of them is passed. These are filled with dry leaves tucked in between the roses and piled lightly over them, and as they remain dry through the winter are a real protection, not only from the cold, but alike from the sun, which really does the real harm to the rose bed by shining on the frozen branches and by sudden thawing causing them to burst. In using these garden frames it will be found a good plan, after the leaves are all tucked around the roses, to place a width of wire netting over the top of the roses, securing it firmly to the inside edge of the frame and place a layer of leaves over this—this is to insure the covering of the roses as the leaves beneath the wire settle gradually by their own weight, and sinking below the tops of the plants leave them exposed.

Complete Outfit

HAND AND FOOT-POWER MACHINERY

OUR No. 7 SCROLL SAW is warranted to be well made, of good material and workmanship, and to saw pine three inches thick at the rate of one foot a minute

SEND FOR CATALOGUE

W. F. & JOHN BARNES CO.
567 Ruby Street Rockford, Ill.

Price
\$15.00



A GREENHOUSE SUGGESTION

Just for example, let us assume that you want a house for cut flowers, one for general plants and another with high enough sides for palms or fern trees; then this subject shown meets the conditions. It is ornamental, economically arranged to heat and work, and built of our iron-frame construction, insuring you a freedom from repairs. Let us talk it over with you.

HITCHINGS & COMPANY

1170 BROADWAY, NEW YORK



And it's fireproof, it's handsome, and it will never need repairs. We've told this story to architects so long that it has got to be an old song—to some. Good things are always worth repeating however, and **CORTRIGHT SHINGLES** are real "good things" in the building line—so good that unscrupulous individuals are imitating the design with the object of deceiving the buyer. Therefore, be sure you get the shingles you specify.

"Cortright U. S. Pat. Off." Stamped on Every One of Them

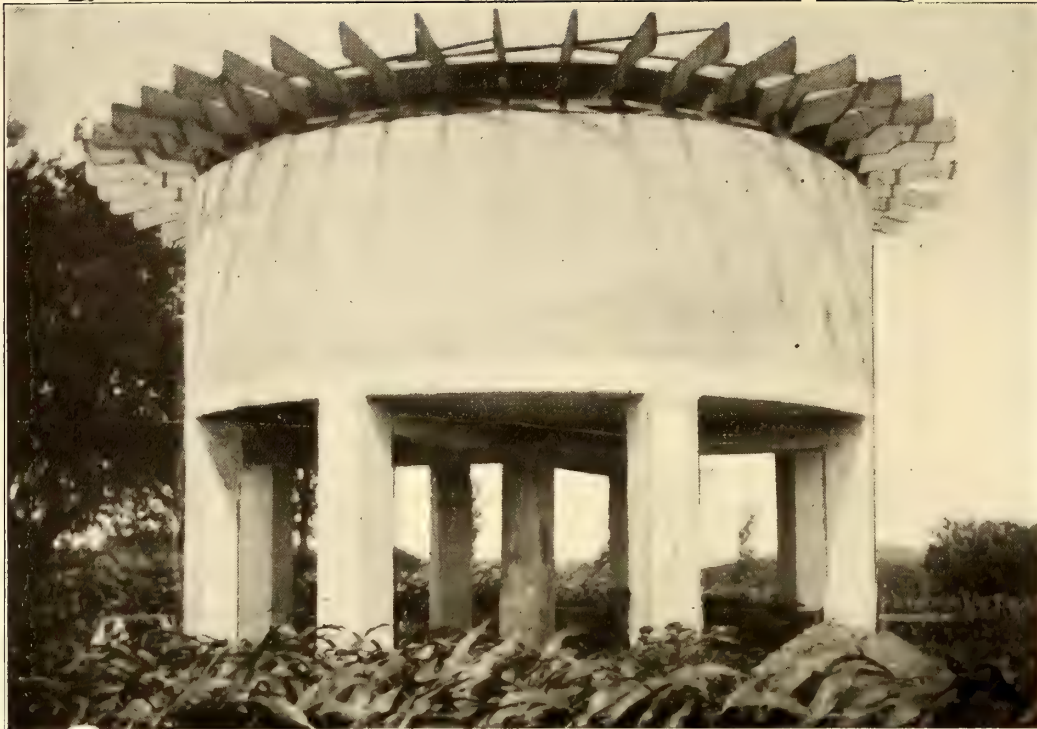
CORTRIGHT METAL ROOFING CO.

PHILADELPHIA AND CHICAGO

FLOORS



ROOFS



A concrete tank erected on estate of Edmund Tatham,
Katonah, New York

Frederick J. Sterner, Architect - - New York
De Lancey A. Cameron, Builder - - New York

Tank designed for storage supply of 15,000 gallons,
built entirely of concrete reinforced with Clinton welded
wire. Before roof was placed over tank, and during
winter months, ice 10 inches thick formed on water
stored therein. No cracks or leakage have developed.

Clinton Wire Cloth Company
CLINTON, MASS.

Cellings

FIREPROOFING DEPARTMENT
ALBERT OLIVER
1 MADISON AVE., NEW YORK

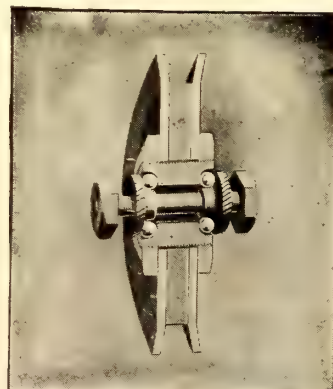
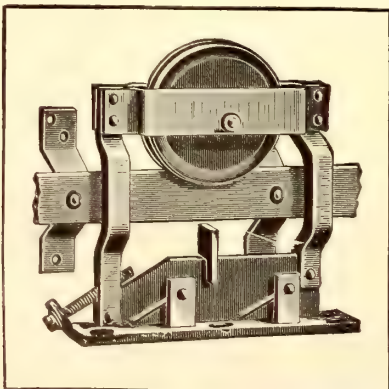
WASHINGTON: ROSSLYN SUPPLY CO., COLORADO BUILDING
SYRACUSE, N. Y.: PARAGON PLASTER CO.
ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
SAN FRANCISCO: L. A. NORRIS, 835 MONADNOCK BUILDING
SEATTLE: L. A. NORRIS, 909 ALASKA BUILDING

Partitions

"LANE'S BALL-BEARING"

is the

Best
House-
Door
Hanger
Made



Other Styles for Less Money

Sold by Hardware Trade

Send for Catalog

Lane Brothers Company, 434-466 Prospect Street, Poughkeepsie, N.Y.

INTENSIVE STRAWBERRY CULTURE

By George H. Sinclair

TO THE man with a small garden the problem of harvesting the greatest quantity from the minimum area of ground is ever present and intensely interesting. In this connection my experience in intensive strawberry culture may be of help to one so situated.

My plot of ground for berries was twenty by thirty feet, and varieties grown were three in number, Charles Downing, Kentucky and an unnamed seedling. The plants were set late in June on a rainy day—as soon as I could get new plants after fruiting—in rows twenty inches apart and fifteen inches between plants in the row. Not quite one hundred plants of each variety being used. The ground had been in corn on a clover sod the previous year and was prepared by spading to a depth of ten inches, turning under a liberal quantity of manure.

During the summer the bed was given thorough cultivation both ways with a handwheel hoe, using the cultivator teeth at least once a week and sometimes twice when the weather was very dry. At each cultivation every runner was carefully pinched off, not pulled. I have an idea that when the runners are carelessly pulled off that the young tender feeding roots of the plant are broken, thereby giving it a set back from which it takes some days to recover. How those plants did grow, how large and dark green were their leaves. In a short time I could only cultivate one way, and that finally became very hazardous.

The bed was well mulched with strawy manure in the fall, and about one bushel of wood ashes broadcasted over it early in the spring. Before growth had started the straw was raked from the rows and allowed to remain on the ground.

When the plants came in bloom it looked as if my wife had covered the bed with bleaching linen, it was so snowy white. The neighbor who furnished the seedling plants counted fifty-seven bloom stalks on one hill, and from that bed during the season were picked two hundred and nine quarts of berries, or at the rate of twenty thousand quarts per acre. The berries were fairly large and exceedingly well flavored. The yield could have been increased had all but the two large berries on each stalk been removed.

Berries grown by this plan, carefully picked with a stem one and one-half inches long on each berry, and then packed in new boxes lined with strawberry leaves, will command almost any reasonable price that one wants to ask in the New York market.

Why not cultivate less ground and do it better; grow better fruit; get better prices; abandon the matted row with its few large berries and myriad of small ones. At the rate this bed turned out, an acre yielding in the same proportion and berries selling at ten cents per quart—a very moderate price for good fruit—the gross income from an acre would be about two thousand dollars, and that is the best argument that can be advanced for intensive culture.

Cattle Manure
in Bags Shredded or Pulverized

Best for all indoor and outdoor work. No bad odor. Easily applied. Delivered east of Missouri River. \$2.00 per bag (100 lbs.) Write for circulars.

The Pulverized Manure Co.
21 Union Stock Yards, Chicago.



AMERICAN HOMES AND GARDENS



Price, 25 Cents. \$3.00 a Year

CONTENTS FOR JULY, 1908

	PAGE
"MAXWELL COURT": The Vista from the Pergola Looking Toward the House	256
MONTHLY COMMENT	258
NOTABLE AMERICAN HOMES—"Maxwell Court," the Residence of Francis T. Maxwell, Esq., at Rockville, Connecticut	<i>By Barr Ferree</i> 259
LEADED GLASS WINDOWS FOR DOMESTIC USE.....	<i>By Charles M. Shean</i> 266
"KINNEKORT,"—The Residence of Edward K. Cone, Esq., at Colonia, New Jersey. <i>By Paul Thurston</i>	268
ETCHING ON COPPER AND BRASS	<i>By Mabel Tuke Priestman</i> 272
GLIMPSES OF TOKENŒKE: Some Attractive Homes at Rowayton, Connecticut. <i>By Francis Durando Nichols</i>	275
SUMMER GARDENING IN FRANCE.....	<i>By Jacques Boyer</i> 285
THE HOME AND STUDIO OF AN ARTIST AT EAST GLOUCESTER, MASSACHUSETTS. <i>By Charles Chauncey</i>	289
CORRESPONDENCE:	
PROBLEMS IN HOME FURNISHING	<i>By Alice M. Kellogg</i> 294
GARDEN WORK ABOUT THE HOME	<i>By Charles Downing Lay</i> 294

The Care of the Summer Rose Bed.
In the Raspberry Field.

Intensive Strawberry Culture.
New Books.

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada, \$3.50 a year

Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



"Maxwell Court" : The Vista from the Pergola Looking Toward the House

AMERICAN HOMES AND GARDENS



Volume V

July, 1908

Number 7



"Maxwell Court": The Forecourt and Entrance Front

Monthly Comment



CONTINUED residence in the country brings forth, from time to time, various kinds of differences between the newcomers and the old settlers. This is especially the case when the old settlers are in the majority and have, perhaps, waxed rich in selling their farms to the new.

All sorts of matters are bound to come up from time to time, and sometimes a good deal of unnecessary friction is aroused, chiefly from the fact that neither party understands the other. It is difficult for a city man, for example, who has purchased a few feet or a few acres of rural land to understand that after having paid his hard earned money for the land, it should still remain a sort of public domain, access to which is demanded by the neighborhood at all hours of the day and night. Singular as it may seem, this is by no means an imaginary situation, but an actual condition that is frequently arising in all parts of the country. A newcomer purchases a water front property, and forthwith fences in his land clear to the water's edge. Laboring under the delusion that, having paid for this land, it is actually his, he sees no reason why he should not have it for his exclusive enjoyment. Of course, he may have known, or may not have known, that the older settlers had been accustomed to use his frontage as an agreeable summer promenade; but he very soon is made aware that, an ancient custom having been interfered with, he should not have done what he has, even though he had a legal right to do so. Or perhaps a diminutive stream trickles into his land; local authorities—non-legal—will argue by the hour that his property should be invaded at pleasure by others than the owner, who, in the popular mind, has really no rights at all on his own land that others may not enjoy.

CIRCUMSTANCES of this sort show an amazing ignorance of property rights which are likely to yield unpleasant results on both sides. It is a pity that this should be the case for most men wish to remain at peace with their neighbors; but it is often difficult to do that when unreasoning demands are made which are based on ignorance and prejudice. There is little unoccupied land near any of our cities that has not an owner who pays taxes on it. This ownership is real and actual, and is defended by many laws and buttressed by many legal judgments. The country youth, or even the farmer who occasionally sits on a jury, is neither competent to discuss these rights nor to abrogate them. The country store parliaments in which such matters are debated with great waste of wind and prodigious leakage of gas, while of the profoundest interest to its participants, carry no weight of real moment anywhere. Too often they lead to unpleasant results, both in propagating false notions, and in promoting lawlessness by disseminating ideas that are vicious at foundation and wrong in application.

THE moderate house, moderate in cost, in size, in site, in running expenses, is the house of the day and hour. The splendid house, large and vast, costly and extravagant, expensive to build and expensive to occupy, is the exceptional dwelling. It is true that, in many instances, it is a most interesting structure, or at least it may be, and many a soul that cannot hope to own one, or even so much as go into one, may take the greatest interest in such mammoth buildings. But the moderate house is the home of the average person, that is to say, of the person of average means, and it is, therefore, notwithstanding our present multiplicity of mil-

lionaires, the home of the bulk of the American people. It is the representative dwelling of the day, the age, the nation. It is the kind of house that most people possess and which most people may hope to earn.

THE characteristics of such a dwelling are not hard to seek. The chiefest is availability, and with this goes livability. These qualities are not determined by excellence of plan or desirability of elevation, but by the more subtle fact of adaptation to ends and means. No house, however excellent it may appear architecturally, is fit to live in that can not be enjoyed and occupied in a comfortable convenient way within the means of the occupant. One should never take chances with a house because it is agreeable unless it is actually certain that one can afford to live in it. Nor is it always sufficient to depend on estimated expenses. A veritable host of unexpected expenses will rise up and confront the house owner yearly, and perhaps more in the country than in the city. All these matters must be provided for or the home life will fall to the ground, and the house which, at the beginning, promised so much pleasure and comfort will, in the end, be a burden of exceeding weight, difficult to resist and hard to support.

THE moderate house, therefore, must be moderate in every respect. It should be no larger than it need be; that is to say, useless rooms and unnecessary apartments should be omitted as essential parts of its plan. It should be designed in a moderate way, without unnecessary ornamental features, often costly to build and difficult to keep in repair. The mechanical plant should be constructed in a similarly moderate way. It should be ample for every possible demand that may be put upon it, and should always be sufficient, but the very important point of economic administration should be carefully looked into and very deliberately considered. And the outside grounds and appurtenances should be on an equally moderate scale. There is charm and delight in extensive grounds and beautiful gardens, but neither of these very beautiful things can be acquired without some expense, and the greater the expense the greater the beauty that may be obtained in this way. All sorts of practical details in estate support are contained in these matters, and it may frequently be found the wiser course to be content with moderate outdoor spaces, rather than to load oneself up with waste land to which no profitable use can be put. Especially should one be moderate in embarking in rural industries. It is true, if much that has been written on this subject is to be believed, many comfortable livings have been secured by engaging in rural pursuits on quite microscopical pieces of ground. Yet though the testimony to this effect is not small, the wise sojourner in the countryside may find it more profitable to stick to his trade and leave such experimentation to his neighbors. One can always begin; sometimes it is difficult to stop if the beginning has been made in search of a profit.

BUT the moderate house need not, fortunately, be commonplace nor ineffective. Many moderate houses are of precisely this description and no other. But beauty and grace in building may be found in the moderate house quite as often as in the larger if one but go about it the right way, and especially if one realizes, as one should, that moderate disbursements for true architectural beauty are right and desirable investments, that will surely be appreciated the more as the house mellows with age and becomes dowered with family love and tradition.



The Pergola at the End of the Formal Garden

Notable American Homes

By Barr Ferree

"Maxwell Court," the Residence of Francis T. Maxwell, Esq., at Rockville, Connecticut



THIS is a generally accepted axiom that a house set on a hill can not be hid. Yet "Maxwell Court" may very well be cited as the exception that proves the rule, since one may not only approach the village of Rockville, but pass through it without seeing much more than fleeting glimpses of its roof, and most certainly without being aware that there was here a house at once so capacious and so finely illustrative of the architect's skill. This, it may be well to set down at the outset, was Mr. Charles A. Platt, of New York, to whom is due both the house and the garden attached to it.

The entrance roadway that leads to the house leaves the main highway at a point occupied by the stable and coachman's house. These buildings are located at what may be termed the base of the estate, and are sufficiently removed from the mansion as to leave it in undisputed isolation. A couple of broad bends, and the driveway comes to an end in the forecourt of the entrance front.

The house is now completely visible, and the whole character of its design and its component parts may be comprehended at ease. Yet, while this is completely true, the statement should not be taken too literally, since only the central portion of the front is contained within the limits of the forecourt, the house extending beyond on either side, and without the boundary of the inclosing wall.

Very interesting, indeed, is the arrangement of this entrance feature. The forecourt is a spacious enclosure, the

larger part of whose surface is finished as a driveway. One comes into it on one side, and finds oneself in an open space, inclosed on three sides with a brick wall, while the fourth is occupied by the house itself. The hillside rises somewhat abruptly before the house, but the declivity has been scraped away so that a perfectly level surface has been obtained, and the wall opposite the doorway actually incloses and supports the hill which rises above it with a fine crown of forest trees, and a growth of wood shrubbery immediately above the wall.

Like the house the enclosing wall is built of Harvard brick with Indiana limestone trimmings. The design is exceedingly simple, but full of life and vitality; for the wall is built in great panels of brick, emphasized with brick piers whose capitals are surmounted with balls of stone. In the center of the wall opposite the house door is a rectangular recess. Three steps fill its base, and above the platform thus created is a semi-circular niche or wall fountain. The hillside is reached by a flight of steps that is continued upward on one side, and which is completely hidden by the main inclosing wall. A wrought iron arch, of extremely decorative design, is applied to the two outer piers, and completes the ornamentation.

Long before all these details will have been noted the general character of the house will have been comprehended. It has a quiet and stately front, in which the prevailing note is very obviously that of dignity. And this is not the less true because, while designed on very conservative lines, it



The Terrace Front



The Wall Fountain in the Forecourt



A Garden Path



The Porch Overlooking the Garden

exhibits a considerable variety of surface. Its variety, however, is purely structural, and has been obtained by the simple device of retreating parts, and without any assistance from unstructural ornamentation.

The central portion is, of course, the most important and the most decorative. It is also the largest, and being surmounted by a pediment has an individuality of its own which is heightened by its strong projection before the main structure. The pediment is beautifully proportioned to the lower walls. Here, in the center, is the one decorative feature of the whole front. Below, in the center, is the doorway, a simple rectangular opening, faced without with two columns carrying an entablature which, in its turn, supports a low ornament. On each side is a small window. The angles are built up with Indiana limestone, and help support the second story, which consists of a loggia, wholly lined, on its three inner sides, with limestone. On the ends are paneled pilasters, and in the center are two Ionic columns. Within is a great central round arched window, immediately over the doorway, with smaller windows on either side. A couple of small carved panels are let into the wall above them.

The outer angles of this frontispiece are emphasized with brick quoins. Each wing contains a single large window. A similar treatment is applied to the next section; also, slightly further in, with two windows in the lower story and one in the upper, while a great porch at either end marks the completion of the house. The whole building is roofed with slate, this front containing here but two dormers. The great chimneys, which rise where needed, are notable features in the general outline.

The entrance front is completely cut off from the inner front, which can best be reached by passing through the house. It is designed in a more elaborate manner, although offering but a more decorative version of the elements that were so successfully employed in the entrance front.

We have here an almost straight wall, treated as two slightly marked pavilions on the ends, with a long connecting wall between them. It is true the center of this wall is slightly thickened, but this is without structural significance, and is simply a slight and legitimate emphasizing of the architectural center.

The conspicuous feature is the loggia that fills in the



The Tapestry Corridor Looking Into the Dining-room

whole of the lower story in the central wall. It is a great open porch, completely within the limits of the house lines, with a central opening emphasized with external columns and a broken curved pediment, strengthened within by a group of pilasters. A single column in the center of each adjoining space supports the extension of the entablature and the whole is closed with pilasters at each end. The inner space is walled throughout with limestone, and is fitted up and furnished as an outdoor sitting-room.

Just without it is the terrace, a long and spacious platform, extending wholly across the entire front, and reaching beyond

with flat arches of brick with keystones of limestone. The lower angles of the end pavilions are also built up in stone, but above the first story they are without emphasis. The thickening of the center of the wall has already been mentioned, and it only remains to add that the window here is incased within a large and ornamental frame of stone. A string course of brick separates the two stories in the end pavilions, and except for the loggia the walls are without other horizontal projections until the fine cornice is reached at the summit. Above is the roof, with segmentally arched dormers of a design similar to those of the entrance front.



The Terrace Is Floored with Brick, Marble and Cement



The Library Is

the porches with which the house is completed. It is inclosed within a stone balustrade, and is supported by a stone wall, with a superb flight of steps in the center that rise directly from the surface of the surrounding lawn. The flooring consists of Harvard brick laid on their sides; in the center are great panels of concrete laid in marble borders, the effect being that of mosaic on a large scale. The hillside drops quickly a short distance below the terrace, giving the front a singularly free and detached appearance, to which its whole design is admirably in keeping.

The remaining features may be briefly noted. They consist chiefly of a fine feeling for wall space and a skilful disposition of the windows. These are throughout of identical design, and consist of large rectangular openings, surmounted

Each end of the house is occupied by a porch. That to the left, as the mansion is entered, is inclosed with glass and is used as an outdoor dining-room when the season permits. That on the right is a great open structure immediately overlooking the garden, to which it not only serves as an introduction, but of which it is an integral portion. It is built completely of limestone, the same material being employed also for the house wall immediately beneath it. It is nearly square, being three bays long on the sides, and three bays across the front. It is supported by columns with pilasters on the ends. The ceiling is of plaster, elaborately paneled and decorated, and the floor is paved with brick.

The garden, to which this porch so completely belongs, is an immense space inclosed with a brick wall of the same gen-

eral design as that which incloses the forecourt. At the far end, opposite the porch, is a pergola, built of wood, and semi-circular in form, completely inclosing the garden at its furthest limit, and forming a highly effective climax to the whole beautiful space. I must not stop too long to describe the beauties of this garden, for they are very many. Everything that goes into the making of a lovely garden has been developed here in a very characteristic and splendid manner. There are spacious stretches of lawn, carefully kept paths, numerous flower borders, much planting of shrubbery, and exactly the right number and the right sort of garden orna-

ported on their outer sides, the space beneath being completely exposed, with paneled under-surface. The paneling of the side walls is discontinued at the summit of the cornice of the first story, the upper wall being painted with Pompeian red directly on the plaster, illuminated with a small Pompeian figure. The brilliant tone of the upper wall is continued throughout the hall in the second story.

The two chief rooms are the library and the dining-room. The latter is finished in Italian walnut, with a low wainscoting of perhaps three feet in height, while the upper walls are hung with old Italian leather, embossed with a pattern of



Library Room of State



The Hanging Staircase and the Pompeian Wall Decorations

ments to give emphasis where needed. It is not only beautifully laid out, but it is beautifully planted, and one need hardly add that it is kept in the very pink of perfection. Very beautiful also are the views that can be gained of the adjoining country from the open side, the finest of all the views to be obtained from the house, beautiful outlooks over beautiful country.

The most striking feature of the interior is the staircase that leads from the main hall to the second story. This is an entirely unique design, carried out in a very splendid manner. The whole of the lower hall is paneled in wood to the ceiling and painted white. At one end is a semi-circular ending or recess, in which the stairs arise. They are carried around the semi-circle in low, gentle curves, being entirely unsup-

comparatively small squares. The butler's pantry and the kitchen are associated with the dining-room, and both are entirely adequate for any demands that may be put upon them. Adjoining the kitchen the servant's dining-room has been conveniently located.

The library is a real room of state, and is very beautifully and elaborately finished and decorated. The woodwork is throughout English oak. The walls are paneled in wood to the ceiling, which is finished with exposed beams, with wood panels. The cornice is richly carved, the high points being picked out with gold. On one side is the fireplace, with an old Italian mantel, with richly carved panels and elaborate frieze that harmonizes very completely with the design of the room.

whole of the lower story in the central wall. It is a great open porch, completely within the limits of the house lines, with a central opening emphasized with external columns and a broken curved pediment, strengthened within by a group of pilasters. A single column in the center of each adjoining space supports the extension of the entablature and the whole is closed with pilasters at each end. The inner space is walled throughout with limestone, and is fitted up and furnished as an outdoor sitting-room.

Just without it is the terrace, a long and spacious platform, extending wholly across the entire front, and reaching beyond

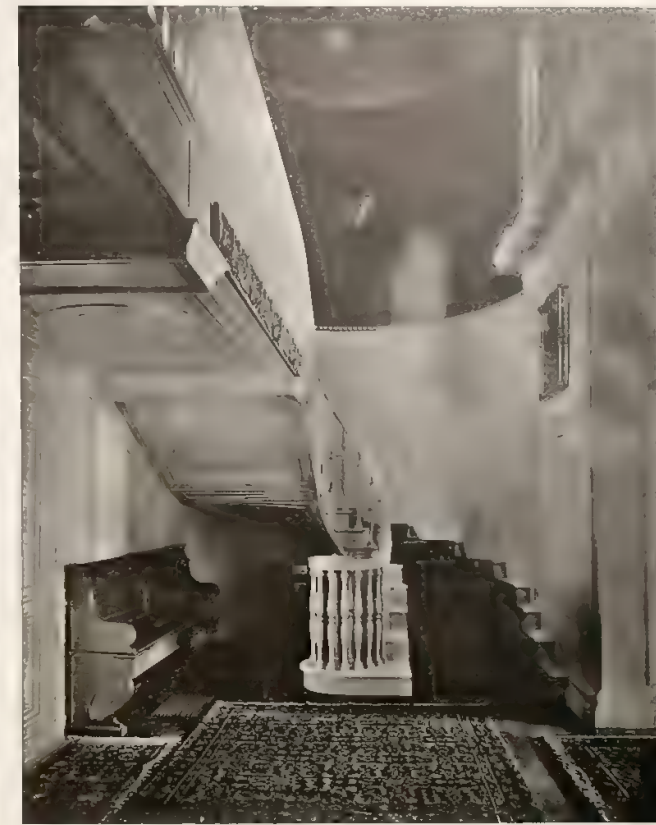
with flat arches of brick with keystones of limestone. The lower angles of the end pavilions are also built up in stone, but above the first story they are without emphasis. The thickening of the center of the wall has already been mentioned, and it only remains to add that the window here is incased within a large and ornamental frame of stone. A string course of brick separates the two stories in the end pavilions, and except for the loggia the walls are without other horizontal projections until the fine cornice is reached at the summit. Above is the roof, with segmentally arched dormers of a design similar to those of the entrance front.



The Terrace Is Floored with Brick, Marble and Cement



The Library Is a True Room of State



The Hanging Staircase and the Pompeian Wall Decorations

the porches with which the house is completed. It is inclosed within a stone balustrade, and is supported by a stone wall, with a superb flight of steps in the center that rise directly from the surface of the surrounding lawn. The flooring consists of Harvard brick laid on their sides; in the center are great panels of concrete laid in marble borders, the effect being that of mosaic on a large scale. The hillside drops quickly a short distance below the terrace, giving the front a singularly free and detached appearance, to which its whole design is admirably in keeping.

The remaining features may be briefly noted. They consist chiefly of a fine feeling for wall space and a skilful disposition of the windows. These are throughout of identical design, and consist of large rectangular openings, surmounted

Each end of the house is occupied by a porch. That to the left, as the mansion is entered, is inclosed with glass and is used as an outdoor dining-room when the season permits. That on the right is a great open structure immediately overlooking the garden, to which it not only serves as an introduction, but of which it is an integral portion. It is built completely of limestone, the same material being employed also for the house wall immediately beneath it. It is nearly square, being three bays long on the sides, and three bays across the front. It is supported by columns with pilasters on the ends. The ceiling is of plaster, elaborately paneled and decorated, and the floor is paved with brick.

The garden, to which this porch so completely belongs, is an immense space inclosed with a brick wall of the same gen-

eral design as that which incloses the forecourt. At the far end, opposite the porch, is a pergola, built of wood, and semi-circular in form, completely inclosing the garden at its furthest limit, and forming a highly effective climax to the whole beautiful space. I must not stop too long to describe the beauties of this garden, for they are very many. Everything that goes into the making of a lovely garden has been developed here in a very characteristic and splendid manner. There are spacious stretches of lawn, carefully kept paths, numerous flower borders, much planting of shrubbery, and exactly the right number and the right sort of garden orna-

ported on their outer sides, the space beneath being completely exposed, with paneled under-surface. The paneling of the side walls is discontinued at the summit of the cornice of the first story, the upper wall being painted with Pompeian red directly on the plaster, illuminated with a small Pompeian figure. The brilliant tone of the upper wall is continued throughout the hall in the second story.

The two chief rooms are the library and the dining room. The latter is finished in Italian walnut, with a low wain scoting of perhaps three feet in height, while the upper walls are hung with old Italian leather, embossed with a pattern of

ments to give emphasis where needed. It is not only beautifully laid out, but it is beautifully planted, and one need hardly add that it is kept in the very pink of perfection. Very beautiful also are the views that can be gained of the adjoining country from the open side, the finest of all the views to be obtained from the house, beautiful outlooks over beautiful country.

The most striking feature of the interior is the staircase that leads from the main hall to the second story. This is an entirely unique design, carried out in a very splendid manner. The whole of the lower hall is paneled in wood to the ceiling and painted white. At one end is a semi-circular ending or recess, in which the stairs arise. They are carried around the semi-circle in low, gentle curves, being entirely unsup-

comparatively small squares. The butler's pantry and the kitchen are associated with the dining-room, and both are entirely adequate for any demands that may be put upon them. Adjoining the kitchen the servant's dining-room has been conveniently located.

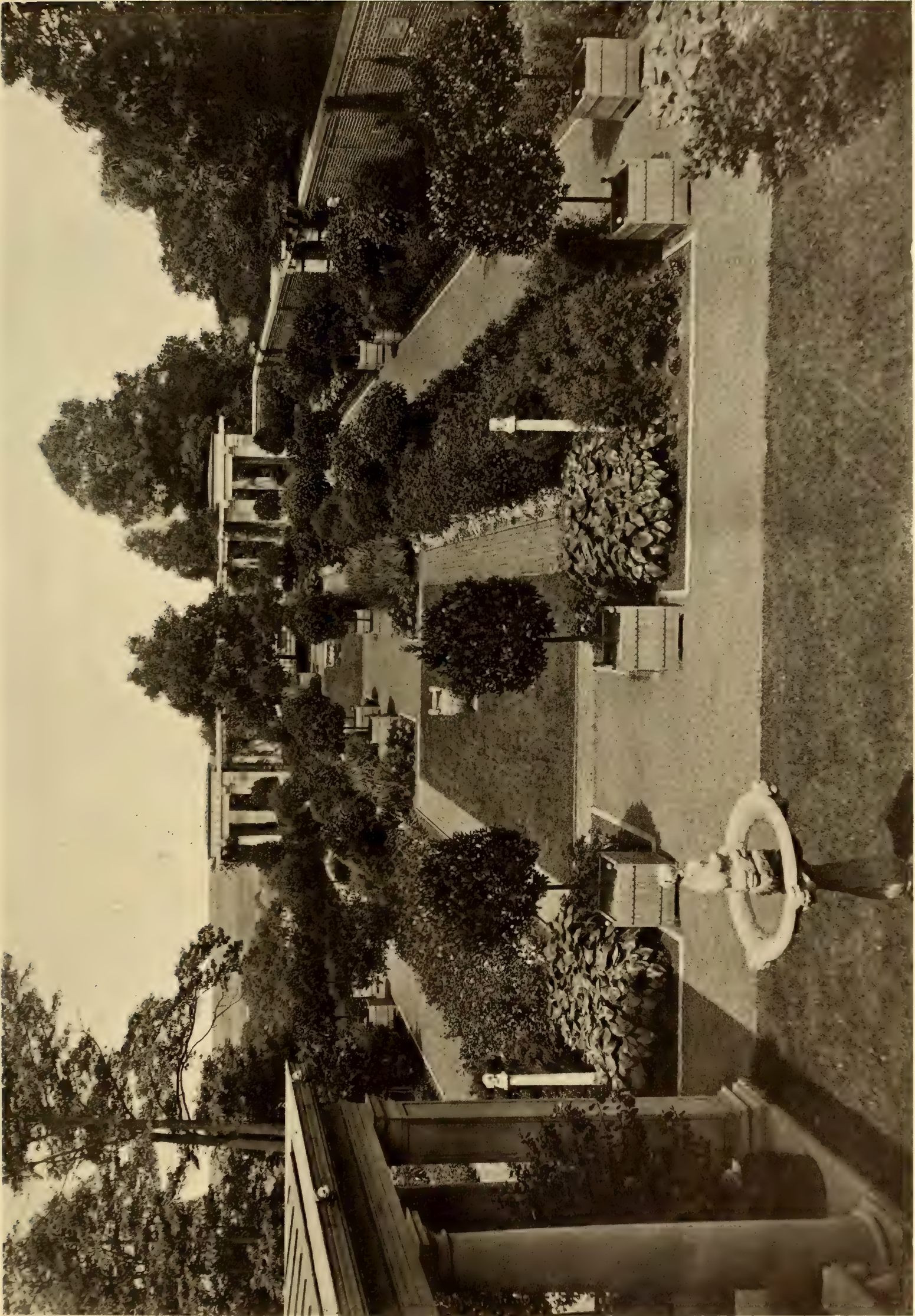
The library is a real room of state, and is very beautifully and elaborately finished and decorated. The woodwork is throughout English oak. The walls are paneled in wood to the ceiling, which is finished with exposed beams, with wood panels. The cornice is richly carved, the high points being picked out with gold. On one side is the fireplace, with an old Italian mantel, with richly carved panels and elaborate frieze that harmonizes very completely with the design of the room.



The House and the Garden



The Dining-room Is Furnished with Italian Walnut



Everything that Goes into the Making of a Lovely Garden Is Here Developed in a Very Splendid Manner

Leaded Glass Windows for Domestic Use

By Charles M. Shean



HE masterpieces of the glass workers' craft, gorgeous of color and magnificent in tone, which glorify many a great church and cathedral, are almost always associated in the mind of the average man and woman with the buildings in which they have been seen. Ecclesiastical art, therefore, is generally regarded as practically the only use to which stained glass of rich coloring may properly be put.

In consequence, the availability of this medium for domestic use and its adaptability for household ornamentation have been too generally overlooked.

Compared with colored glass the deepest and richest pigments on the palette of the painter are poor and ineffective. In glass alone is color at its full splendor to be found; but in the few figure windows that have been placed in homes, where the full gamut of color has been used, the result generally has been unsatisfactory. Perhaps the principal reason being that the effect, no matter what the subject may be, is apt to recall ecclesiastical work in which rich draperies and glittering accessories have become traditional; and then again in very few homes can a figure composition of rich coloring be seen from a distance sufficient to give it its proper effect.

There is, however, one kind of colored window for the dwelling, in which rich tones have been most successfully used by a few artists, and which stands in a class by itself. That is the landscape window.

In these windows the richest tints of our autumn woods have been given in a way to make them pictured things of beauty, and this with no hint of ecclesiasticism. They enrich and embellish the rooms in which they are placed, and, moreover, this form of composition lends itself most happily to windows of any shape; circular, square, long and narrow, or upright. Furthermore, they can be used to advantage where the outlook is disagreeable, always providing that the light is sufficiently strong to properly illuminate them.

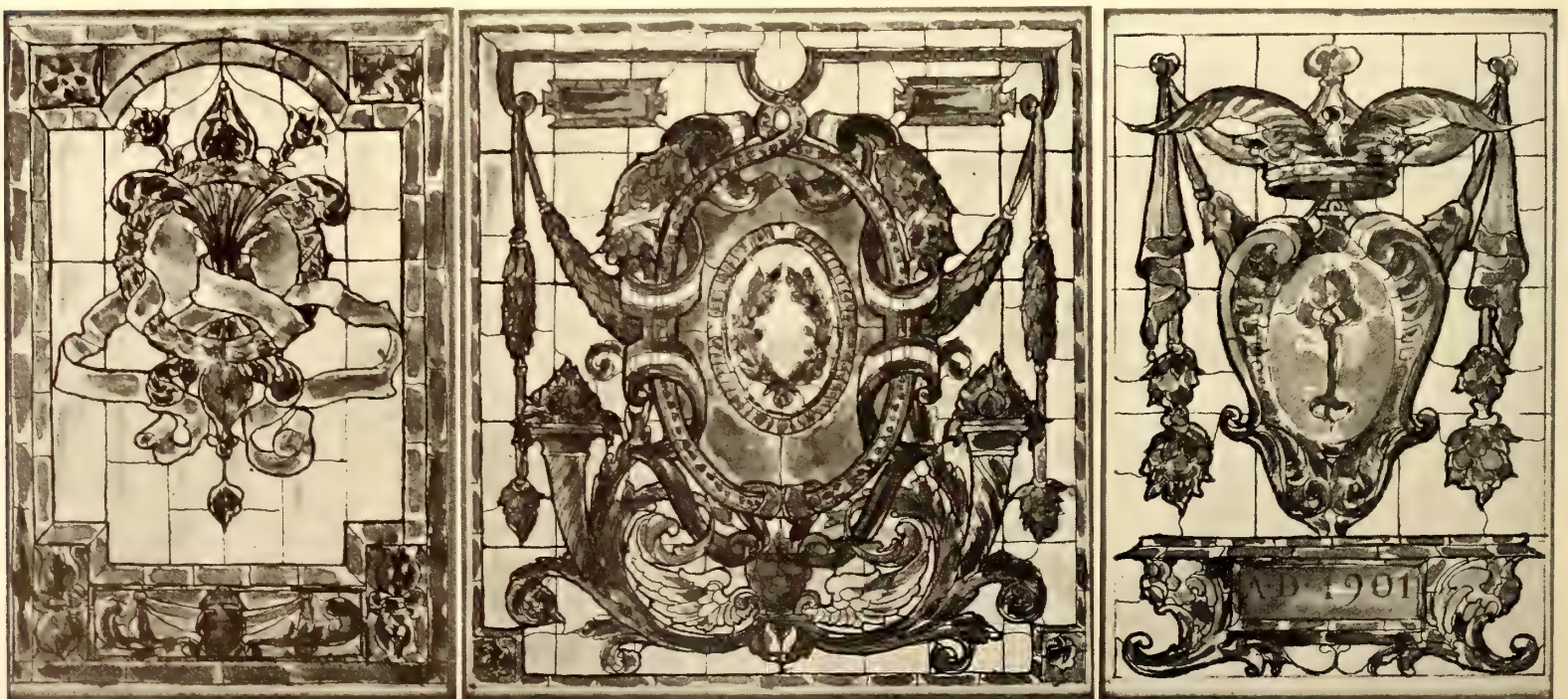
When, however, the light is not sufficient to show a heavy window of this sort, there are compositions calling only for delicate and translucent glass. Some of the most successful American landscape windows are of this description; trees white or pink with blossoms, or with the tender green leafage of early spring.

The accidental flow of color and the blending of tones in American opalescent glass, if properly selected and judiciously used, can be made to suggest a wealth of landscape effects; the depth of the forest, the tenderness of distant mountains, the silveryness of streams, the greens, browns and purples of undulating hills.

Frequently the skies of landscape windows are their principal feature, and the glass available for this purpose is abundant, of great variety and of wonderful beauty.

These windows are susceptible of almost the diversity of nature itself. Sometimes a few slender trees with light leafage are used with the distance low and simple, the sky leaded in clear glass, so that color and pattern, together with a view of the outside world, is secured. Or again a few branches with blossoms and leaves can be thrown across the window and the rest left in clear transparent glass. Sometimes in small windows a spray of flowers is shown and the greater part of the window left uniform in color, either clear or translucent glass being used. For these windows many Japanese designs naturally suggest themselves as often available.

Glass for domestic use offers as large a scope for the artist's fantasy and invention as ecclesiastical work. In many ways it is a more inviting field, for formulæ and stereotyped forms are lacking, and the artist is freer to develop his conception in an original and personal way; subject always to the marked limitations of the material. For in glass crude realism is impossible, and perspective, except in a modified form, is out of place. The lead line dominates and controls the pattern and design and compels attention in every part. It is the basis of the worked out conception



Leaded Glass by Maitland Armstrong



Design for Window on Stairway Landing in Residence, Montclair, New Jersey, by Joseph Lauber

and skilfulness in its use is the test of the competent designer.

In old glass the lead line was arbitrary; holding together sheets and pieces of glass of different colors on which the design was painted or stained, and consequently differs radically from the American practise. The term "stained glass" is a misnomer when applied to American glass, but it has the sanction of usage. In American glass the pigments are molten in and each sheet contains a variety of blended tones which the artist selects and which are cut to the pattern shown on the cartoon.

Space and distance being available the human figure, either singly or in a composition group as elaborate as the opening may justify, can always be used; provided the color effect of rich glass is borne in mind. In important houses figure compositions are often the logical treatment for a given space, and by availing himself of the abundance of light and delicate colors produced by American opalescent glassmakers the artist can produce a result in every way secular.

A peculiar and most interesting form of figure window has been evolved, in which no painting whatever is employed. The heads and hands in American windows are painted in vitrifiable colors, the remainder being free from pigment and made of what is generally termed "pot metal." In the windows in question no pigment is used anywhere. The face and hands are made entirely of cut glass, and all the features are leaded in—to accomplish this without making a grotesque is in itself a "tour de force."

They have been principally produced in Europe by devotees of "L'Art Nouveau," and to a limited extent here under the same influences. They are expensive to make, and call for the highest form of trained skill, both in designer and cutter. In the cartoon there can be no uncertainty; every line must be even more carefully studied and more accurately placed than in the

windows in general use. They represent the highest development of the lead line in pictorial domestic glass.

The stained glass window is only a matter of design, of leading, of cutting and of selection. But while the "pot metal" is at the service of every man who cares to buy it, so are artists' brushes and tube colors, but if an artistic result is desired only an artist can give it, and for glass an artist is needed part of whose training has been to design and work in this particular medium; a medium whose advantages and limitations are marked and peculiar. This is the baldest of truisms, but for some inexplicable reason it is almost uniformly overlooked. Instead of going to the studio of an artist and craftsman, the average patron wends his way to the office of a glass factory, often with lamentable results.

For the ordinary dwelling something less elaborate and expensive than the landscape or figure window is generally called for, and in the vast majority of cases is necessary and desirable both on the score of good taste and economy.

For small houses or small rooms, those windows in which the leading forms geometric or ornamental patterns are most appropriate, the question of color being governed by the surroundings, as is also the pattern, which must have some relation to the architectural character of the room. If the room is in one of the historic styles the kind of leading is in a manner prescribed and it must of necessity, if the dictates of good taste and custom are followed, recall the architectural ornament by which it is surrounded. If the color of the room is permanent, that is, if hard wood or much marble has been used, the dominant note of color has also been determined in advance.

Fortunately most rooms are relatively simple both as to moldings and carving and in the windows of these the most tempting opportunities occur. In them the designing becomes simply a question of taste and of the conditions of outlook.



Design for Window in Residence, Montclair, New Jersey, by Joseph Lauber



A Quaint New-Old House Above a Stream

“Kinnekort”

The Residence of Edward K. Cone, Esq., at Colonia, New Jersey

By Paul Thurston



HE house “Kinnekort” is designed to realize the owner’s love for the simple charm of the old Dutch farm houses.

The outside walls of the house are covered with hand-riven cypress shingles twenty-four inches long laid eleven and a half inches to the weather and painted white. The roofs are covered with split cedar shingles, stained and bleached a weathered gray. The exposed foundations and chimneys are of common red Jersey brick laid Flemish bond in white mortar with five-eighth inch joints. The porches and terrace are paved with large red brick laid herring-bone in wide white mortar joints. Although the silhouette of the house is lively and varied from all viewpoints, it is interesting to note that from every aspect it fills a semi-circle, returning always to the ground and retaining repose and intimate connection with the site. The porches are large and occur

where needed, but are so tied into the house that its old-fashioned character is kept unhurt by the excrescence of a porch of the usual modern type.

The principal rooms have white painted woodwork, gray ceilings and birch floors stained dark mahogany red. The hall is paneled to the ceiling in the first story, and hung in the second with a landscape paper in dull grays, greens and blues upon a buff canvas-like ground, which is continued in the passage as a plain wall hanging. Entrance to the hall is

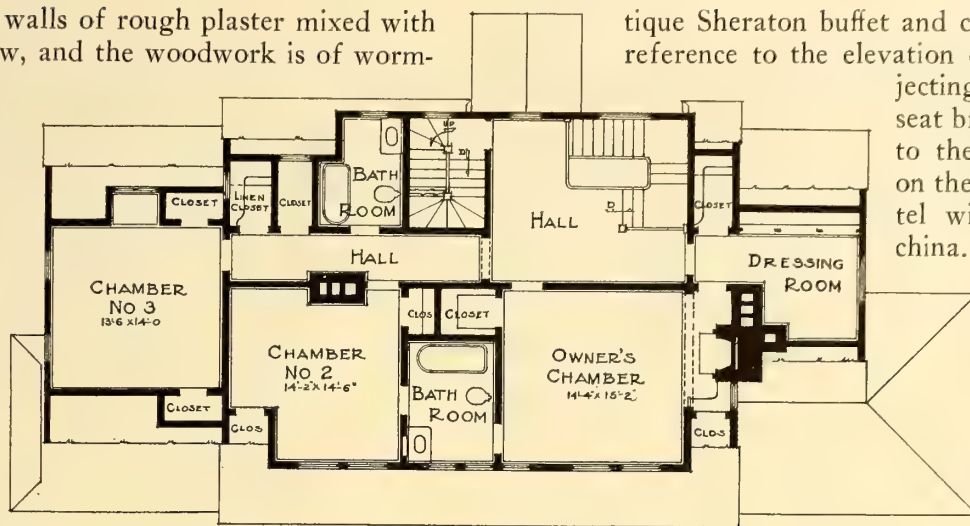
on the lower landing of the stairs, and a pleasing sense of gradual entrance into the house is given by descending one step to the hall and another to the living-room. This room is hung in old-fashioned chintz, and its broad windows open to the east porch and terrace. It is furnished, as are all the rooms, with charming old mahogany and excellent reproductions of the old work. The brick-lined fireplace has facings and hearth of specially made Volkmar tiles in dull green.

The den, open-



A Pergola Is Built at the Entrance to the Garden

ing from the hall, has walls of rough plaster mixed with a stain of golden yellow, and the woodwork is of worm-eaten chestnut in old brown. The wainscot is of plain boards and battens, and the posts and beams of the old braced framing are reproduced in the walls and ceiling. A generous fireplace and mantel of rough red brick occupies a nook with two settles. The nook is floored with red quarry tiles. The brick chimney is



Plan of Second Floor

tique Sheraton buffet and chairs were selected with reference to the elevation of this floor. The projecting bay with plant shelf and seat brings the morning sun into the room, and is balanced on the opposite wall by a mantel with flanking closets for china. The facings and linings of the fireplace are of old Harvard brick. The walls of the room are hung with a striped green velvet.

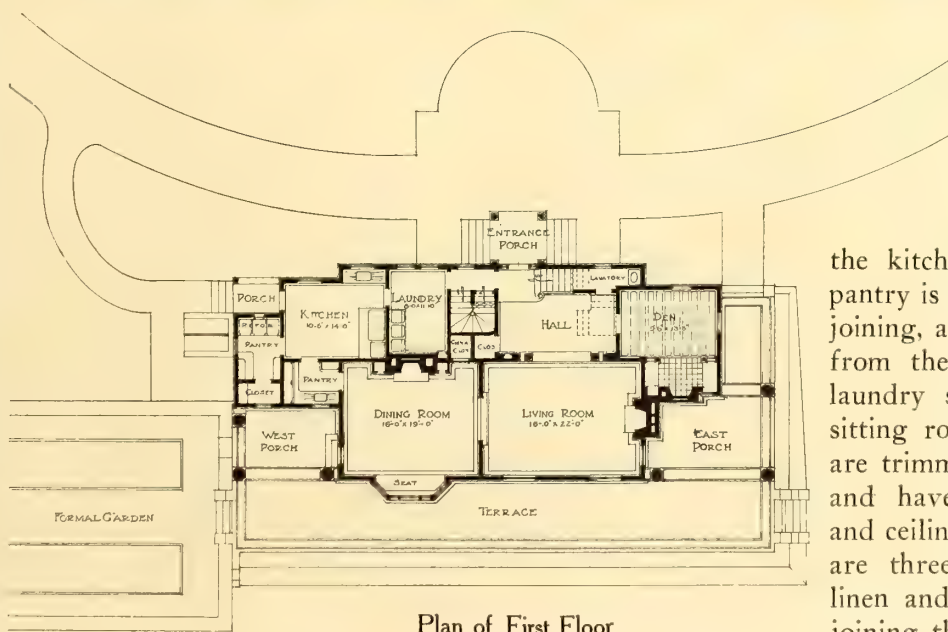
The west porch, overlooking the formal garden, opens from the dining-



The Exterior of the House Is Covered with Hand-riven Cypress Shingles Painted White

exposed, and its drawing over to the main stack is frankly shown by the stepped sloping breast and the arched recess, in which are shelves for storing familiar books within easy reach of the settles. Upon the plate shelf and pegs around the room are displayed an interesting collection of old china, brass and pewter.

The dining-room is separated by two steps from the living-room and the low an-



Plan of First Floor

room, and is easily reached from the serving pantry, which contains the usual cabinets and china sink, and connects the dining-room with the kitchen. An ample kitchen pantry is provided with larder adjoining, and with refrigerator iced from the servant's porch. The laundry serves also as servant's sitting room. All service rooms are trimmed in natural hard pine and have painted plaster walls and ceilings. On the second floor are three chambers, two baths, linen and maid's closets, and adjoining the owner's chamber is a



Classic Columns Supporting a Beamed Arch Form the Separation Between the Hall and the Living-room



The Garden Front of the House with Trees

dressing room with wardrobes and mirrors. The chambers are charmingly quaint in old-fashioned chintzes, with white painted woodwork and old mahogany. Although the roof is a low sweeping gambrel, the large front dormer gives level ceilings to the principal chambers, and the roof is of sufficient

height to afford two excellent bedrooms, a trunk room and a tank room in the third story.

Throughout the house great restraint has been exercised in the design of all woodwork, and an attempt has been made to present the crudeness of much of the old work while main-



The Living-room Is Furnished in the Colonial Style



The Walls of the Hall



Facing the Lawn, Decorated
Shrubbery



The Staircase Is a Handsome Feature of the Hall with Its Mahogany
Treads and Rail and Its White Painted Balusters

taining general excellence of proportion. In fact nearly all the interior trim was first designed with the usual elaboration of Colonial detail and reduced by successive eliminations of moldings and ornament to severely simple forms. The result has been to attain a restful freedom of atmosphere pe-

culiarly appropriate to a country house intended for summer occupancy.

Mr. George Nichols, of New York, was the architect, and the planting of the grounds was done under the direction of Mr. Charles W. Leavitt, Jr., also of New York.



Handsomely Paneled



The Dining-room Has Mahogany Furniture of the Sheraton Period



Classic Columns Supporting a Beamed Arch Form the Separation Between the Hall and the Living-room



The Garden Front of the House Facing the Lawn, Decorated with Trees and Shrubbery



The Staircase Is a Handsome Feature of the Hall with Its Mahogany Treads and Rail and Its White Painted Balusters

dressings room with wardrobes and mirrors. The chambers are charmingly quaint in old-fashioned chintzes, with white painted woodwork and old mahogany. Although the roof is a low sweeping gambrel, the large front dormer gives level ceilings to the principal chambers, and the roof is of sufficient

height to afford two excellent bedrooms, a trunk room and a tank room in the third story.

Throughout the house great restraint has been exercised in the design of all woodwork, and an attempt has been made to present the crudeness of much of the old work while main-

taining general excellence of proportion. In fact nearly all the interior trim was first designed with the usual elaboration of Colonial detail and reduced by successive eliminations of moldings and ornament to severely simple forms. The result has been to attain a restful freedom of atmosphere pec-

uliarly appropriate to a country house intended for summer occupancy.

Mr. George Nichols, of New York, was the architect, and the planting of the grounds was done under the direction of Mr. Charles W. Leavitt, Jr., also of New York.



The Living-room Is Furnished in the Colonial Style



The Walls of the Hall Are Handsomely Panelled



The Dining-room Has Mahogany Furniture of the Sheraton Period

Etching on Copper and Brass

By Mabel Tuke Priestman

THERE is a charm in etched metal that appeals to most of us, for not only is it extremely decorative, but it is very interesting to do, and not nearly as difficult as it would seem, on looking at an intricate piece of work. Its uses are manifold, and it is especially well adapted for candle lamp shades and sconces. The worker in sheet metal will find it a pleasant variety to the ordinary repoussé work.

For those who do not understand how repoussé work is done, a few preliminary directions are necessary.

Very few tools are required, some of which can be bought as they are needed. It is not necessary to buy a work bench, as a shelf or table can be made use of. The following list of tools will be needed, and can also be used for all kinds of repoussé work, etched, perforated, or cut metal:

A small pair of metal shears at thirty cents.

Medium hammer, forty cents.

Hardwood mallet, twenty-five cents.

Medium round file, fifteen cents.

Flat plier, twenty cents.

The following materials are also required for all kinds of sheet metal work:

Hard and soft wood blocks.

Several sheets of fine emery paper.

Numerous six penny wire nails, Nos. 10 and 20.

Sheet of copper, gage 21, which costs, per pound, twenty-three cents.

Sheet of brass, gage 24, costs twenty cents a pound.

Small copper rivets at forty cents will be required, together with a block of metal for riveting.

The little card tray, designed and executed by Mr. Haswell Clark, teacher of metal work at the New York School of Design, is an easy piece of work for the beginner. This little copper tray is formed by hammering and bending.

After the design is etched upon it the design may be traced upon the tray by means of a carbon sheet of paper. As the design is geometrical, only one corner of the design need be drawn, the same tracing being folded and traced on the three remaining corners in order to get them perfectly symmetrical. Cut a piece of copper with the shears exactly the size the tray is to be made. When this is cut out the metal must be laid on the hard wood block and any irregularities on its surface can be obliterated by striking it squarely with the wooden mallet. The corners must be rounded slightly, and draw a pencil line one inch from the edge on the four sides. Then place the hard wood block in this, in such a position that the pencil line shall come over the angle of the block. Then, with the round end of the mallet, beat the center of the side over the edge

of the block to begin to form the shape of the tray. Each side must be beaten, working up gradually to the corners, first from one side and then from the other, so that it closes up evenly. This can all be done by the round end of the mallet which will adjust itself nicely to the curves. If the edges are rough they must be filed, using the flat side for convex curves and the round side for concave. The corners are made to match by means of a rat-tail file, and the tray should now be ready for the process of etching. If it does



The Etcher at Work

not sit squarely on the table place it again upon the block, and tap with the mallet any irregularities until it lies perfectly flat upon the table. The tray is now ready for etching.

Cover the surface with a coat of asphaltum varnish by means of a paint brush, spreading it evenly on both sides of the design. Allow this to harden for twelve hours. The design will be visible through the varnish and must then be scratched with an engraver's pen until it is all exposed. Mix the following solution for eating the brass: Three parts of clear water, one part of nitric acid and one part of sul-

phuric acid. This must be placed in a large earthen jar, which should be kept covered, as the fumes are very unpleasant. Immerse the metal in the acid, which will gradually eat through the exposed parts. It can be fished out of the acid for examination occasionally with a stick, and can remain in it until the depth of depression suits the craftsworker. The tray will not need immersing nearly so long as the candle shades, which are eaten entirely through the metal.

The scone is made of quite heavy brass, and it will be noticed in the illustration how deep the lines are cut. The



Candle Shades

Brass Scone

Card Tray

Flattening the Bottom of a Card-tray
on the Wooden BlockShaping the Sides on the
Wooden Block

heavy sheet of metal is cut the shape of the sconce and immersed in the acid without the candle holder. This is made with a diameter of two inches, and is cut out and bent for holding the candle. The three angle pieces are cut from heavy metal and shaped to the right angle with the pliers. They are then punched and riveted to a drip cup, which is afterward fastened on to the twisted supporter. This solid piece of copper has the twist hammered with the steel hammer.

The combination of glass and etched metal is very beautiful and unique. The illustration of some etched metal over glass done in the Tiffany studios, gives many suggestions to craftsmen. The group of desk fittings consists of green etched metal over cloudy green glass, and its effect is most beautiful. If the



Etched Metal
Over Glass

Some small rivets must hold the binding in place on the metal candle shades, but when they are placed over the glass shades they can only be bent up to hold the glass together.

The candle sticks were eaten out in the same way as the shades, but these are beyond the scope of the beginner, and it is best to confine the early attempts to such simple things as candle shades, sconces and other flat surfaces.

The beginner must, of course, be careful to confine herself to designs of the simplest possible pattern. Elaborately detailed work is often very beautiful and is generally wonderfully attractive; but the more complicated the design, the more work there will be to do and the more difficult it will be found. Discouragement often follows attempts to reproduce complicated patterns, which should be avoided until the

elementary steps have been completely mastered. In etching on metal, as in all crafts work, the first steps are the most difficult, because most of the processes are strange and unfamiliar. There is nothing difficult in this kind of work, and a great deal of pleasure can be had from it. But one must be thoroughly familiar with the technique of the work before setting out to develop elaborate designs. With a very simple idea at the outset, simply developed and without unnecessary complications, it may be possible to produce serviceable objects from the very beginning. As more skill is obtained through practice, more elaborate pieces and more complicated designs can be undertaken. With a little application anyone may become an adept in this beautiful work.



Group of
Desk
Fittings

craftsman could purchase glass, leather or silk articles, the etched brass could be applied to them, and finished firmly off with a binding of brass or copper. The pine leaf design on the frame, matchboxes and inkstand has a ground work entirely eaten away by the acid, allowing the alien background to show through. Nearly any kind of leather or glass could be used as a background. The grape design on the note-paper holder shows more intricate work. The coloring of brass and copper is done in the following



The Drives About Tokeneke Are Delightful

Glimpses of Tokeneke

Some Attractive Homes at Rowayton, Connecticut

By Francis Durando Nichols



THE most enthusiastic characteristic of the American people at the present moment is their growing fondness for country life. This disposition to get close to nature is not a sudden fancy, but is an outgrowth of a well defined taste that has gradually developed. One of the many factors which have been the means of bringing this about is the desire of the urban dweller to indulge in athletics and sports, such as golf, tennis, horseback riding, boating, bathing and

other outdoor amusements. Another contributor is found in the increasing disposition on the part of the modern man of affairs to grant himself more respite from business cares than was formerly his custom, and even more protracted intervals for the enjoyment of home comforts, before and after the business hours of the day. Congested populations and higher rentals of our great cities is also one of the reasons why the city dweller has been forced to seek a home in the country, and while the greater part of the urban population must keep within close touch of the city, they require a



"Covesend": The Fountain on the Terrace in Front of Mr. Taintor's House



"Covesend": Mr. Taintor's House

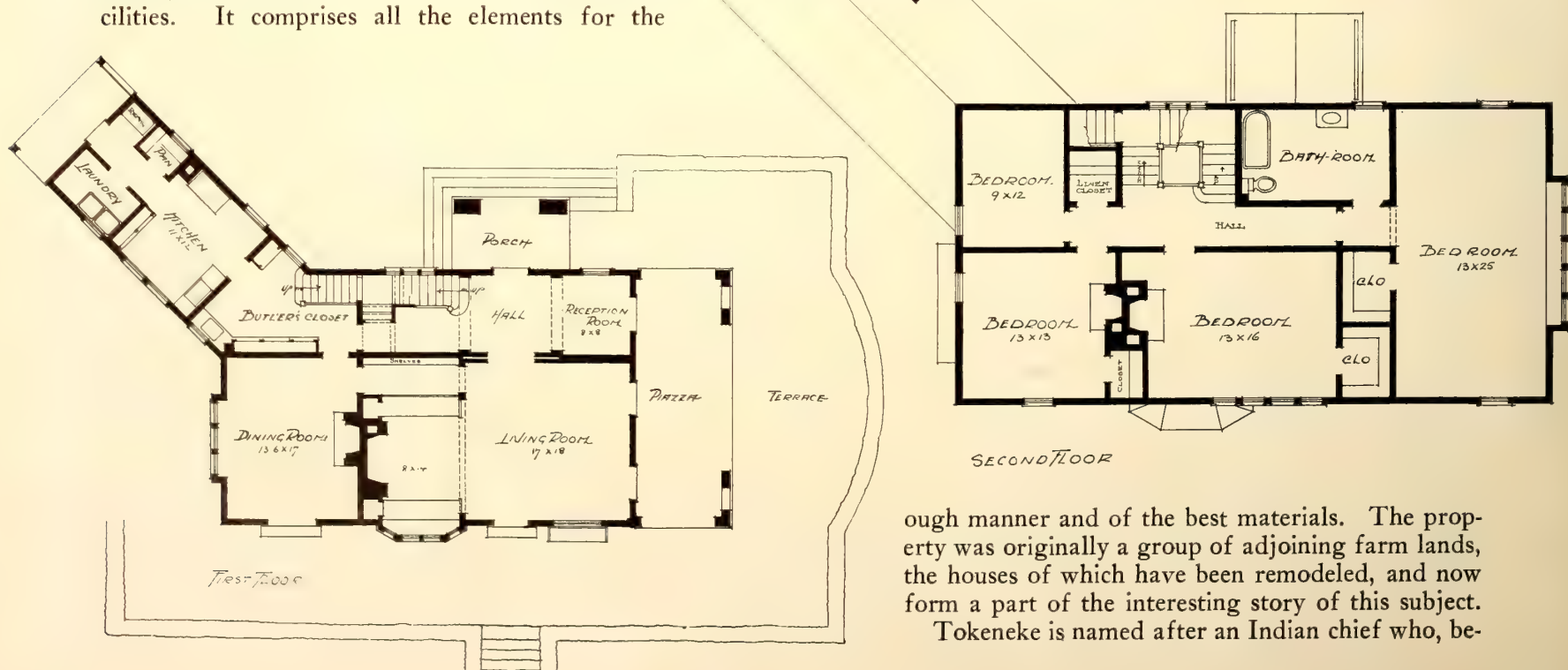
substitute in the greater isolation of a rural existence, which will preserve its innumerable advantages. Another notable factor which has added many recruits to the country is the providing of suburban properties in which are installed all the best modern improvements and conveniences, such as are to be found in the most complete city home.

The conditions which have been portrayed are not merely those of a single ideal community, but are existent in the semi-rural abiding places which are in close proximity to our leading American cities.

Tokeneke is thoroughly representative of these great possibilities of the times, for it is delightfully situated on the Connecticut shore of Long Island Sound, and is within close touch with railroad facilities. It comprises all the elements for the

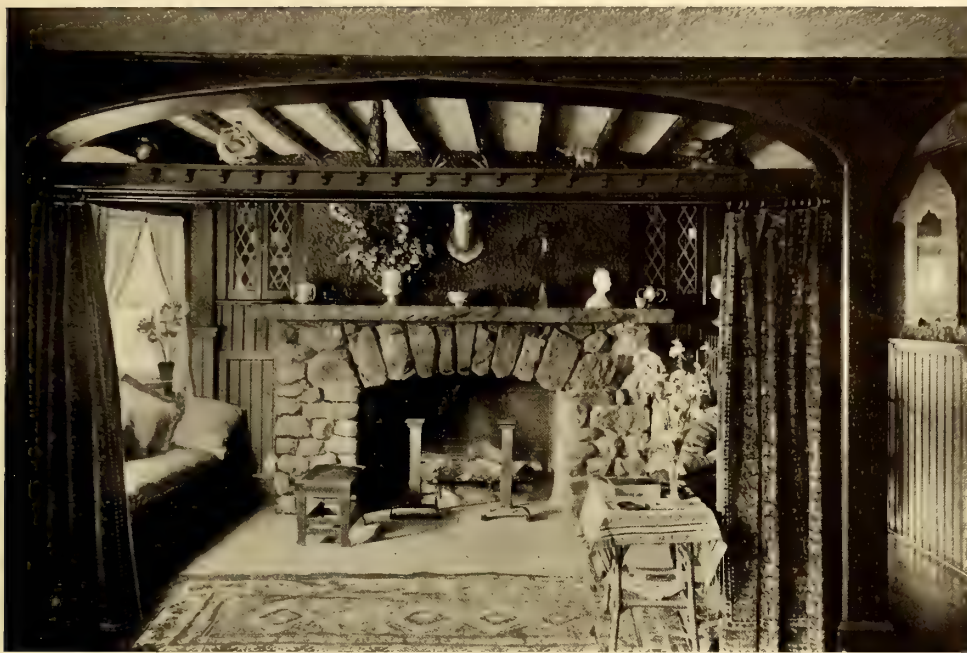
enjoyment of outdoor life, for it has miles of magnificent wooded drives, an inn for the accommodation of transient friends of the dwellers in the Park, a well-appointed casino, a garage, and every convenience and form of recreation.

There are some fifteen houses and bungalows on the property, many of which have been erected by the present owners; those built by the company have been constructed to meet the requirements of assured purchasers. All the houses are thoroughly equipped with steam heating apparatus, sanitary plumbing, electric lighting, electric bells, telephones and every modern convenience, and are constructed in a thor-



ough manner and of the best materials. The property was originally a group of adjoining farm lands, the houses of which have been remodeled, and now form a part of the interesting story of this subject.

Tokeneke is named after an Indian chief who, be-



"Covesend": The Inglenook Has a Stone Fireplace with Seats on Either Side

fore the white man trod the land, owned this beautiful shore where he hunted and fished. It must have been a favorite rendezvous for the Indian, for not only have flint and stone arrow heads been found in quantities, but there are no less than four of the old Indian corn mills laboriously cut from the rock, the pestles worked by hand and suspended from a sapling.

Tokeneke is unique in one respect, that the large bold rocks and heavy forest-wooded groves come to the water's edge. Mahackemo and Osceola drives and a number of the houses perpetuate some of the rhythmic names which Longfellow has so beautifully embodied in verse. "Minnewoa" is one of the most charming dwellings—it seems to grow from the rough jagged rock, embowered in mighty chestnuts and close to the water's edge. It has large verandas on three sides, outdoor breakfast-room, balconies large enough to sleep in, entrance hall extending through the house, with wide doors at either end, and an effective overhanging stair balcony in the oak columned and oak wainscoted hall. It has many bedrooms with tiled baths, and all the modern accessories that go with an up-to-date country dwelling.

Mr. Charles H. Pope's stone and shingle English house, with tiled courts and quadrangular fountain, wooded approach, and rock fronted lawn, is a beautiful country

house. Perched high upon a cliff, close to the Tokeneke Beach Inn, is a very attractive home, with its high, pergoda-curved veranda and a beach and sound outlets, owned by Lair C. Tetard.

High up among the trees, with a charming outlook of water, rock and land, is Mr. Freeland's bungalow.

One of the most interesting houses in the Park is "Casa-del-Ponte," which was illustrated in the June issue of AMERICAN HOMES AND GARDENS. "Covesend," Mr. H. D. Taintor's house, of which Mr. W. W. Bosworth, of New York, was the architect, is one of the most attractive houses in the group, and is built of stucco with a thatched shingle roof effect. The grounds surrounding it are most artistic in their layout. The terrace at the south of the house forms an excellent position from which a broad vista of the Sound is obtained.

The entrance to the house is into a hall, from which access is made to the reception-room and the living and dining-rooms. The entire floor throughout is trimmed with cypress, stained and finished in a deep Flemish brown.

The staircase has white painted balusters and a brown-stained rail. The walls have a wainscoting, and the space above is covered with rough stuccoed plaster tinted in plain col-



"Covesend": The Dining-room Has a Wainscoting Finished in Flemish Brown



"Covesend": The Living-room Has Rough Plastered Walls Above the Brown Stained Wainscoting

ors. The inglenook is the feature of the living-room, with its broad open fireplace built of rough stones, and a floor laid with paving stones. Broad seats are built on either side of it.

The dining-room, connected by a passage, is treated in a similar manner, and has an attractive fireplace and mantel. The service end of the house is perfect, and is provided with all the best modern conveniences.

The second floor is divided into sleeping-rooms and bathrooms, the latter fitted with porcelain fixtures and exposed nickelplated plumbing. The servants' quarters are placed on the third floor, which has also the trunk room.

"Shorewood," the summer home of E. H. Norton, Esq., is another of the most attractive of the newer houses. It is built of rock-faced fieldstone with half-timber work, carrying out English characteristics. The timber work is stained a soft brown color, and the white tinted plaster panels and the brilliant red shingled roof make a handsome picture. The interior is admirably planned, with great living-rooms on the first floor and sleeping-rooms and ample bathrooms on the second floor.

"Cedar Cliff" is a Dutch Colonial house, designed by Mr. A. N. Paddock, architect, of New York, and is built of stone and shingles, and has a very attractive setting with a group of cedars, from which it finds appropriateness in its name.

Mr. Walter Blabon's house, of which Carpenter & Blair, of New York, were the architects, is a new addition to the Park. It is a stone and half-timber house with bottle-green trimmings and gray plastered panels between the timber work.

Mr. Paddock's design for "Heartsease," the summer home of Joseph Sawyer, Jr., in a grove of tall chestnuts and close to the water's edge, is another one of his attractive houses in stone and half-timber work.

"Shing-wak" (lone pine), the residence of Mr. Thomas Alsop, is one of the old farm houses, which was built in 1771 and remodeled by Mr. Paddock in 1906. The changes have been slight on the exterior, as shown in the photographs of the house before and after the alteration; the only addition being the piazza and dormer windows built in the roof. Small lighted windows were installed in the old



An Arm of Long Island Sound



Rusticity Is Well Expressed in this Picture



The Casino and B



The Tennis Courts in the Park



Is Itself to the Shores of Tokeneke



Landing on the Beach



One of the Drives Through the Park



The East Entrance to Tokeneke Park

frames and the entire building was painted a pure white.

The interior shows a large living-room with a great open fireplace and a Dutch oven. The white painted trim and the walls, covered with linen and painted a cream-white, carry out the old Colonial effect. The staircase rises out of this living-room, and has white painted risers and balusters and a mahogany rail. The small alcove contains a bookcase and seat. The dining-room walls, which are covered with linen, are tinted a pea-green. The kitchen and small hall is fitted up complete.

The second story was renovated, and the four bedrooms had dormer windows built in the roof for extra ventilation and light. The bathroom is fully equipped and the whole house placed in a first class sanitary condition.

"Wayside," Mr. Gerrit Smith's house, is another of the renovated farm houses. It was built in 1749, and its transformation under Mr. Paddock's direction to its present condition has not been excessive. A piazza and a bay window were added to the side of the house and a bay window to the front; both the bay windows give additional space in the rooms to which they are attached.

The first floor contains a great living-room, with a large open fireplace and old Dutch oven, its old stone hearth and facings and its simple mantelshelf. The walls are covered with narrow green and white striped paper, and the trimmings are painted white. The windows are hung with chintz curtains with red roses on a white ground.

The drawing-room is finished in lavender and white. The walls are covered with a barred paper in lavender and white, and the windows are hung with chintz curtains in lavender and white.

The dining-room is finished in yellow and white. The walls are covered with yellow and white paper and the furniture is painted yellow to match. Yellow and white chintz curtains are hung at the windows. A bathroom was built in the second story and equipped with all the best modern conveniences.

"Naganook" (Little Home) is another of the old farm houses, built in 1764, and also remodeled by Mr. Paddock.

The exterior of this house was maintained in its entirety. The interior was changed, however, and

ors. The inglenook is the feature of the living-room, with its broad open fireplace built of rough stones, and a floor laid with paving stones. Broad seats are built on either side of it.

The dining-room, connected by a passage, is treated in a similar manner, and has an attractive fireplace and mantel. The service end of the house is perfect, and is provided with all the best modern conveniences.

The second floor is divided into sleeping-rooms and bathrooms, the latter fitted with porcelain fixtures and exposed nickelplated plumbing. The servants' quarters are placed on the third floor, which has also the trunk room.

"Shorewood," the summer home of E. H. Norton, Esq., is another of the most attractive of the newer houses. It is built of rock-faced fieldstone with half-timber work, carrying out English characteristics. The timber work is stained a soft brown color, and the white tinted plaster panels and the brilliant red shingled roof make a handsome picture. The interior is admirably planned, with great living-rooms on the first floor and sleeping-rooms and ample bathrooms on the second floor.

"Cedar Cliff" is a Dutch Colonial house, designed by Mr. A. N. Paddock, architect, of New York, and is built of stone and shingles, and has a very attractive setting with a group of cedars, from which it finds appropriateness in its name.

Mr. Walter Blabon's house, of which Carpenter & Blair, of New York, were the architects, is a new addition to the Park. It is a stone and half-timber house with bottle-green trimmings and gray plastered panels between the timber work.

Mr. Paddock's design for "Heartsease," the summer home of Joseph Sawyer, Jr., in a grove of tall chestnuts and close to the water's edge, is another one of his attractive houses in stone and half-timber work.

"Shing-wak" (lone pine), the residence of Mr. Thomas Alsop, is one of the old farm houses, which was built in 1771 and remodeled by Mr. Paddock in 1906. The changes have been slight on the exterior, as shown in the photographs of the house before and after the alteration; the only addition being the piazza and dormer windows built in the roof. Small lighted windows were installed in the old

frames and the entire building was painted a pure white.

The interior shows a large living-room with a great open fireplace and a Dutch oven. The white painted trim and the walls, covered with linen and painted a cream-white, carry out the old Colonial effect. The staircase rises out of this living-room, and has white painted risers and balusters and a mahogany rail. The small alcove contains a bookcase and seat. The dining-room walls, which are covered with linen, are tinted a pea-green. The kitchen and small hall is fitted up complete.

The second story was renovated, and the four bedrooms had dormer windows built in the roof for extra ventilation and light. The bathroom is fully equipped and the whole house placed in a first class sanitary condition.

"Wayside," Mr. Gerrit Smith's house, is another of the renovated farm houses. It was built in 1749, and its transformation under Mr. Paddock's direction to its present condition has not been excessive. A piazza and a bay window were added to the side of the house and a bay window to the front; both the bay windows give additional space in the rooms to which they are attached.

The first floor contains a great living-room, with a large open fireplace and old Dutch oven, its old stone hearth and facings and its simple mantelshelf. The walls are covered with narrow green and white striped paper, and the trimmings are painted white. The windows are hung with chintz curtains with red roses on a white ground.

The drawing-room is finished in lavender and white. The walls are covered with a barred paper in lavender and white, and the windows are hung with chintz curtains in lavender and white.

The dining-room is finished in yellow and white. The walls are covered with yellow and white paper and the furniture is painted yellow to match. Yellow and white chintz curtains are hung at the windows. A bathroom was built in the second story and equipped with all the best modern conveniences.

"Naganook" (Little Home) is another of the old farm houses, built in 1764, and also remodeled by Mr. Paddock.

The exterior of this house was maintained in its entirety. The interior was changed, however, and



An Arm of Long Island Sound Bends Itself to the Shores of Tokeneke



Rusticity Is Well Expressed in this Picture



The Casino and Boat Landing on the Beach



One of the Drives Through the Park



The Tennis Courts in the Park



The East Entrance to Tokeneke Park



"Shorewood": The Summer Home of E. H. Norton, Esq.

the partitions were removed between the hall and the living-room on the first floor, enlarging its dimensions. The walls of each room have been decorated and the trim painted old ivory white. The staircase in the hall is a grand old Colonial one with white painted balusters and mahogany rail. It rises to the second story, which has been thoroughly renovated.

The members of Tokeneke Colony have built a clubhouse, which is one of the features of the Park, for the privileges of it are extended to its families and their friends, proving to be one of the most popular social organizations along the Connecticut shore.

The west entrance gate to Tokeneke is but four minutes' walk from the Darien station. The east entrance is from Rowayton, but the Park is so



"Cedar Cliff": A Dutch Colonial House



Mr. Walter Blabon's Home

extensive—between four hundred and five hundred acres—that, generally speaking, it is a driving proposition, and the owners have built a large club stable and a club garage to cover their requirements.

Amusements at Tokeneke are not wanting. The denizens of the Park are taken care of in various ways. There are a number of well made and well cared for tennis courts, both in dirt and sod. Bathing facilities are very complete. An absolutely safe sand bathing beach; no undertow, and water clear and free from drainage; flanked by a commodious casino from the upper covered story of which all water spots can be viewed.

Boat landing and diving pier are fitted with spring board and steps, and a large float is at anchor off shore, while sail and row boats and launches

are constantly in use, adding to the outlook and giving enjoyment. There is a deep harbor anchorage in Five Mile River, close to Tokeneke, with from twelve to sixteen feet of water at low tide.

Automobile roads and walks through the woods and the trip to the top of the iron observation tower surmounting one of two of Tokeneke's water towers, the sand beach and wood-crested rocks, make it an unique park, in which many of the residents remain during the entire year. It has often been aptly said that Tokeneke brings the Adirondacks within one hour of New York. The Wee Burn golf links are not over fifteen minutes' drive from Tokeneke, and the trolley which passes one of the entrances to Tokeneke goes directly by the links.

Truly a summer residence park of singular beauty and enormous attractiveness! Hard indeed to please must be the country resident who can not find satisfaction and pleasure within its surroundings. The promoters of Toke-



"Heartsease": The Summer Home of Joseph D. Sawyer, Jr.

ing that may be suited to individual and personal needs. These are matters of importance, it is true; but there are a host of other questions that come to the front from time to time, sometimes when they are not expected, and often enough when they

are not desired or when a ready solution for a new difficulty can not be had. Success in

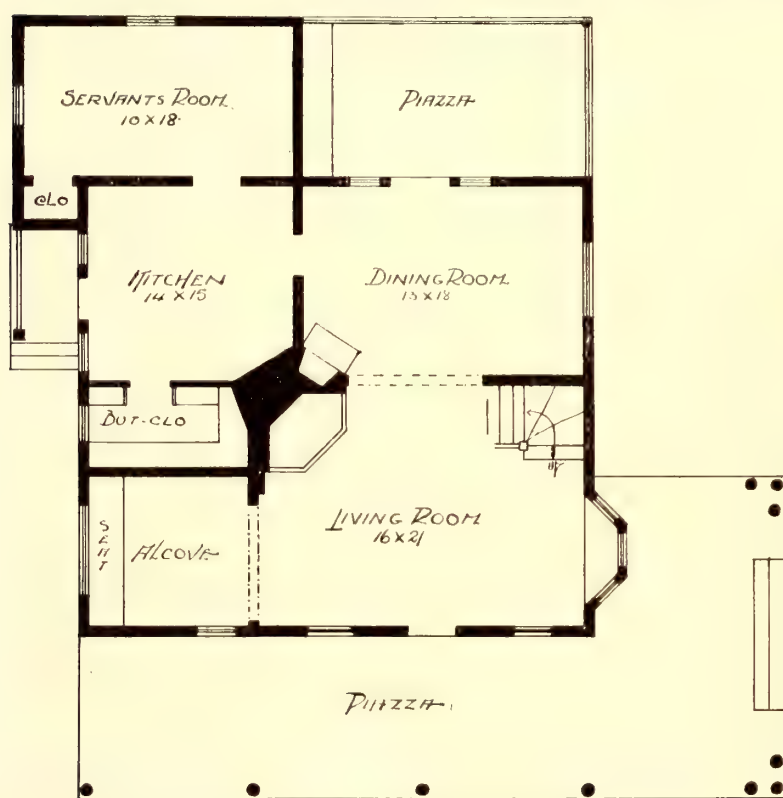
the development of any rural region can only be had by a broad preparation to meet every possible contingency. The needs of one will not be those of another. Conditions that suit one family may represent the acme of dis-



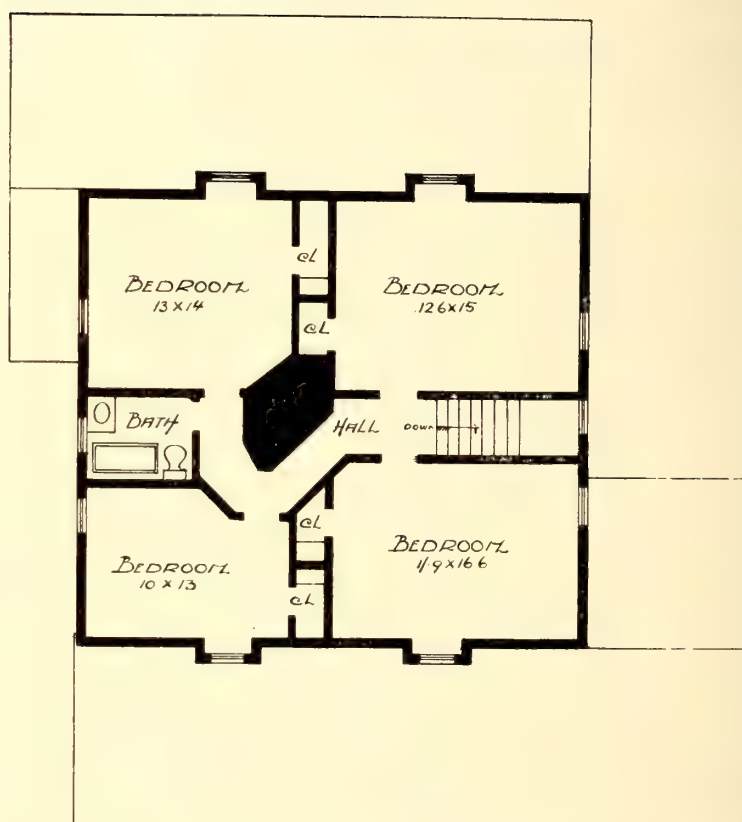
"Shing-wak": The Home of Thomas Alsop, Esq., Showing the House Before and After the Alteration



"Shing-wak": A Piazza and Dormer Windows in the Roof Were the Exterior Alterations



First Floor.



Second Floor



"Shing-wak": The Old Brick Fireplace and Dutch Oven are the Interesting Features of the Living-room



A White Painted Staircase with a Mahogany Rail Rises Out of the Living-room

comfort and inconvenience to another. Allowance must be made for very many tastes and for a great variety of inclinations. Conditions must be elastic rather than set and rigid. Yet elasticity in the arrangement of any rural property is one of the most difficult things to accomplish, although the property which offers the most elastic conditions is the one that offers the best opportunity of permanent success.



"Shing-wak": The Two China Closets in the Dining-room Carry Out the Colonial Effect

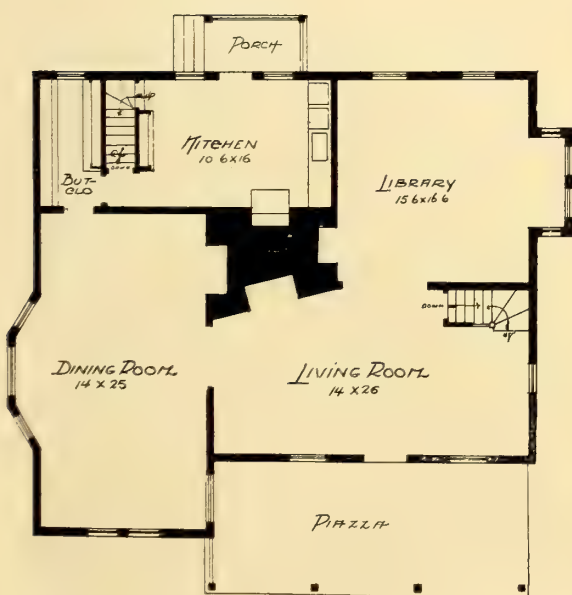
This success has, in a very marked degree, been obtained in Tokeneke. Its ample areas are superbly developed and provide every possible degree of outdoor attractiveness. Its new houses are of fine design, handsome and commodious, and provided with every modern convenience. Such of the older houses as have been permitted to remain have been remade over in a manner that causes them to vie with in-



"Wayside": Second Floor Plan



"Wayside": Mr. Gerit Smith's House



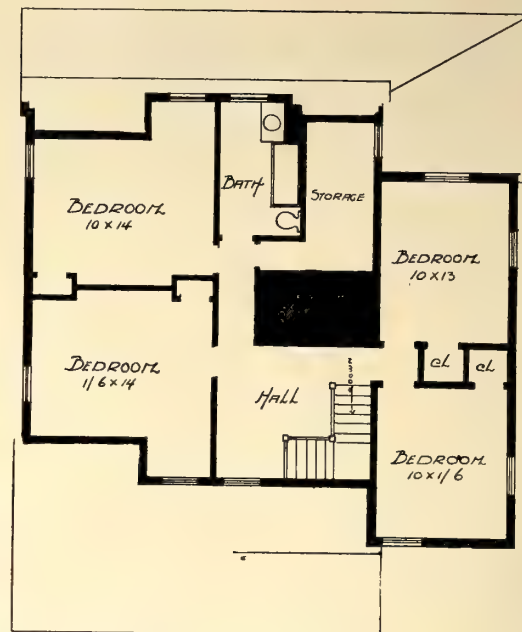
"Wayside": First Floor Plan



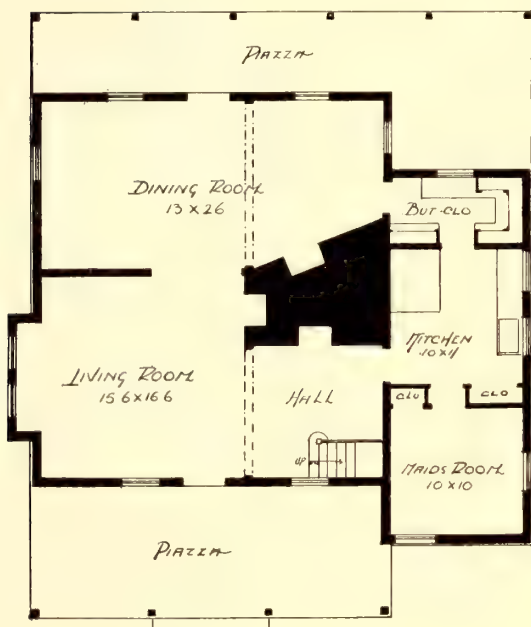
"Wayside": The Walls of the Living-room Have Green Striped Paper and White Painted Trim. The Old Brick Fireplace Is a Feature of the Room



"Wayside": The Drawing-room Is Finished in Lavender and White in Its Wall Trim, and the Curtains Which are Hung at the Windows



"Naganook": Second Floor Plan



"Naganook": First Floor Plan



"Wayside": The Chairs Are Painted Yellow, the Walls Are Covered with Yellow and White Paper, and the Windows Are Hung with the Same Color Scheme

terest with the very newest. In a very striking degree and in a very true sense, the land has been embellished architecturally.

But architectural embellishment is in itself not sufficient. There must be much more, and of these additional matters Tokeneke has an abundance and to spare. It rejoices in a sequestered convenience, if the phrase may be coined, in being near enough to centers of population to make it thor-



"Naganook" Was Built in 1764 and with a Slight Remodeling Still Forms a Happy Sheltering Place for the Lover of the Country

oughly accessible, and yet in being itself so retired and completely private and to give it a distinctive isolation which, after all, is one of its chiefest charms.

And when to this is added its own resources in outdoor sports and recreation, and its proximity to other facilities of the same kind, the last word, surely, has been said on the attractiveness of this completely delightful place.

Summer Gardening in France

By Jacques Boyer



IN FRANCE, and above all in the vicinity of Paris, there are many orchards and vegetable and flower gardens. As land is dear no ground is wasted, and very often flowers, fruits, and vegetables are grown on the same property.

This article deals entirely with the work done in a little French garden during the summer season. Toward the first of May the kitchen garden is hoed and weeded. Cabbages, some varieties of artichokes, and Roman lettuce are planted about the end of May. Peas are twined on poles, and their tops, if in flower, are pinched. The variety of peas known as the "clamart," although they come a little late, is very popular with gardeners, as they do not need rich soil. Peas are sown either in rows about seven inches apart or in bunches every seven inches. Once earthed up each bunch is supported by props. Peas grown in this way are shorter than those in rows, but have more sunshine and are easier to pick. The buds are nipped to hasten their ripening. This process consists in cutting off from the stalk the top of the plant, with its flowers, and the tendrils of the underlying foliage. A portion of the crop of peas is thus sacrificed, but the rest can be picked ten days sooner than otherwise would be possible. Peas are never sown two successive years in the same ground. They should be planted at intervals of thirty days, so as to have a continuous growth.

The French bean ought to be planted in May or June. The favorite varieties are the very productive "flageolets," the kidney beans, which are picked very young if eaten as

fresh vegetables, and the large bean called "blancs de Soissons," a white bean of Soissons, which is dried and kept to be eaten in the winter. Beans grow well in soft, freshly plowed earth. Manure is too rich for them, but some cinders mixed in the soil will help their growth. It is easy to start early beans called "Naines of Holland" in hotbeds or under glass, but, of course, this is winter work.

Like other vegetables, the Milan and Brussels cabbages are sown in May. Spinach, which grows in the shade, is planted in June. Turnips, chicory, endives, lettuce, carrots, and black horseradish are sown in the autumn. In July the celery is bunched up in order to have a sufficient supply on hand to meet the demands of the table. Scallion, leek, and onion are planted then, which are picked in October. This is also the time to nip the lettuce heads in order to whiten them. In August the tops of the artichokes, whose product has been picked, are cut. The most successful varieties of artichokes are the "Gros Vert de Laon," which are very large, and the "Gros Camus de Bretagne," which are cultivated in the east of France. The first is large and pale green, and the "red" artichoke, which, like the purple artichoke, is small, and is eaten generally as a salad.

Artichokes require a great deal of water and increase entirely by shoots, which sprout every year from the neck of the plant. After the shoots are cut they are immediately watered, and then for a time sprinkled every two days. The earth is plowed to loosen it. After fructification it is necessary to cut the stem of the artichoke very near the root, so that the plant will not be exhausted. At the first sign of



Picking the Roses



Heading the Lettuce

frost the gardener must pull off the leaves and put earth around the bottom of the plant. Every tuft must be covered with manure, which must be removed as soon as the snow and ice melt, so as to give the plant a chance to bud. To have good artichokes their ground must be changed every two or three years.

Orchards are pruned in the spring. In May all the useless branches are clipped off and the new slips are propped. In June and July the fruits about to ripen are uncovered. In August the bunches of fruit are tied up in paper bags to protect them from wasps and insects, a simple and easy device. Pear trees can be trained in any form, for instance in the shape of a great branched candlestick or a palm leaf. In the latter form the branches are trained horizontally, parallel to each other, and are then allowed to grow vertically. When trained in this way, the trees grow better along the wall, as they need support. I advise amateurs to train the trees in easier forms; for instance, the branch candlestick with only two or three branches. This is done by taking the graft of one year and when it is planted cut off half of it. Then the following year the trunk is cut down to about thirteen inches from the ground, keeping only two branches, one on the right of the tree and one on the left. Then at the length of thirty-nine inches they are again bent and the last twelve inches of the branch is allowed to grow up vertically and form the branches of the candelabra. Once the growth of these branches is assured the middle of each horizontal branch is taken and two buds are chosen to make new ramifications, parallel to the preceding ones.

Very few varieties of pears grow in France. They are the



Banking Up the Artichokes

"Doyennes" (Valentia pear), whose fruit, which is small and delicious, ripens in July; the big "Williams," which are lemon yellow, have a musk flavor and are eaten in August; the "Bons Christian," which is green spotted and much appreciated, and the Butter pears, "Buerres" and "Louises-Bonnes," whose fruit is yellow and red and which is very juicy.

Apples grow very well in granite regions and in siliceous earth. The northern, northeastern, and northwestern exposure suits them. The only kinds of apples much cultivated around Paris are the "Calvilles," which are ivory yellow, are acid, and recall

the flavor of pineapples; the "Reinettes," large and yellow with red stripes, and very spicy; little apples called "Apis," very popular in Paris. Other fruits that grow in France are peaches, apricots, plums, cherries, and currants. Under our climate strawberries ripen earliest. The large strawberries, which are of a great variety (the Ananas, the Chiliens, the Scarlet Strawberry of Virginia), are planted in pots under frames, as shown in one of the illustrations. They should be open to the air as much as possible, watered often, and covered with straw matting every night. Props are used to hold up the fruit. The little strawberry, "Fraise des Quatre Saison," is propped up, and with care bears fruit the whole year.

FLOWER GARDENS.—Manure is put in the ground to hasten the growth of the flowers. Dahlias are planted in the middle of May. The tubercle is pulled up from the ground, where it has been all winter, and put in earth covered with compost. Immediately one or more shoots sprout.



Propping-Up the Strawberries



Potting the Geraniums



Planting a Group of Begonias

As soon as a second leaf appears it is transplanted, and only one shoot is left on the plant. The dahlias bunched together look like a bush which is completely covered with foliage. The blossoms last till the ice.

In June groups of begonias are formed. The buds of the carnations and lilies are cared for. The fuchsias and calceolarias in their temporary planting are watered. The withered stalks of the geranium are removed. The flowers of this plant last the entire summer. Geraniums increase by the slips taken from the plant. This is done from July to September. The slips are placed in small pots filled

with earth. After three weeks they take root. They should be taken in before the frost and placed either in greenhouses or in a cellar, where there is sunshine. It is necessary in the spring to repot the geraniums. The tender branches are cut off and the strong ones are shortened so as to round the top. Roses grow very well in good soil, freshly plowed and manured every year. If they are of a naturally strong stock they are propagated by shoots, which take root very easily, but the gardener depends especially on the grafting or on the buds to obtain roses, and by preference they work on the dog-rose tree with its high stem.



Picking Early Peas



Tying Up the Grapes in Sacks

The rose bush of Bengal, which grows on garden walls and fences, lives very long. Brambles are used to cover arbors. The roses are arranged according to color and graftings, so that in June, July, and August there may be beautiful flowers.

The roses are replaced at the end of the summer by Marguerites and balsams. Plants are repotted and the vegetables prepared for the greenhouses.

Thus the whole work is completed and a constant succession of beautiful blooming supplied throughout the season.



The Studio with a View of the Sea Beyond Makes an Admirable Picture

The Home and Studio of an Artist at East Gloucester, Massachusetts

By Charles Chauncey



HE interesting and artistic house and studio of Miss Cecilia Beaux, the well-known portrait painter, is a unique expression of the artist's character and taste. They were designed and built under the personal directions of Miss Beaux, who was very ably assisted by her architect, Mr. Charles K. Cummings, of Boston, Mass., in carrying out her suggestions and ideas as to what she desired.

The plan, elevations and the interior decorations represent a great deal of study and everything that is real and natural, for seldom has a house more splendid simplicity and yet more elegant taste. A house of this sort, with its marked individuality, is essentially the creation of a cultured and artistic mind which demanded congenial surroundings.

The location of the house is quite ideal, for it is approached from the roadway through a simple little turnstile placed in the old stone wall, where the stones were pulled away to form an entrance. From here a walk winds



The Cloisters are Happy Characteristics of this Interesting House



The Entrance Hall Has a Tiled Floor and a Beamed Ceiling



A Glimpse of the Hall Through the Living-room



The Bowling Green in Front of the House Is Lined with Flowering Hollyhocks



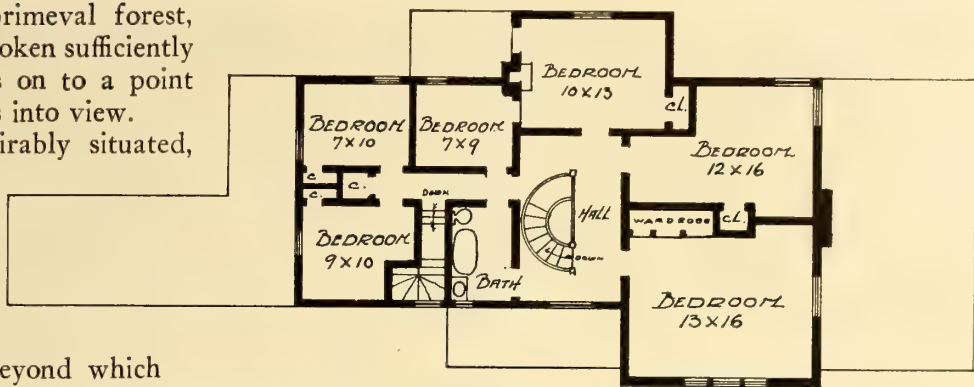
A Glimpse of the House Is Reached After Passing Along the Winding Walk from the Roadway



The Interior of the Studio Is Distinctly Italian ; Fine Tapestries are Hung on the Walls, and the Furniture Is Antique

through a veritable primeval forest, which has only been broken sufficiently to permit one to pass on to a point where the house comes into view.

The house is admirably situated, for from any part of it one can look out upon the densely wooded country, or catch the sheen of the waters of Gloucester Harbor, beyond which are the shores of Manchester-by-the-Sea, or out across the broad expanse of the Atlantic Ocean. The house is built of stucco on a wooden framework, with its white faces pierced with casement windows, lending a charm to the treatment of its wall



SECOND FLOOR

tibule is the parlor, extending the entire depth of the house and furnished in Italian style. The trim is of cypress, finished in a Flemish brown. The ceiling is heavily beamed, and the pilasters placed at either side of the fireplace, and on the opposite side of the

room and supporting a beam, break its elongated effect. The fireplace is the feature of the room and has a facing and hearth built of brick laid in herringbone pattern. The



Fine Views of the Sea are Obtained from the Terrace at the Rear of the House

surfaces. The roof is covered with shingles. The terrace at the rear is built of red brick laid in white mortar, with the floor of similar brick laid in herringbone fashion.

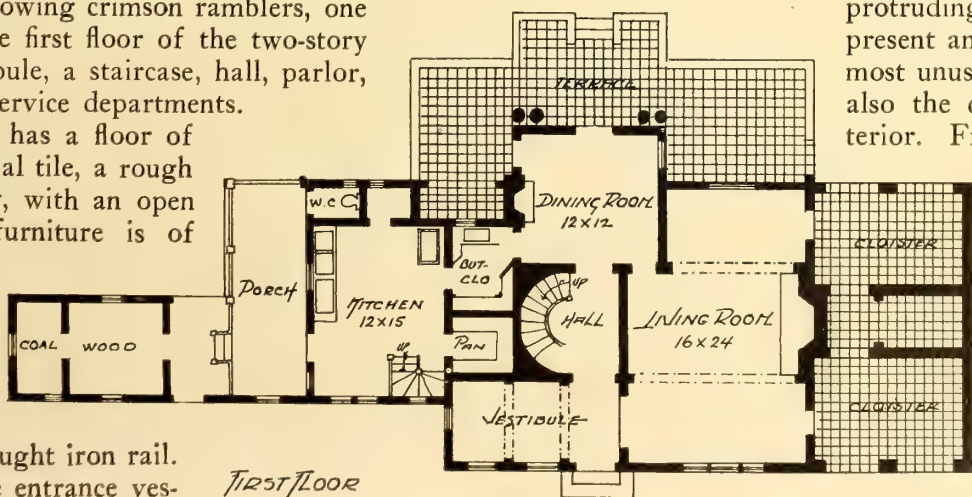
Stepping up from the stone slab placed in front of the entrance door, which is surrounded by a latticed arbor on which are growing crimson ramblers, one enters the house. The first floor of the two-story villa has a great vestibule, a staircase, hall, parlor, dining-room and the service departments.

The main vestibule has a floor of reddish brown octagonal tile, a rough plastered wall in gray, with an open trussed roof. The furniture is of Italian character. Crossing the vestibule the staircase hall is reached, containing a staircase built in a circular form with a plain wrought iron rail.

To the right of the entrance ves-

mantel is plain and simple with paneled overmantel. On either side of the fireplace are French windows opening into the cloisters, which have been built with brick piers and arches. The faces of this brickwork have been partially whitewashed, with the red bricks protruding at random in order to present an antique effect, which is most unusual, for it predominates also the characteristic of the interior. From the cloisters and the

terrace, which extends across the rear of the house, the full beauty of the situation is laid bare; for it is bordered by a long line of straight high cedars, banded into a wall with festoons of bay and sumac,



FIRST FLOOR



The Walls of the Dining-room are Paneled with Oak and It Is Furnished with Antique Furniture



The Fireplace and the Beamed Ceiling Are the Features of the Living-room

presenting scattered patches of kindly color over the meadow land which extends to the edge of the sea.

The dining-room, opening from both the hall and the parlor, has a paneled wall of ash from the floor to the ceiling, which is ribbed with heavy moldings. The furniture is simple; the antique mahogany table, the rush bottom chairs, the side table and carved cabinet and the Oriental rugs placed on the highly polished floor, complete the furnishings of the room. An open fireplace, with brick facings and hearth and a mantel, is built at one side of the room.

The butler's pantry is fitted with drawers, dressers and sink complete, and forms the connecting link to the kitchen, which is furnished with all the best appointments. From the kitchen a rear porch is reached, from which easy access is obtained to the wood and coal sheds.

The second story contains three bedrooms and bathroom and three servants' bedrooms. The trim of each room is painted French gray, while the walls are of rough plaster, tinted.

From the terrace at the rear of the house, which is used for dining under the shade of the white birch tree which overhangs one corner of the terrace, an irregular walk leads to the studio which nestles among the brambles and rocks, and is quite close to the sea. From the studio, with its picturesque background, broader vistas are obtained of the sea, and in the distance the now growing city of Gloucester.

Miss Beaux's studio is built in an open spot, permitting plenty of sunshine and light, and just far enough away from the house to insure a quiet place for working hours. The studio is also built of white stucco over a wooden frame; the verge boards and other trim being stained brown. A batten door forms the en-



A Latticed Arbor Surrounds the Front Entrance to the House

trance, over which is placed a ship's light which illuminates the walk at night and guides the wayfarer from the house to the studio. The roof is covered with shingles, left to weather. Another entrance, on the south side of the studio, has a porch built of field stone, from which a walk leads to the gate in the rustic fence that separates the property from the roadway.

The interior of the studio is unique and comprises one great room, which is open to the peak of the roof; the wooden trusses of which are exposed to view. A great window is at one end, while opposite the main entrance is built a large fireplace of molded concrete, with a hearth of brick laid in herringbone fashion. The main walls are rough plastered, and all the woodwork is stained and finished in a soft brown tone.

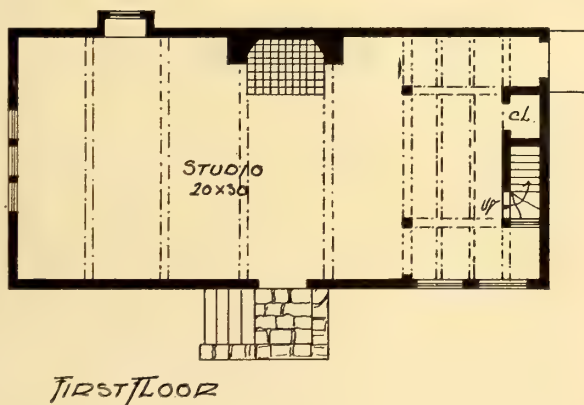
The room is furnished with Italian furniture and draperies. A very fine tapestry hangs on the wall over the entrance hall. A screened staircase in the entrance hall leads to the second story, containing a bedroom and bath.

No planting has been done about the house or studio, but only a development and assistance to what nature has so beautifully bestowed upon the site.

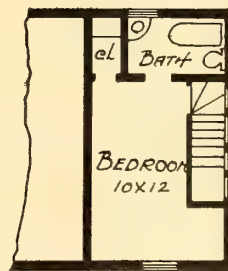
One looks naturally, and without any question, for artistic surroundings for an artist, but it is only just to say that few artists are so agreeably and so artistically housed as is Miss Beaux in her charming house and studio in Massachusetts. Simple and unpretentious as the house is, with its adjoining studio, it is possessed of great inherent charm of its own that gives it interest as a dwelling, apart from the special and personal interest that necessarily attaches to it as the home of one of our foremost artists. This special interest is something that belongs to it apart from its distinction as a dwelling of note.



Miss Beaux's Studio Is an Additional Adjunct to Her Scheme for a Country Home



FIRST FLOOR



SECOND FLOOR



CORRESPONDENCE



The Editor of *American Homes and Gardens* desires to extend an invitation to all its readers to send to the Correspondence Department inquiries on any matter pertaining to the decorating and furnishing of the home and to the developing of the home grounds.

All letters accompanied by return postage will be answered promptly by mail. Replies that are of general benefit will be published in this Department.

Problems in Home Furnishing

By Alice M. Kellogg

Author of "Home Furnishing: Practical and Artistic"

SEVERAL PROBLEMS IN WALL DECORATION

AMONG the inquiries received during the past month by this department on wall treatment, the following will be of general interest. M. R. O., of Kentucky, writes: "Please give some information about borders and friezes and their proper use. I hear a good deal said about crowns. Are these different from the borders?"

Borders, crowns and friezes, in widths varying from twelve to thirty-six inches, are a means for dressing up, or decorating, the upper part of a wall, leaving the lower part as a background for furniture and pictures. Usually a plain or a two-toned paper is hung below the border. The two spaces, to look well, should be covered with the same material. For example, if a plain grass cloth is applied to the lower wall, a figured grass cloth would be selected for the upper space. This rule, of course, does not apply to a wood paneled wainscot, as the space above could be filled with any material that was appropriate in color and design.

The difference between a crown and a border is that the latter is printed in a long strip that is pasted horizontally on the upper wall, while the crown is printed in the opposite way, and each figure is detached from the roll and hung at the top of each strip of wall paper. In the finest grade of paper the crown is printed at the top or end of a length of wall paper that forms one complete roll. In this way the crown is a part of each strip, and not pasted over the paper, as in the cheaper goods. In the illustration a graceful festoon of blossoms forms the crown for a moire paper of French manufacture.

As a crown or border does not add to the apparent height of the ceiling, but seems to lower it, neither one should be used where the ceiling is less than nine feet high. Its width should be suited to the general proportions of the room. Sometimes the casings of doors and



A Finely Printed Crown

Garden Work About the Home

By Charles Downing Lay

MOLES

"I AM rather discouraged, as nearly all my bulbs have been eaten up by the moles. It is a continuous fight to raise anything, and I feel at times like giving the whole thing up. Can anything be done to get rid of moles?"

This from a melancholy gardener in Sayville, who shows a common misconception of the relations of things in nature. If he knew more he would probably ask how he could get more moles to live on his place.

We are slow to appreciate the value of birds and animals in keeping the different pests of worms and bugs within bounds. The crow has at last received justice in a bulletin of the Department of Agriculture, and may some day have a monument in his honor, like the gulls of the Salt Lake which saved the wheat from a swarm of grasshoppers.

The toad also is in high favor now and welcome in every garden, but for the mole there are few kind words.

It is commonly supposed that moles eat grass, roots, vegetables and seeds, but (we quote Hornaday) "a mole supplied with vegetable food alone soon starves to death. Moles do not eat seed, corn or garden vegetables, but they do eat grubs."

Field mice, which sometimes run through moles' burrows, do occasionally eat seeds or bulbs, as doubtless happened to our correspondent quoted above, and the mole is blamed for it.

In France they are more discerning. There the value of the mole is recognized by law, and the killing of one is punishable by a fine of five francs.

In the garden moles eat cutworms and grubs, which is certainly a benefit. The only harm they do is the infrequent burrowing under a row of seeds and raising the earth they are in, so that the seeds dry out, or if they have started to grow the new roots may be broken or separated from the soil below.

This is easy to remedy in time, if the garden is looked at every day or so, by treading down the burrow.

But it is in the lawn that moles are most useful, for there they eat the white grubs, or larvæ of the June bug, which in turn feed on the grass roots, and if not checked in some way, will ruin the lawn. The bare patches, sometimes as much as a square yard in area, and which look as if brine had been poured there, are caused by these grubs.

As Comstock says ("Manual of Insects," p. 561): "The larvæ of the different species of May-beetle (June bug) are commonly classed together under the name 'white grubs.' They are often great pests in meadows and in cultivated fields. No satisfactory method of fighting this pest has been discovered as yet. We have destroyed great numbers by the use of trap lanterns, but many beneficial insects were destroyed at the same time."

The lawns of a cemetery near Boston were once ruined in appearance by these grubs, so the superintendent had acres of the land dug over, the soil sifted, and the grubs picked out by hand. Barrelsful of them were destroyed, but the cost was enormous.

The burrows and hills that moles throw up on the lawn are only slightly objectionable and are easily trodden down and scattered.

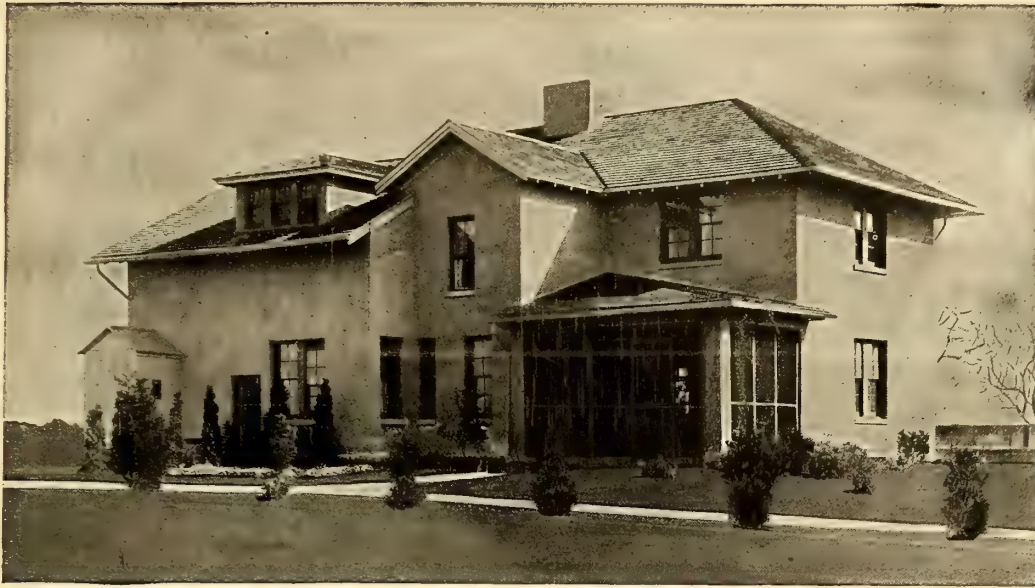
The presence of moles is a pretty good sign that they find an attractive diet, and they should be encouraged to stay until the dainties are exhausted.

MOWING THE LAWN

There are several ways of mowing a lawn, but the best and cheapest way is to mow so often that raking need not be done. If it is mowed when the grass is of a height to make the clippings an inch long, then the clippings will fall into "the pile of the green carpet" and will be hidden at once and raking will be unnecessary. Mowing twice without raking will, I think, be found to cost little, if any, more

(Continued on Page xii)

(Continued on Page x)



A RESIDENCE
OF
CONCRETE

GARDEN CITY, LONG ISLAND

WHEN you build a home use **CONCRETE**. It is durable, inexpensive and fireproof, needs no paint, repairs or fire insurance, is warmer in winter, cooler in summer than any other style of construction, and is adaptable to any style of architecture. We have just published a second edition of

Concrete Country Residences (Second Edition)

which contains photographs and floor plans of over **150 COMPLETED CONCRETE HOUSES**, designed by the best architects in the country, which should be of immense value to you in planning your house.

A copy of this 160-page book (size 10x12 inches), will be sent express prepaid upon receipt of \$1.00

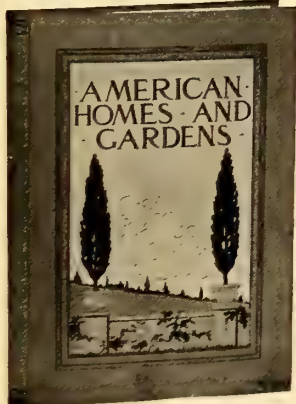
THE ATLAS PORTLAND CEMENT CO., Department 10, 30 BROAD STREET, NEW YORK

BOUND VOLUMES OF American Homes and Gardens

480 Pages :: 1,050 Illustrations :: Price, \$5.00

American Homes and Gardens covers a wide scope; it deals with house building from the design and construction of modest cottages on tiny lots to the building of mansions on large estates. All degrees of gardening, from laying out a landscape to the planting of a window-box, are dealt with. Practical questions of water supply, of sanitation, or of the arrangement of the kitchen receive equal treatment with draping of windows or the arrangement of old china.

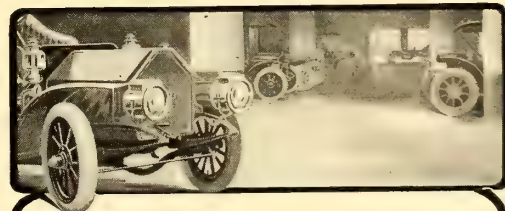
American Homes and Gardens is beautifully printed. The year's volume contains more than a thousand engravings, as full of details and finish as actual photographs. They depict some of the old and historic mansions of America, and the most beautiful of gardens or of natural scenery. The following list of a few of the principal practical articles which appeared in *American Homes and Gardens* during 1907 will show the wide choice of subject:



Historic Mansions of the James River—Small American Homes—Inexpensive Log Bungalows—The Iris Garden—House-Boating in America—A Boy's Summer Camp—The Choice of a Dog—Ventilation—The Water Garden—Curtains and Draperies—The Wild Garden—Concerning Driveways—Heating the House—The Modern Bedroom—Touring in an Automobile—Flowers for House and Table Decoration—What is a Fireproof House—Interior Woodwork—White Lilac Culture—How to arrange Window Curtains—Street Entrances—Collection of Old Blue Staffordshire Ware—Novel Uses of Electricity—The Question of the Fire Place—Orchid Culture—Hand-wrought Iron work—Kitchen Furniture—Water Supply.

A limited number of volumes for 1907 are available. 480 pages. 1,050 illustrations. Price, \$5.00. Volume for 1906, \$5.00. Volume for 1905, \$3.50.

MUNN & CO., Publishers, 361 Broadway, New York



Putting the Car in Commission

When you put your car "in commission," you want it to "stay put." Good lubrication is almost the first requirement. Avoidance of carbon deposits is of prime necessity. Both are accomplished by the use of **ZEROLENE**, the new friction-proof, trouble proof, carbon-proof oil. This oil is produced in only one place in the world.

ZEROLENE Auto-Lubricating Oil

is made in only one grade. This one grade works perfectly in every type of gasoline engine, in both summer and winter. Leaves practically no carbon deposit, and keeps cylinders and spark plugs clean.

Sealed cans with non-refilling spout protect against substitution of inferior oils. Also put up in barrels for garage trade. Sold by dealers everywhere.

STANDARD OIL COMPANY
(Incorporated)



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.

Denver

CHICAGO

Trenton

PROBLEMS IN HOME FURNISHING

(Continued from page 294)

windows are so near to the ceiling that a border is out of the question.

Another correspondent, A. B. S., of New Mexico, asks: "Will you kindly suggest the right wall treatment for our living-room. The room has a southern exposure, and in this climate we have few cloudy days. I do not want to darken the room, but I would like to make it restful from the outside glare. The rug is a Wilton, blue and green the most prominent colors, with a little yellow. The woodwork I will repaint any color you advise."

A gray wall paper will meet the interior as well as the climatic conditions of the room described. The English silk fiber paper, at ninety cents a single roll of eight yards, is the best in tone and for sun-wearing quality. The woodwork may be painted a dark bronze green, if this shade does not conflict with the green in the floor covering.

Mrs. J. W. F., of West Virginia, asks: "What color and pattern of wall paper can I use for a small, dark hall that faces north? I want to make the hall appear brighter and larger."

A buff paper with a light tracery of pattern in a slightly deeper tone may be had for thirty-two cents a single roll. A still cheaper selection would be a tan-colored ingrain paper at twenty cents a roll.

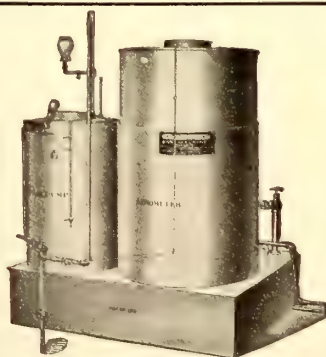
From Michigan L. E. writes: "I would appreciate having from the Home Furnishing authority a color scheme for my new house. The vestibule, hall and dining-room will have the woodwork stained alike in a medium dark oak. The living-room will be finished in mahogany. There are spaces in the wood paneling in the dining-room that I do not know how to fill."

For the vestibule wall, above the wood wainscot, a Japanese leather paper would be attractive. There are various coloring and patterns, from three dollars a roll upward. The walls of the main hall may be covered with an English paper in two tones of deep tan at ninety-six cents a single roll. The spaces in the dining-room wainscot that are not filled with the wood paneling may have a foliage tapestry that will not cost more than two dollars a yard, fifty inches wide. On the upper wall of the dining-room a tan-colored jute material, at the same price, may be the background for some pieces of blue china. For the mahogany-finished library, a soft shade of olive green grass cloth may be the wall covering.

SITTING-ROOM FURNISHINGS

M. H. S., of Iowa, describes a sitting-room which is partly furnished, and on which she is ready to expend two hundred dollars to complete its comforts. "The wall paper is a golden tan with small figures. The rug is made of Brussels carpet, and its prevailing colors are tan, green, cream and black. The curtains are of ecru net. The furniture now in the room is a Morris chair and a high-backed oak Windsor. Please suggest additional furniture for this room, two or three interesting pictures, a suitable portiere for the double doorway, and also give me an idea of what lamps to use, as we do not have gas or electricity."

A divan would be the first selection for this room, and a good style at a small expense would be a box frame fitted with spiral springs on which a hair mattress is laid. The price is twenty-seven dollars. A plain green Bagdad cover, and four down pillows with pretty covers, would cost about sixteen dollars. A single oak bookcase, thirty inches wide, made in such a way that additional cases may be attached to it at the sides, may be had for twenty dollars. Two willow chairs with hair cushions and velvet covers (illustrations may be found in



GAS FOR COUNTRY HOMES

Clubs, hotels, churches, laboratories. Economy Gas Machine gives a clear, steady, brilliant light and supplies gas for cooking, water heating, etc. Cheaper, cleaner and more satisfactory than acetylene, kerosene or electric light.

Economy Gas Machine

Automatically generates gas as consumed. None stored, so no danger. Self operating. Lighted the same as electric light, but without batteries. Eleven years success proves its merit. Write for booklet "LIGHT."

ECONOMY GAS MACHINE COMPANY

Stationary Gas Engines for Every Purpose

437 MAIN STREET EAST,

ROCHESTER, N. Y.

The Only Real Stain

If you have only seen the crude and tawdry colors of the thinned-paint imitations of

Cabot's Shingle Stains

you have no idea of the beautiful coloring effects of the true Stains. They are soft and deep, like velvet, but transparent, bringing out the beauty of the wood grain. Half as expensive as paint, twice as handsome, and the only Stains made of Creosote, "the best wood preservative known."

Samples on wood, and catalogue, sent free on request

SAMUEL CABOT, Inc., Sole Manufacturers

131 Milk Street, Boston, Mass.

AGENTS AT ALL CENTRAL POINTS



Claude & Starch, Architects, Madison, Wis.

Roof stained moss-green, walls silver gray with Cabot's Shingle Stains and lined throughout with Cabot's Sheathing Quilt for warmth.

the May number of this magazine) will cost twelve dollars each. A round table for the center of the room will cost, in dark oak, eighteen dollars. A small willow table for tea things may be found for five dollars. A tall glass lamp, with an umbrella shade made of paper, costs sixteen dollars and fifty cents. The price of a student lamp in old brass, with a celadon shade, is eighteen dollars. For pictures, the three panels of "Canterbury Pilgrims," from Sewell's mural paintings, would make an interesting decoration above the mantel (eighteen dollars). A colored print by Jules Guerin of Independence Hall, Philadelphia (five dollars), a reproduction of one of F. Hopkinson Smith's Venetian scenes (three dollars), and a photo-engraving of Dicksee's "Swift and Stella" (six dollars) may be framed in dark oak or gilded chestnut. A portiere may be made from five yards of double-faced velour in one of the shades of green that appear in the rug, and with a trimming of tapestry braid down the sides and bottom will cost twenty dollars. About twenty-two dollars will be left for an extra chair or table.

CARPET FOR HALL AND STAIRS

"I am not able to use rugs in my hall," writes L. R. A., a correspondent from Indiana, "and I would like a suggestion for some floor covering for both the main hall and stairs and also the hall of the second story. The woodwork is stained cherry, and the wall paper is a Colonial design printed in two tones of yellow."

For these conditions a very good choice would be a Bokhara design in either body Brussels at one dollar and seventy-five cents a yard, or a Wilton at three dollars, which ever could be afforded. The characteristic of this design is its small, close-set figure and Oriental colors. A stair carpet and wide border matches the ordinary carpet. To fasten the stair carpet the invisible rod, which is laid under the carpet, leaves the pattern unobstructed and is most practical in every way.

COVERS FOR TABLES

A question has been asked from Long Island (C. R. V.) as to what kind of a cover or mat is appropriate for the different tables that are scattered through a country house.

A piece of brocade may be lined with silk and the edges finished with a gold or silver braid as a mat or spread for the parlor table. If the top of the table is very large it is not necessary to cover it all up. Sometimes a circular mat to lay over the center looks better than a larger square that hangs down at the sides. A new device in the way of a mat is a small picture framed in passepartout style with the back covered with velvet. This is used for a vase of cut flowers to protect the polished wood from moisture. An ooze sheepskin in brown, green or dark red looks well on a sitting-room table. Or a hard leather may be ornamented with hand work in gold or colored paints. The shape may be round, square or oblong. For the dining-table a white lace or white embroidered linen centerpiece is usually laid on the middle of the table, but, as suggested in reply to a correspondent in the March department, some hand-woven linen with the pattern wrought in colors is more unique. The mats for the bedroom tables may be hem-stitched squares of colored linen, or circles of the same material with the edges buttonholed with white mercerized floss.

A general suggestion may be made here about the many uses to which a knowledge of stenciling may be put. A plain material may be enriched very much by a painted border and a table mat created in a simple and effective way.

If a washable cover is desired, such as linen, the stenciling may be applied in such a way as to allow of its being laundered.



CREX

Grass Carpets and Rugs
TRADE MARK

The Only Suitable Porch Covering

In designing and arranging the modern home, much care and attention is given to the porch, which must be as cozy and inviting as any part of the interior.
This is true especially at this season when you might say *people live outdoors*—all rooms have been thoroughly renovated, the heavy hot draperies and carpets removed, and a fresh, cool and inviting atmosphere pervades the home by covering all the floors with

CREX CARPETS AND RUGS

In contrast with these interior decorations and in perfect harmony with the natural outdoor surroundings, CREX GRASS RUGS are the only suitable covering for the porch. Nature designed CREX for this specific purpose. It gives a soft, restful and refreshing tone, affords a firm quiet footing and resists the effects of all weather. You can get solid comfort living on CREX. CARPETS in all widths—plain and striped. RUGS in a large variety of designs and sizes.

Avoid imitations: Look for the **CREX** trade mark

For sale at all up-to-date Department, Furniture and Carpet Stores.

AMERICAN GRASS TWINE COMPANY, 377 Broadway, New York City



Solve the
Problem
of effective
Ceiling and
Wall
Decoration
by
installing

Berger's Handsome Artistic Embossed Steel Ceilings

DESIGNS FOR ALL SIZES AND STYLES OF ROOMS

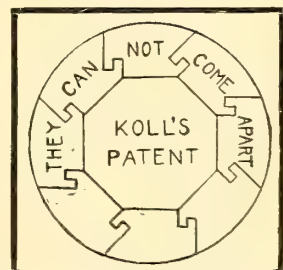
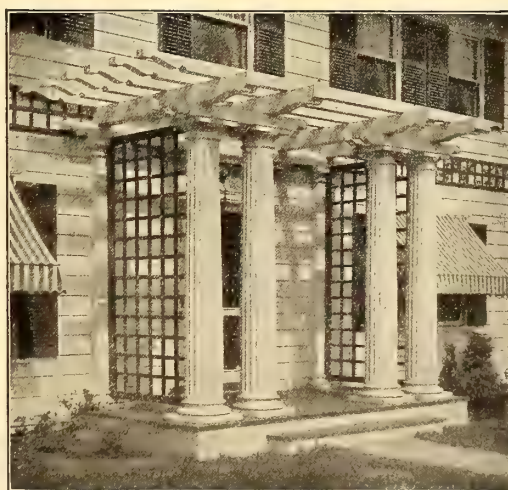
Berger's "CLASSIK" is the largest and most complete line of artistic STEEL Ceilings in existence. It covers the field so completely you can get just what is required, whether bold, massive or elaborate designs, or something comparatively simple. Before buying a Steel Ceiling of any description, whether for business or residence structure, get full details of Berger's "CLASSIK."

ASK FOR CATALOG D-64

Send sketch and dimensions of rooms for free suggestions and exhibition drawings

THE BERGER MFG. CO. :: CANTON, OHIO

New York Philadelphia Boston Chicago St. Louis Minneapolis San Francisco Atlanta



KOLL'S PATENT Lock-Joint Columns

Suitable for Pergolas, Porches
or Interior Use
are made exclusively by

HARTMANN-SANDERS COMPANY

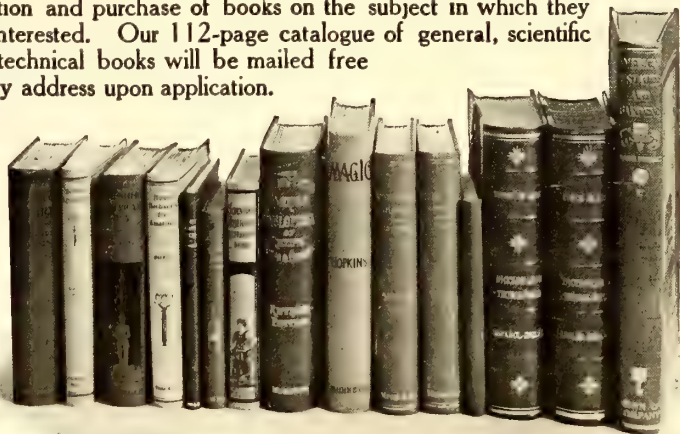
Elston and Webster Avenues, CHICAGO, ILL.

Eastern Office, 1123 Broadway, NEW YORK

Send for Catalogue A-19 of Columns, or A-29 of Sun-dials, Pedestals, etc.

Our Book Department

WE OFFER our patrons and subscribers the advantages of a long established and widely experienced department, devoted to the publication and distribution of modern, up-to-date books pertaining to all branches of Engineering, Mechanics, Chemistry, Science, Industrial Arts, Trades and Manufactures. We shall be glad to aid our patrons in the proper selection and purchase of books on the subject in which they are interested. Our 112-page catalogue of general, scientific and technical books will be mailed free to any address upon application.



Some of the Scientific American Publications

The Scientific American Reference Book, compiled by A. A. Hopkins, 12mo, cloth, 516 pages, illustrated.....	\$1 50
The Scientific American Boy, by A. R. Bond, 12mo, cloth, 317 pages, 320 illustrations.....	2 00
Home Mechanics for Amateurs, by Geo. M. Hopkins, 12mo, cloth, 370 pages, 326 illus.....	1 50
Experimental Science, by Geo. M. Hopkins, 2 volumes, 1100 pages, 900 illustrations....	5 00
The Scientific American Cyclopaedia of Receipts, Notes and Queries, edited and compiled by Albert A. Hopkins, revised edition, containing 15,000 selected formulas, 734 pages.....	5 00
Magic, Stage Illusions and Scientific Diversions, by A. A. Hopkins, 8vo, cloth, 556 pages, illustrated.....	2 50
The New Agriculture, by T. Byard Collins, 8vo, cloth, 374 pages, 106 illustrations....	2 00
Industrial Alcohol, Its Manufacture and Uses, by John K. Brachvogel, 8vo, cloth, 516 pages, 107 illustrations.....	4 00
Practical Pointers for Patentees, by F. A. Cresee, 12mo, cloth, 144 pages.....	1 00
American Estates and Gardens, by Barr Ferree, quarto, 11x13½ inches, 340 pages, 275 illustrations.....	10 00
The Design and Construction of Induction Coils, by A. Frederick Collins, 8vo, cloth, 400 pages, 125 illustrations.....	3 00
The Technological Dictionary, Spanish-English, } Vol. I, Ingles-Español, \$8.50 } Two English-Spanish, by N. Ponce De Leon, } Vol. II, Spanish-English, 7.50 } vols.	16 00

Full descriptive circulars of the above books will be mailed free upon application

MUNN & Co., Publishers, 361 Broadway, New York

GARDEN WORK ABOUT THE HOME

(Continued from page 294)

than one mowing and raking. The result is a lawn kept in perfect condition.

On the other hand, a grass catcher attached to the lawn mower saves all raking, and, best of all, keeps the lawn free from the short pieces of grass, which are so likely to be tracked into the house on damp mornings.

There is a disagreement between experts as to whether the clippings should be removed or left as a mulch, but certainly a lawn looks better when they are removed, and the consequent loss of humus should be more than made up by the yearly dressing with manure.

WATERING THE LAWN

Watering by means of a lawn sprinkler never does much good, and it is a great waste of water, particularly if it is done in the day time when the evaporation is so great that the soil is only moistened on the top.

The sprinkler covers a large area with a very little water, and it is very beautiful and amusing to watch, but what the lawn needs in a long drought is a thorough soaking. The

only way to give this (except by sub-irrigation) is to let the hose run on the ground all night. You might start at six o'clock, at the highest part of the lawn, move the hose at nine to a fresh place, and again at twelve, if there is anyone up so late to do it. In the morning shut off the water and the following night repeat in some other part of the lawn.

It is well to remember that it is only on rare occasions that the leaves of a plant need water, never, I think, if the roots are in good contact with the soil and growing.

PLANTS FOR SHADY PLACES

A. A. S. wants to know what to do with the bare ground under some beech trees, and says he has given up trying to make grass grow there.

If the trees are used to hang hammocks under or if they are constantly resorted to for their shade, it is hard to know what to do, but I think it would be better to cover the roots with a few inches of soil and lay flat stones on the space which is constantly used, or else pave the entire space and not attempt to grow anything under the trees. Then if people can be kept on the brick or stone paving it will be

possible to grow a few plants in the rest of the space. The difficulty about growing grass and plants under the dense shade of trees is not only that they do not get enough light, but that the trees rob the soil of richness and moisture.

Shallow-rooted trees, like the maple, beech, pines, etc., are particularly bad in this way, while the oaks, which root deep, are not.

If the branches of the trees hang too close to the ground to permit any plant to grow well, the pavement will still be an advantage, for then the unused portion may be left covered with the fallen leaves, which make a neat, beautiful carpet, so long as one does not walk on it too much.

I have known people who have tried to keep footpaths through pine woods covered with needles like the rest of the ground, but pleasant as such a carpet is to the foot and eye, it is not lasting, and stepping stones or bricks are better in the end, even though they are more formal.

Sweet pepper bush, the fragrant *Clethra alnifolia*, which blooms in August, is a large and beautiful shrub which seems not to mind ordinary shade. This is, moreover, easy to collect in the woods, and can therefore be used in quantities.

The purple flowering raspberry, *Rubus odoratus*, has showy flowers two inches across, and stems and branches covered with clammy hairs. It has no prickles, and it is an ornamental shrub for the shady parts of the wild garden.

The Wych Hazel, *Hamamelis Virginica*, is another wild shrub of great value for use under trees. It is large, reaching fifteen or twenty feet sometimes.

Fragrant sumac, *Rhus aromatica*, is a straggling bush, three or four feet high, which will grow in shady places. The leaves resemble the poison ivy somewhat in shape, but are hairy instead of shiny, and have a pleasant fragrance when crushed.

The Indian currant, *Symphoricarpus vulgaris*, grows well in the shade, and is a good shrub because of its fresh green leaves. It increases rapidly by underground shoots. The berry is attractive in the autumn.

English ivy can be used as a ground cover under trees, and often does well, but perhaps the myrtle, *Vinca minor*, will endure more shade.

Hypericum adpressum, too, is good under trees though difficult to get, and the yellow root, *Zanthorrhiza apiifolia*, will grow with little sunlight. These are both low shrubs seldom reaching two feet in height.

Many spring blooming plants, like the blood root, wake robin, Jack in the pulpit, and mandrake, will grow under deciduous trees, and narcissi, too, may be grown there, because these things bloom before the trees are clothed in leaves; but there are few plants that will grow at all under the dense shade of evergreens.

Of course, few plants will grow as well in shade as in the open, and the plants which are commonly found there, are there not because they like it best, but because their upward growth is so limited that without the intervention of man they must always be under taller plants. Moved to the open and protected from encroachment they often do better than in their accustomed environment. The reason they do not spread to open places now is that they can not, when young, contend with grass and weeds, and inevitably perish the first year.

R. R. asks "if anything can be done in a small way to abate the mosquito nuisance."

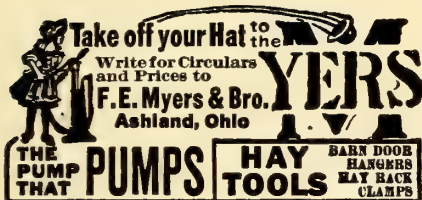
There are three things to remember about mosquitoes:

First.—They can not increase without water.



"WILWEAR"
NIAGARA LAWN SPRAY

A new Spray for lawn and garden. Made in "Wilwear" fashion, nicked on heavy brass. No loose or movable parts to get lost or out of order. Stamped into three angles to produce "Niagara Spray," so fine it will not wash dirt or injure flower beds. Great grass saver from effects of sun. Direct for \$1.00 if dealer cannot supply. Catalog of "Wilwear" metal goods and bathroom fittings upon request. NOVELTY MFG. CO., 215 Maple St., WATERBURY, CONN.



Take off your Hat to the
Write for Circulars
and Prices to
F.E. MYERS & Bro.
Ashland, Ohio

THE PUMP THAT **PUMPS** **HAY** **TOOLS** **BARN DOOR** **HANGERS** **HAY RACK** **CLAMPS**

Lawrence Park, Westchester County
Fifteen Miles from New York

For Sale or Rent, Colonial house, 12 rooms, 3 baths, servants' dining room, large laundry, glass enclosed piazza, electric lights, open fireplaces, good heating system. 1/2 acre of high land within ten minutes walk of Bronxville station. The property is located in one of the best residential districts of Westchester County.

Cornelius B. Fish & Son, Inc.

Westchester County Properties

527 Fifth Avenue

New York

Second.—They can not increase in water where there are pollywogs or fishes.

Third.—Crude oil or even kerosene poured on the pools kills the larvæ and prevents adults from laying eggs on the water.

A barrel partly full of rain water, an unprotected cistern, pieces of crockery and tin cans which will hold water, are often sufficient to provide a generous swarm of mosquitoes, which in all probability will be persistent in their attentions to the owner of such nuisances. So cover your tanks with netting or kerosene, and drain your swamps when possible. Then you will at least have the satisfaction of knowing that mosquitoes which bother you are not of your own raising.

IN THE RASPBERRY FIELD

A COUNTRY home that must pay its own way, and every country home should certainly do this, ought to begin a garden of berries at once, raspberries pre-eminently, followed by blackberries, and in the southern States by dewberries. The most profitable at the outset, and quickest to make cash returns, will be the red raspberries—including the yellow and purple varieties. For the last ten years the price of these berries has gone steadily upward, in spite of increased production. The wholesale price has climbed from eight or ten cents per quart to eighteen and twenty. In 1907 the market was far from being well supplied even at the latter prices. The reason for this is that the raspberry enters more and more freely into consumption, and in a larger number of ways, than most other fruits. Those who economize on every thing else desire a few raspberries for jelly, jam and canning. The raspberry can always be counted on to hold the local market, because it can not be shipped to any distance in the basket and crate without crush-

Warmth for the Guest

The guest suddenly arriving is quickly, surely made to feel "at home" and the cordial welcome is much emphasized where the home is equipped for right living by



AMERICAN & IDEAL
RADIATORS & BOILERS

A turn of the valve puts uniform, genial warmth into a room—or shuts off the heat in unoccupied rooms and saves fuel. Richest furnishings and decorations will not put a warm welcome into a cold house for either guests, callers or vacation-returning family. Better, therefore, prepare early this Fall season to warm the home by Hot Water or Low Pressure Steam heating. IDEAL Boilers and AMERICAN Radiators bring no ashes, coal gases, dust, smoke, grime or soot into guest chamber or other rooms. Why, therefore, continue to pay the extra expense for labor, fuel and repairs of stoves and hot air furnaces? Why lose in addition all the comfort, convenience and healthfulness of our way?

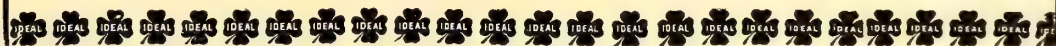
Made in sizes for cottages, mansions, stores, schools—all buildings—OLD or new—farm or city. A child can operate.

You will need our catalogues (free) showing best arrangement, uses and decoration of radiators and rooms. Sales Branches and warehouses throughout America and Europe.

AMERICAN RADIATOR COMPANY

DEPT. 6

CHICAGO



THE "GLOBE"

is built on honor
and sold on merit

Patented and
Trade-Mark
Reg. U.S. Pat. Off.

The "Globe" Ventilator

In Galvanized Iron, Brass and Copper
Also with Glass Tops for Skylight

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. *Smoky Chimneys Cured.*

"GLOBE VENTILATED RIDGING"

Manufactured by

Globe Ventilator Company :: Troy, N. Y.



COUNTRY HOUSES

that represent the best in artistic, up-to-date home architecture—houses that are fireproof, economical and permanent. Apply for booklet to

BENJAMIN A. HOWES ENGINEER and CONTRACTOR
1193 Broadway, New York City
All buildings, interiors and exteriors of reinforced concrete—also walls, walks, pergolas—all garden work.

House of Reinforced Concrete in process of construction at Short Hills, N. J. John A. Gurd, Architect. We would like the privilege of referring you to satisfied clients.

How to Make an Old Home Modern at Very Small Cost

THE things most in evidence in any home are the woodwork, furniture and floors.

If these things look old, shabby or out-of-date, the home cannot be modern.

Are you perfectly satisfied with the appearance of your furniture, woodwork and floors?

If you are not, you can easily remedy matters yourself—you can do the work in your spare time—it's interesting, fascinating—the expense is trifling.

You can make a pine floor almost as beautiful as hardwood—you change old discarded furniture, making it handsome and modern in finish—you can change the shiny, harsh, always-marred varnish finish on any wood to the proper dull waxed finish.

The "Johnson Way" is the only way that is absolutely satisfactory and really simple and practical.

Wood stains dry so quickly that it is very difficult to apply them evenly—they show laps, light and dark spots and rub off—spirit stains and water stains raise the grain of the wood.

As for "varnish stains,"

stain and varnish, they produce a coarse, out-of-date, shiny finish and anyway varnishing requires expert handling—such preparations hide the beauty of the wood because they are too "thick" to penetrate the pores and they are a constant source of care and expense—they cannot wear well because every scratch and scrape takes them off the surface.

Anyone can secure the best results with Johnson's Wood Dyes and Johnson's Prepared Wax.

Johnson's Wood Dyes (in 14 shades) are really dyes—they do not coat over the wood—they color it because they are so prepared that they penetrate the pores—thus they accentuate the beautiful grain of the wood and give an unequalled richness and depth of permanent tone—a perfectly even texture which will not rub off.

Then right over the Dye, you apply Johnson's Prepared Wax—simply rubbing it with a cloth and you have a modern, subdued, lustrous and enduring finish which cannot be produced in any other way.

This finish is easily kept in perfect condition because it does not show scratches and heel marks like varnish, shellac and hard oil, and when a place becomes worn all you have to do is rub a little Johnson's Prepared Wax over the worn part.

But don't expect to be able to do this with any other wax because Johnson's contains 20 per cent more of the hard, expensive polishing wax than any other similar preparation—so it covers a fifth more space—does not get soft and sticky—does not catch dust and dirt—does not show re-waxed spots and can be brought to the most beautiful and lasting polish with the least labor and expense.

Our book tells the entire story.



There Are No Substitutes For

JOHNSON'S
ARTISTIC WOOD FINISHES
JOHNSON'S

For Furniture
Woodwork and Floors



This Book
FREE
To You.



THIS 48-page book shows you the easiest and most economical way to make and keep your home really beautiful.

We will gladly send you a copy for your name and address on a postal or on the coupon below:

Address:—

S. C. Johnson & Son,
Book Edition A-H-7, Racine, Wis.

"The Wood Finishing Authorities"

Johnson's Wood Dyes for the artistic coloring of woods (14 shades), half-pint cans 30 cents, pint cans 50 cents, Johnson's Prepared Wax—10 and 25c packages and large size cans. Sold by all dealers in paint.

Send This
Coupon
For the
Book
Now

AH-7
S. C.
Johnson
& Son,
Racine,
Wisconsin
Please send me
FREE, prepaid,
copy of your book
"The Proper Treat-
ment for Floors, Wood-
work and Furniture."
This involves no obliga-
tion on my part.

Name.....

City.....

ARE YOU LOOKING FOR A MACHINE THAT WILL

plane out of wind, surface straight or tapering, rabbet door frames, rabbet and face inside blinds, joint, bevel, gain, chamfer, plow, make glue joints, square up bed posts, table legs, newels, raise panels, either square, bevel or ogee, stick beads, work circular mouldings, etc., rip, cross cut, tenon, bore, rout, rabbet, joint and bead window blinds, work edge mouldings, etc.? If so, drop us a postal card, and we will send you a descriptive circular showing two views of our No. 62 Universal Wood Worker.

Write

209-229 WEST FRONT STREET
J. A. FAY & EGAN CO.
CINCINNATI, OHIO

No. 62. UNIVERSAL WOOD WORKER

ing. The blackberry and strawberry can be shipped, on the contrary, a long distance. The wise berry-grower for this reason prefers the raspberry, at least in his earlier planting.

The black raspberry is used mainly for drying and export. It is, however, a grand fruit for home use, and should be planted to a limited extent. Nothing excels it in a bowl of milk, and this the boys and girls soon find out. The plant can not be kept in good condition beyond four years, while I find I can keep a field of red raspberries in good shape for twelve years. The black raspberry roots at the tip, and in order to secure plants we must leave untrimmed enough canes to furnish the sets we need. On the contrary, the red raspberry multiplies by suckers; although there are some crosses of the two sorts, like Schaffer and Columbian, which root in both ways. The suckers, which spring so abundantly with the reds, must be largely cultivated out or cut out. I top off my black raspberries at four or five feet, and keep them headed in all summer with arms of fifteen or eighteen inches in length. There is considerable difference in the growth of varieties, and some of these, like the Davison Thornless, I allow to grow taller. My red raspberries I do not cut off until October or November. Earlier clipping or heading in will start a lot of weak shoots and ruin the plantation. Wait until the weather is cold and there is no danger of starting buds.

As soon as the berry crop is off I cut out the old canes and fork them from the field. At the same time I crowd the new canes between two wires that are stretched from post to post—the posts standing about twenty feet apart. The wires are then clamped together with bent pieces of wire. The two wires should stand about three feet from the ground. Now you have your canes in good condition for winter and for running your cultivator. The tops can be clipped when the weather directs. The black raspberry is already trimmed and ready for winter. I treat my blackberries like the red raspberry—that is, I do not cut them back until cold weather. But I do not put the new canes between wires. The old canes are cut out and burned, and through the young canes I cut a passage wide enough for my horse to pass without being severely scratched. The upright growing Snyder, and King Phillip, I leave standing at a height of six or seven feet, but the somewhat spreading Eldorado have to be cut closer. These three sorts include about all that I now plant.

The best raspberries of the red and golden sorts are Cuthbert and Golden Queen. Neither of these is absolutely hardy, but they generally give a good crop as far north as central New York and Massachusetts. I have succeeded in raising a seedling of a lemon-yellow color, which is absolutely hardy. It is not yet ready for introduction. The best purple berry is still Schaffer, and even Columbian must give way to it. It annually kills back a little ways, but it invariably gives a fine crop. Indeed it is one of the really grand berries that we must never part with. Of all berries it is the best for canning, and the flavor as well as size are unsurpassed. The Loudon is a large and high-flavored berry, but very juicy, and unfit for market within twelve hours of picking. Miller, Haymaker, Cardinal, etc., are unworthy of planting. In fact, we are as yet not out of sight of the old Cuthbert. Of the very early sorts, Marlboro is emphatically the best. For market the demand will take about one-quarter either yellow or purple; but there must be about three-quarters of your stock pure red—and bright red at that. The housekeeper is very proud of her canned goods, and she likes to look lovingly at the rich cardinal color. The flavor of the golden berry is

unique, and it does not hold up in the can as well as the Cuthbert. What the country home now wants is to produce a very early berry, and another very hardy berry, both of them as rich and beautiful as the Cuthbert.

The best blackcaps are mostly seedlings of the Gregg. I have grown dozens of them very successfully. The Gregg was a monster berry, but not quite hardy, while most of its seedlings are hardy. One of these that is just now getting into high favor is the Cumberland—entirely hard and very productive. A good companion for this should be the Kansas, a large, handsome and firm berry of fine quality. For early I should select the Palmer, which is an abundant bearer of beautiful berries of high quality. For late I should select Nemaha. One Wisconsin grower of this sort says that it yields for him one hundred and fifty bushels to the acre. It is a large and firm berry and of fine quality. The Gault has gained a reputation for autumn bearing, although this autumn fruitage is not of much value, as berries are not very acceptable in market out of their regular season. An autumn bearing sort should, however, be acceptable in a corner of the garden for home use.

Some of the newer sorts that are claiming attention are the Ransome—a continuous bearer until heavy frost. The Haymaker is an Ohio seedling, not really black, and I do not find it worth the planting. I like the old Davison Thornless, and still plant it, always expecting seedlings from it that are of good quality and without thorns. However, this sort will never give you very heavy crops. Cross it, however, with other sorts and the greatest of all berries may some day start up in your garden. The Doolittle, which was the very first blackcap to be profitable in the garden, is still planted, especially in western New York, because it is one of the best for drying and shipping.

Both raspberries and blackberries like a moderately moist soil, but never wet; and the more mulch the better. The red raspberry will take a dryer soil than the others, but it also likes mulch. None of them are fond of barnyard manure—especially raw manure. I think that this sort of food stimulates root gall. This disease has enormously spread, and very suddenly, from the Atlantic to the Pacific; it is making red raspberry growing a very doubtful affair. The best thing to be done is to dig up the affected plants promptly and burn them. Be careful also not to set a plant which shows any signs of the disease. It is a gall or swelling on the roots. This disease is going out, I am happy to say, and if growers are careful to second the efforts of nature, we shall probably get rid of it, so as to make raspberry culture once more very profitable. So far as I know, gardens have decreased in number almost everywhere for the last ten years.

The proper manure or food for the raspberry is never highly concentrated barn manure, although this may be applied in the form of stable straw. Much better is it to use a heavy mulch of compost. Let this lie all winter and then plow under. Your compost piles for this purpose should take in very liberally autumn leaves in great quantities, coal ashes, wood ashes, barnyard manure, weeds, turf and all other waste which will make humus. Comminute this in October, and spread it liberally up and down the rows. Let it serve as a root cover for the winter, and plow under in the spring. In setting your plantations be sure to set the rows wide enough apart to run your mulch spreader between; and in the spring your spraying cart. If there come any sign of fungus, run your spraying cart at any season, with Bordeaux mixture. As the red raspberry is grown from



GRAND RAPIDS CORRUGATED ASBESTOS TABLE PADS

Patent applied for

How nice to keep your dining table's beautiful top unmarred by heat-scorching, scratches and moisture! How handsome it is when service and cloth are removed! The **one perfect protection** is the

GRAND RAPIDS CORRUGATED ASBESTOS TABLE PAD

The only pad having absolutely heat-proof air spaces formed by a corrugated centre board and top and bottom sheets of hard-pressed asbestos. Removable white flannel envelope, downy-soft, thoroughly shrunken, bound and tied with tape, prevents the slightest scratch on the table. Ribbon hinged to fold and place in sideboard; easiest to handle. Most necessary to perfect, noiseless service and preservation of the table finish.

48-inch, round or square, \$5.00 54-inch, round or square, \$6.00
60-inch, round or square, \$7.00

Proportionate prices on other dimensions, or special sizes quoted on request. 54-inch extension leaves, \$1.20 each.

See the GRAND RAPIDS PAD at Your Furniture Dealer's

Price refunded on any pad not wholly satisfactory and returned to dealer, or express collect to us if bought direct, within 30 days.

Neat booklet, Edition No. 4, mailed free

Agents wanted in every city and town. Liberal commission. Write for full information.

THE VEACH ASBESTOS COMPANY, OIL CITY, PA.

Importance of Hardware

There is no detail in the construction of your new home that should receive greater attention than the choosing of hardware that harmonizes perfectly with the architectural scheme.

Tastily designed hardware trimmings, chosen in deference to your architect's good judgment and your own wishes, is certain to add a lasting tone of refinement and a truly artistic effect.

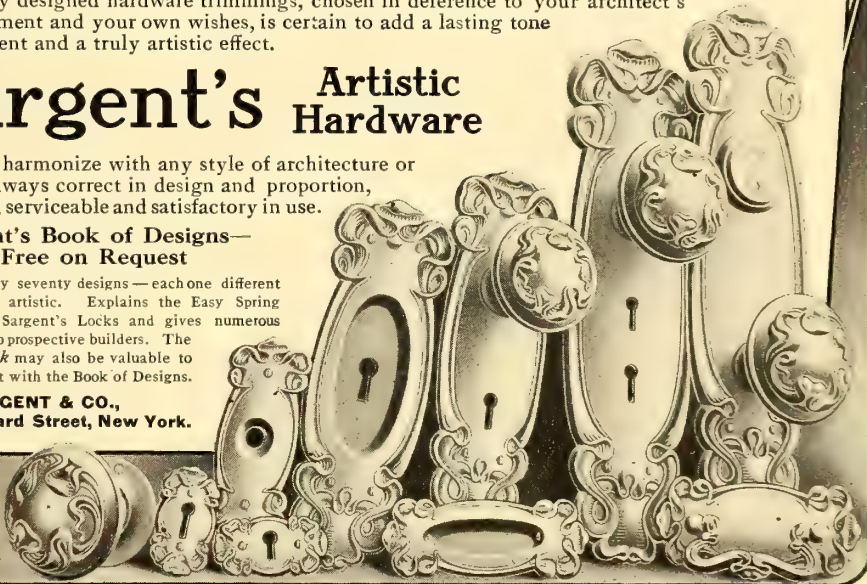
Sargent's Artistic Hardware

is made to harmonize with any style of architecture or finish. Always correct in design and proportion, and strong, serviceable and satisfactory in use.

Sargent's Book of Designs—Free on Request

Suggests nearly seventy designs—each one different and each one artistic. Explains the Easy Spring Principle of Sargent's Locks and gives numerous ideas helpful to prospective builders. The *Colonial Book* may also be valuable to you. Ask for it with the Book of Designs.

SARGENT & CO.,
 156 Leonard Street, New York.



Overlooking Lake Champlain



Just placed on the market—beautiful residence occupying the most sightly location in Burlington, Vermont. Has an unobstructed view of Lake Champlain and the Adirondacks for over fifty miles, with another view of the Green Mountains. Three-story-and-basement house, first story pressed brick. First and second floors are finely finished in quartered oak and other woods. Large finished basement contains well-equipped laundry; parlor, library, reception hall, dining-room, kitchen, etc., on first floor; six bedrooms and bath on second floor; two bedrooms, billiard hall, study and storerooms on third floor. House is supplied with gas and electricity. Property includes a fine brick stable and beautiful grounds. An ideal modern summer or all-the-year home, and a splendid value. Price, \$20,000. Address **O. S. Presbrey, Port Henry, N.Y.**



The expense and annoyance of painting will not recur every year or two if you use

DIXON'S SILICA-GRAPHITE PAINT

the "Proven Shield for Steel Work." Durability records in all climates; write for a few.

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.

Do You Want a Good Water Supply?

Would you like to have—

- Fresh running water whenever and wherever you want it, at very little expense?
- Strong, dependable pressure at all times?
- Water at a usable temperature the year round?
- Water piped to any part of your buildings or grounds?
- A simply operated plant with very little attention?
- Maintained at a very small cost?

All these and more are everyday features of

The Kewanee System of Water Supply

Give us your name and address and let us tell you the story of 8,000 successful Kewanee Systems which have been installed in the last few years in country and suburban residences, clubs, farms, schools, public and private institutions, villages, etc.

Our broad experience and the expert technical knowledge of our hydraulic engineers are at your service. We make no charge for our specifications and estimates.

The Kewanee System of Water Supply is **not an imitation**, is **not a substitute**—it is the **original** water system, involving the use of **air pressure** instead of gravity pressure. Kewanee tank is placed in the cellar or buried in the ground. Avoid cheap imitations.

When we sell you a Kewanee System of Water Supply, we know to a certainty what it will do, because it is planned and suited to meet your particular requirements; and further, we guarantee it to do what we say it will do.

Write for our handsome catalog which is the most complete catalog on water supply ever published. Ask for Catalog No. 36.

Kewanee Water Supply Co.

Kewanee, Ill.

1566 Hudson Terminal Bldg., 50 Church Street,
New York City.

710 Diamond Bank Bldg., Pittsburg, Pa.
820 Marquette Bldg., Chicago.

NOT Canned Corn

A smile goes round the table when Kornlet is served. Perhaps it's a Kornlet pudding, or croquettes, gems, cakes, fritters. You can serve Kornlet a new way every day of the year.

Kornlet

(The Heart of the Kernel)

is young, tender corn, minus the husks and hulls. It isn't canned corn. Fancy having green corn in winter. That's Kornlet.

Look for recipes on every wrapper. Valuable book of recipes sent free on request.

If your grocer hasn't Kornlet, write us.

THE
HASEROT
CANNERIES
COMPANY

CLEVELAND OHIO U.S.A.

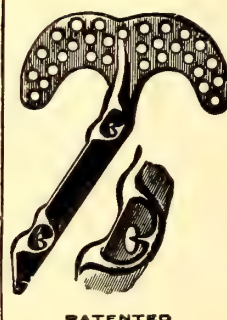
Van Dorn Iron Works Co.



PRISON, HOUSE &
STABLE WORK

JOIST HANGERS
LAWN FURNITURE
FENCING, ETC.

CLEVELAND, OHIO



Standing Seam ROOF IRONS

CLINCH right through the standing seam of metal roofs. No nails are needed unless desired. We make a similar one for slate roofs.

SEND FOR CIRCULAR

BERGER BROS. CO.
PHILADELPHIA

HOTEL "WAWA"

GRAND TRUNK RAILWAY SYSTEM

LAKE of BAYS

This handsome new Hotel is situated at Norway Point, Lake of Bays, with accommodation for 150 guests.

Modern in every respect. Delightfully Situated. Electric Lighted throughout. Pure Mountain Spring Water. Hot and Cold Water in every room. 1000 feet above sea level. Hay Fever unknown. Good fishing. Boating for all kinds of craft. Fine Bathing Beaches. Good Steamboat Service.

Write for copy of handsome booklet descriptive of the territory, to any of the following:

G. W. Vaux, 917 Merchants Loan and Trust Building, Chicago, Ill.
F. P. Dwyer, 290 Broadway, New York, N. Y.
E. H. Boynton, 360 Washington St., Boston, Mass.
W. Robinson, 506 Park Building, Pittsburg, Pa.

W. E. DAVIS, P.T.M., Montreal. G. T. BELL, G.P.T.A., Montreal.

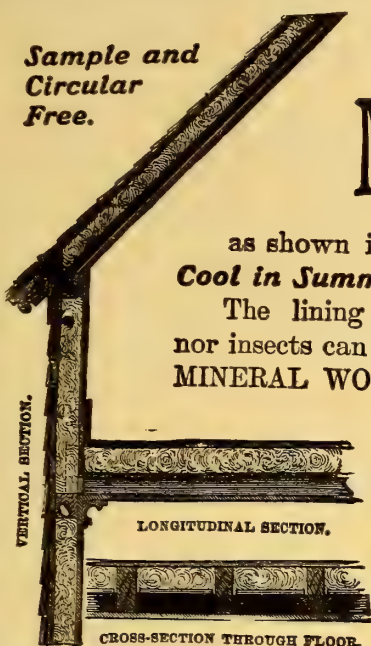
Bound Volumes of American Homes and Gardens

Volume for 1905	\$3.50
Volume for 1906	\$5.00
Volume for 1907	\$5.00

MUNN & CO., Publishers 361 Broadway, New York

suckers, you can set at any season, either spring or fall, and you can set very deep if you please. This is true also of the blackberry. The black raspberry, however, being grown from rooted tips, must be set only in the spring, or it will be heaved out by the frost. The key to success all the time is mulch, mulch, mulch; and after the plants begin to grow run your cultivator constantly, until the berries will be knocked off by the horse. Follow these simple directions, and your country home will have a most delicious and healthful food, while your surplus will be in steady demand and help to pay your meat bill. I trust that every country home maker will live mostly on fruit and cereals, which he can grow himself.

Sample and
Circular
Free.



A House Lined with Mineral Wool

as shown in these sections, is *Warm in Winter,
Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice,
nor insects can make their way through or live in it.
MINERAL WOOL checks the spread of fire and keeps
out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.
140 Cedar St., NEW YORK CITY.



The prevail-
ing interest
in early
English
styles and

decorations has led to
the use of many an
old English lantern—
not alone for its soft-
ness of light, but for
its beauty of detail
and decorative value
to its surroundings dur-
ing the hours when not lighted.

For the protection of our clients, our trade-mark will
be found on each and every piece of work made by us.

The Enos Company

MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
San Francisco, 1748 California Street
Toronto, 94 King Street, West
Pittsburg, G. P. Norton, Penn at 4th St.
Chicago, W. K. Cowan & Co., 203 Michigan Blvd.

NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & Co., BOSTON

Illustrated catalogues will be furnished on application



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER TILING

An Ideal Floor Covering for Court
Houses, Banking Institutions, Churches,
Hospitals, Libraries, Business Offices,
Restaurants, Vestibules, Elevators,
Kitchens, Laundries, Pantries, Bath-
rooms, Steamships and Floating Prop-
erty generally.

We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

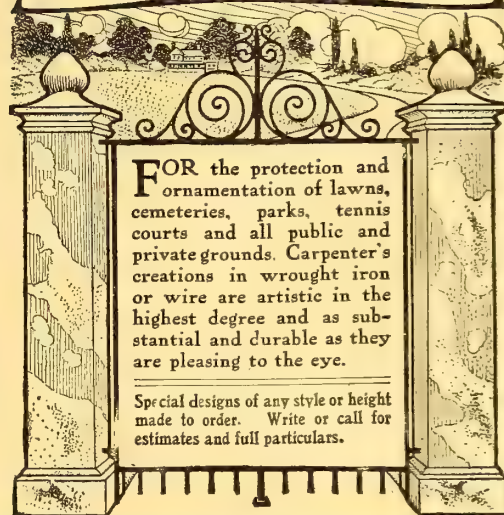
CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street

WROUGHT IRON FENCE

And Entrance Gates
WIRE FENCING

Ornamental Iron-Work, Tree-
Guards, Lawn Furniture, Etc.
TENNIS COURT ENCLOSURES A SPECIALTY
F. E. CARPENTER CO.,
7 & 9 WARREN ST., - NEW YORK



FOR the protection and
ornamentation of lawns,
cemeteries, parks, tennis
courts and all public and
private grounds. Carpenter's
creations in wrought iron
or wire are artistic in the
highest degree and as sub-
stantial and durable as they
are pleasing to the eye.

Special designs of any style or height
made to order. Write or call for
estimates and full particulars.

?
**What
Do You Want
to Buy**
?

We can tell you where to buy anything you
want. Write us for the addresses of manu-
facturers in any line of business—Novelties,
Special Tools, Machinery, Equipments, new
patent *Labor-Saving Devices*.

MUNN & COMPANY

Publishers of Scientific American

361 BROADWAY, NEW YORK, U. S. A.



Chickering pianos

THE RESULT OF SKILL, inspired by a keen appreciation of the artistic and a desire to live up to an enviable reputation, directed by the latest scientific knowledge, and practical experience gained by eighty-five years of piano building. ¶ The resulting excellence, both as to tone, touch and general staying power, is the reason and the only reason for the uniformly high favor in which it is held in exclusive musical circles. ¶ It is conceded to be a standard of comparison for all other makes.

Made Solely by CHICKERING & SONS

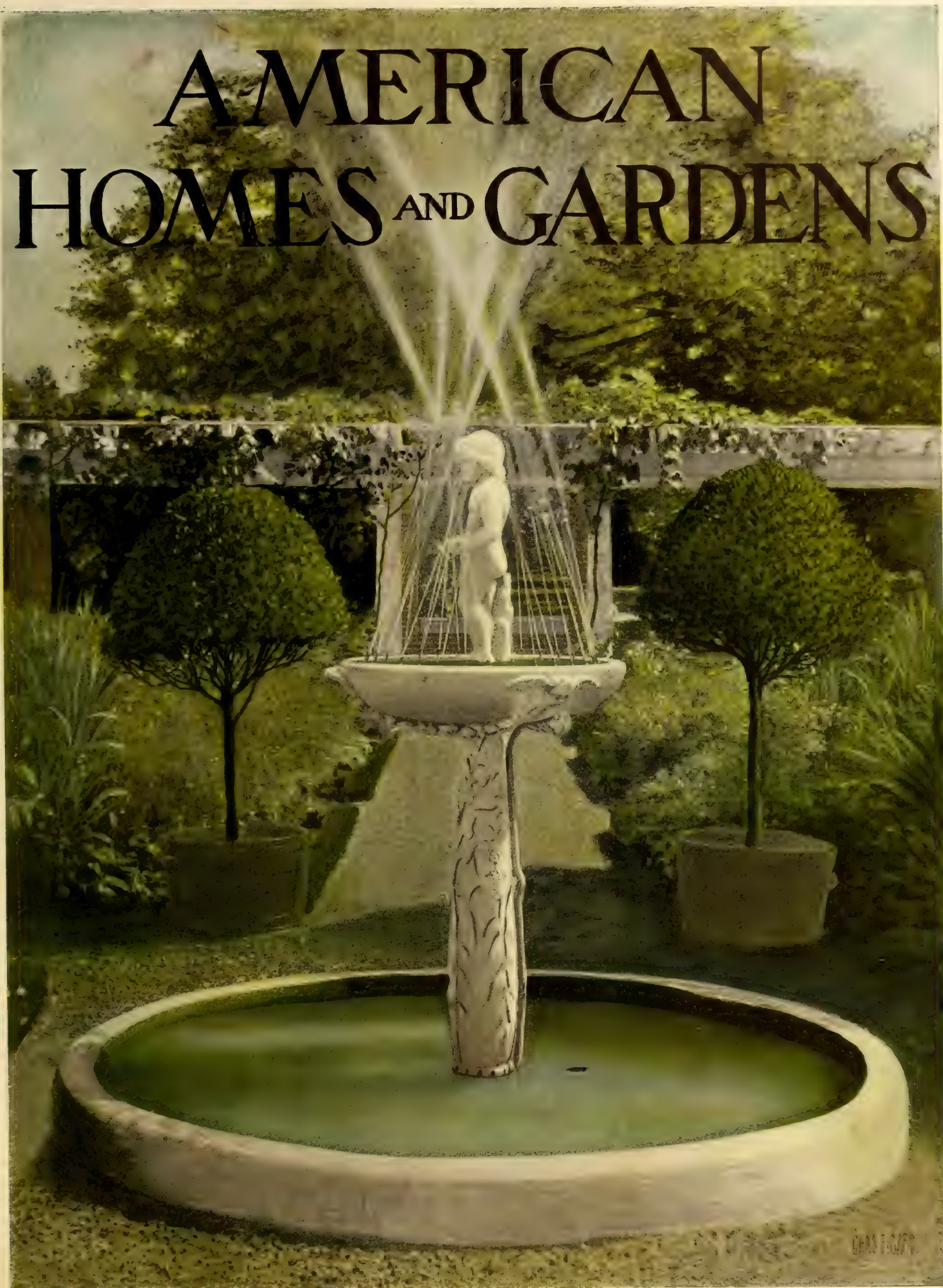
826 Tremont Street

PIANOFORTE MAKERS

Established 1823

Boston, Mass.

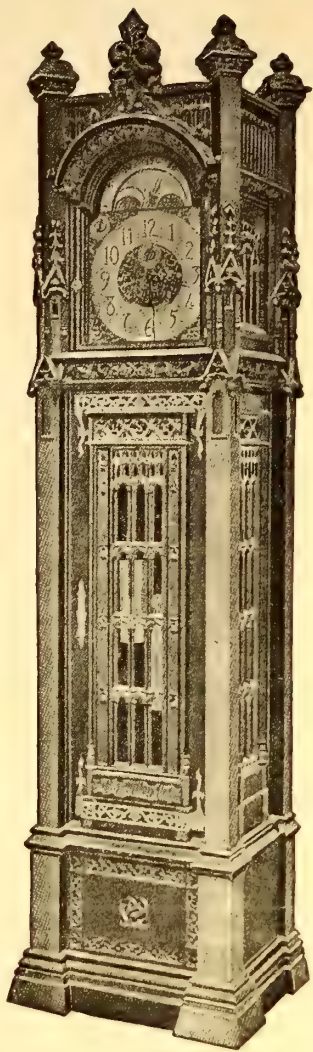
AMERICAN HOMES AND GARDENS



\$3.00 A YEAR

MUNN & COMPANY, Publishers

PRICE, 25 CENTS



HALL CLOCKS

The most useful and ornamental article you can have in your home is a fine HALL CLOCK. We make many styles and kinds, with or without chimes.

The "Banjo," which is so popular for dining-room and library, is a most satisfactory clock.

We also make a full line of Marble Clocks and Regulators.

If your local dealer does not sell our line, send direct for new illustrated catalogue.

Waltham Clock Company
Waltham, Mass.



VERY RARE WILLIAM AND
MARY WALNUT SETTEE

Reproductions of Exclusive English
Models at Moderate Prices.

The Largest Collection of English
Furniture in America.

The A. J. Crawford Co.
251-255 Fifth Avenue, New York

Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO



Running A Car By Ear

The trained ear of the experienced automobilist instantly detects the superiority of MOBILOIL in the even, contented "pur-r" of the engine that tells the story of perfect lubrication. No matter what the type of gasoline engine or season of the year, MOBILOIL invariably gives perfect lubrication under all conditions.

VACUUM MOBILOIL

is made in five different grades, each grade meeting the particular requirements of certain automobiles.

A valuable booklet on motor lubrication will be sent free on application. Lists every automobile made, and shows grade of MOBILOIL necessary for its perfect lubrication. Contains track records and other useful information.

MOBILOIL in barrels, and in cans with patent pouring spout, is sold by all dealers. Manufactured by

**VACUUM OIL COMPANY,
ROCHESTER, N. Y.**

MENNEN'S BORATED TALCUM TOILET POWDER



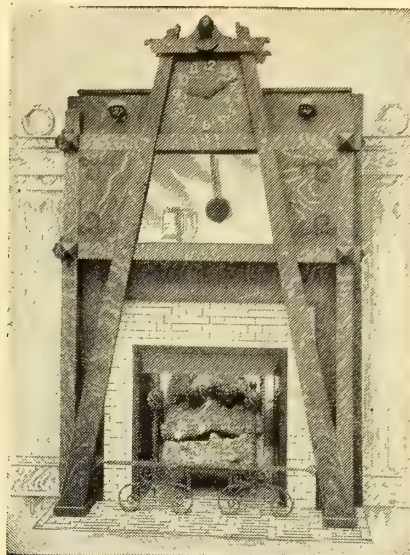
"Patience and Mennen's" do wonders for the skin and complexion of those who lead an outdoor life. The continued daily use of

**MENNEN'S
BORATED TALCUM
TOILET POWDER** will improve a poor complexion and preserve a good one. For vacation days Mennen's is a necessity and a comfort. It prevents and relieves Chafing, Sunburn and Prickly Heat. After shaving and after bathing it is delightful. In the nursery it is indispensable.

For your protection the genuine is put up in non-refillable boxes—the "Box that Lox," with Mennen's face on top. Guaranteed under the Food and Drugs Act, June 30, 1906. Serial No. 1542. Sold everywhere, or by mail 25 cents. Sample free.

Gerhard Mennen Co.
Newark, N. J.

Try Mennen's Violet (Borated) Talcum Toilet Powder—it has the scent of Fresh-cut Parma Violets. Sample free.
Mennen's Sen Yang Toilet Powder, Oriental Odor.
Mennen's Borated Skin Soap (blue wrapper). Specially prepared for the nursery.
No Samples.



Artistic 1908 Mantels

Our Catalogues contain 130 designs, including Mission, Colonial, White, Mahogany and Oak. Everything, from the very cheapest to the best.

Fireplace Hardware and Tiling of every description.

Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.

Unity Building
Chicago, Ill.

306 Main Street
Jacksonville, Fla.

Factory, Knoxville, Tenn.

"Bulletin 26"

SENT FREE: "HOW TO KEEP AWAY CHICKEN-LICE AND MITES," by only ONE APPLICATION A YEAR

Successfully used upward of 30 years

Carbolineum Wood Preserving Co.

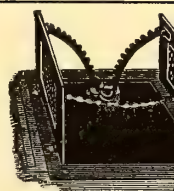
350 West Broadway, New York, N. Y.

MANLOVE AUTOMATIC GATE



can be attached to ordinary posts. Is opened and closed by any vehicle, including Automobiles. Machinery is all above ground. Simple, durable, inexpensive. Especially adapted for Summer Homes and Country Clubs.

MANLOVE GATE CO., 272 E. Huron St., Chicago



T. H. BROOKS & CO. CLEVELAND, O.
FLOOR & SIDEWALK LIGHTS.
OF EVERY DESCRIPTION.
SEND FOR CATALOGUE.

Cottage Designs

No. 1. Cottage Designs
Twenty-five designs, ranging in cost from \$600 to \$1,500

No. 2. Low Cost Houses
Upward of twenty-five designs, costing from \$750 to \$2,500

No. 3. Modern Dwellings
Twenty designs, at costs ranging from \$2,000 to \$5,000

No. 4. Suburban Homes
Twenty selected designs, costing from about \$3,000 upward

By far the most complete collection of plans ever brought out. Illustrated with full-page plates.

\$1 each. Sold separately.

MUNN & COMPANY, PUBLISHERS
361 BROADWAY :: NEW YORK



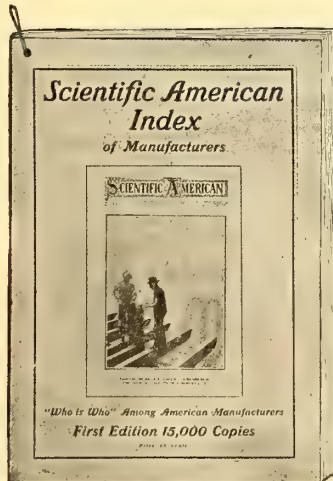
Artistic Practical Houses, 1908

A NEW book for 1908 has been prepared, showing the latest designs of houses of modern cost. This volume contains practical and skilful arrangements of floor plans, and shows artistic exteriors equal to those of the most expensive work in the suburban architecture of America. If you want a house costing from \$5,000 to \$10,000, complete and convenient and yet unusual and the opposite from the commonplace, you will be interested in this new book. Price, \$2.00, by express prepaid.

MUNN & CO., 361 Broadway, New York

SCIENTIFIC AMERICAN INDEX OF MANUFACTURERS

NEWLY EDITED
EDITION OF 1908



64 PAGES

2500 ENTRIES

FREE

SOME TEN YEARS AGO the publishers of the SCIENTIFIC AMERICAN issued an index of leading manufacturers. This book has proved so popular that the demand has warranted an entire new edition. The invaluable list tells where to buy almost any article, and buyers who fail to find the information they desire can have their wants specially looked up without charge, and if necessary we will advertise their wants in our inquiry column without expense. The first edition of this index is only 15,000 copies, so that early application is necessary.

MUNN & CO., Publishers Scientific American, 361 Broadway, New York

BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont

MR. R. H. RUSSELL announces that he has again personally resumed the publication of art books, fiction, enriched and limited editions, pictorial reprints, and general literature under the imprint of:

R. H. RUSSELL

He wishes particularly at this time, because of their unique value, to call your attention to seven books by

CHARLES DANA GIBSON



who has just come back to this country, reiterating the statement that he would not return to the field of his early and remarkable success in pen and ink characterization of American types and manners.

The books listed below printed on heavy plate paper and bound in Japan vellum practically cover his work:

The Social Ladder	- - - -	\$5.00
Americans	- - - -	5.00
A Widow and Her Friends	-	5.00
The Education of Mr. Pipp	-	5.00
Sketches and Cartoons	- -	5.00
Pictures of People	- - - -	5.00
People of Dickens	- - - -	5.00

JAMES McNEILL WHISTLER

His own witty satire on the *cause célèbre* which excited and diverted Europe and America, "The Baronet and the Butterfly," with the author's butterfly signature in gold on the cover. \$1.25.

More of the famous **Wolfville Stories**, by ALFRED HENRY LEWIS, entitled "The Black Lion Inn." \$1.50.

"The Tiger and the Insect," a sequel to "Helen's Babies," by JOHN HABBERTON. \$1.20.

Write for a list of other important publications. Every direct purchase of five dollars' worth of books will entitle you to a year's subscription to

THE METROPOLITAN MAGAZINE

The Great Monthly for the American Home

Among the important and interesting contributions to the August number are: "Our Navy's Great Task," by John R. Winchell; "Voodoo: Its Effect on the Negro Race," by Marvin Dana; "The Scars of War in the Shenandoah," by John D. Wells; "The Southwest's Evolution," by Charles M. Harvey, and some of the best summer fiction ever published.

15 CENTS A COPY

\$1.50 A YEAR

R. H. RUSSELL, Publisher



Dept. A., 3 W. 29th St., New York

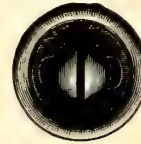
CRYSTAL Domino SUGAR

5^{lb} Sealed Boxes Only!

Best Sugar for Tea and Coffee!

By Grocers Everywhere!

PREVENTS DRAFTS, DUST AND WINDOW RATTLING.



IVES' PATENT Window Stop Adjuster.

HEAVY BED

PATENTED.

The only Stop Adjuster made from one piece of metal with solid ribs and heavy bed that will not cup, turn or bend in tightening the screw. Manufactured only by The H. B. IVES CO., New Haven, Conn., U. S. A. (Fifty-page Catalogue Mailed Free.)

Details of Building Construction

A collection of 33 plates of scale drawings with introductory text

By CLARENCE A. MARTIN
Assistant Professor, College of Architecture,
Cornell University

This book is 10x12½ inches in size, and substantially bound in cloth. Price \$2

MUNN & CO., 361 Broadway, NEW YORK

"To have your roof last—
Use Ruberoid Roofing first"

Roofing Facts

In every quarter of the globe and in every kind of climate, you'll find Ruberoid Roofing.

Why?

Ruberoid was the first elastic, smooth surfaced, fire and acid resisting roofing made. Since it was placed upon the market, there have been numberless imitations.

Why?

Imitators try to copy only the best or standard articles, *not the poor ones*, and only a roofing that possesses great intrinsic merit, would be ADOPTED BY THE WHOLE WORLD. If you are looking for a truly serviceable roofing, one that is less costly and lasts longer than metal or shingles, that is weather-proof, water-proof, and fire and acid-resisting, write us about

RUBEROID ROOFING

(TRADE MARK REG. U. S. PAT. OFF.)

"The only permanent roofing with permanent colors"

It is made in Red, Brown, Green and Slate color, and is in use on prominent buildings all over the world. It is the *only* roofing made, that has a record of *over 16 years* of unvarying satisfactory service to its users.

For further particulars, write for Booklet 15

THE STANDARD PAINT COMPANY

Manufacturers of Ruberoid Roofing, Building and Sheathing Papers, etc.
100 William Street, New York

CHICAGO, ST. LOUIS, KANSAS CITY, BOSTON, PHILADELPHIA, NEW ORLEANS
THE STANDARD PAINT CO. OF CANADA, LTD.,
Imperial Bank Bldg., Montreal
THE RUBEROID CO., LTD.
81-83 Knightbridge St., London, England

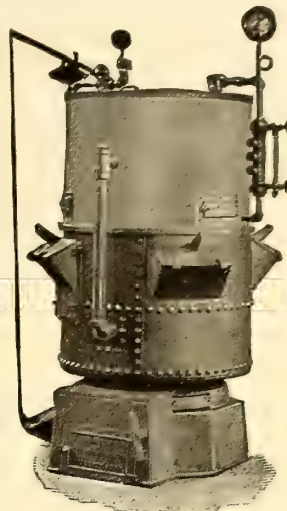
RUBEROID GESELLSCHAFT, m. b. H.,
Hamburg and Berlin, Germany
COMPAGNIE FRANCAISE DU RUBEROID
20, Rue St. George, Paris, France



The STANDARD

GORTON

SIDE FEED BOILERS SIDE FEED



For Steam
and
Hot Water
Heating

Insure a
Warm
Building
Day
and Night in
Coldest
Weather

Send for
Catalog

GORTON & LIDGERWOOD CO.
96 LIBERTY STREET, NEW YORK
Old Colony Bldg., Chicago 77 Oliver St., Boston

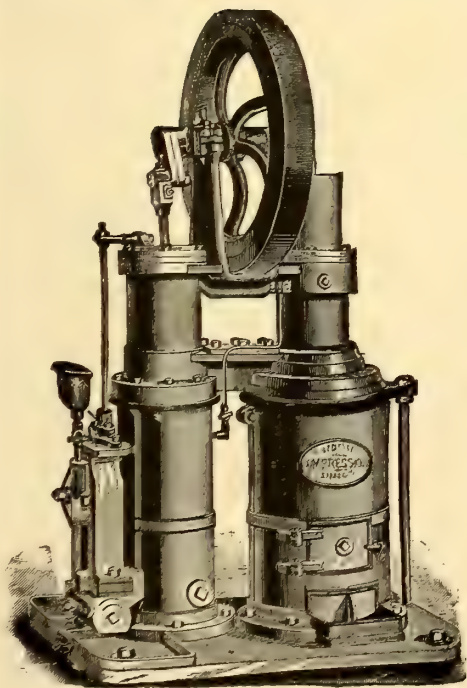
HEALTH CEILINGS

HEALTH SIDE WALLS



They might well be termed as above for they do **not** gather moisture—are **not** filled with poisonous coloring matter and **cannot** fall, crack or become unsightly. Eller's Steel Ceilings and Side-walls have for many years been the standard of quality—look for the trade-mark—it means perfection in every feature.

ELLER MFG. CO., Canton, Ohio



Improved Rider Hot Air Pumping Engine

AND

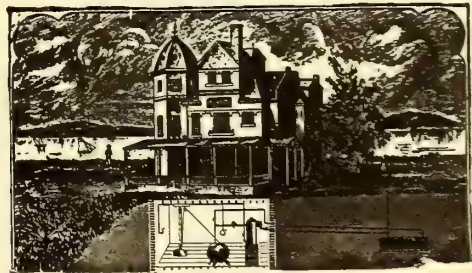
Improved Ericsson Hot Air Pumping Engine

PRICES GREATLY
REDUCED

Send for Catalog "E" to nearest office

Rider-Ericsson Engine Co.

39 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



Our remarkable recent inventions enable us to offer the public an intensely brilliant

Smokeless Gas

at much less cost than city gas, better, safer and cheaper than electricity, and costing but one-fourth as much as acetylene.

Most Durable and Least Expensive
Apparatus to Maintain

In effective perpetual operation. Gives services of lighting, cooking and heating. Fullest satisfaction guaranteed, and easy terms. The very apparatus for suburban homes, institutions, etc. We construct special apparatus also for fuel gas for manufacturing, producing gas equivalent to city gas at 50 cents per 1000 cubic feet, and made to respond to very large demands; also for lighting towns, etc.

C. M. Kemp Mfg. Co., Baltimore, Md.

GURNEY HEATERS

GURNEY HEATERS, measured by quality, economy and efficiency, are the standard of value.

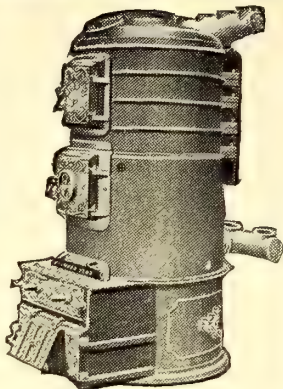
☐ They are made of the best materials and by the highest grade of mechanical and engineering skill; constructed under these conditions, they are unequalled in durability.

☐ There is also complete combustion of fuel and no waste of heat units, thus insuring great economy.

☐ The **GURNEY HEATER**, made either for hot water or steam, distributes the heat evenly and with a certainty that gives complete satisfaction to the user.

☐ Easily installed in old or new buildings they appeal to those who want to eliminate extra care and waste, or who want greatest value for amount expended.

☐ Send for illustrated catalogue.



GURNEY HEATER MFG. CO.

188-200 Franklin St., Corner Pearl St., BOSTON, MASS.
NEW YORK BRANCH, 12 East 42d Street

New Papers on Concrete Reinforced Concrete Concrete Building Blocks

Scientific American Supplement 1543 contains an article on Concrete, by Brysson Cunningham. The article clearly describes the proper composition and mixture of concrete and gives the results of elaborate tests.

Scientific American Supplement 1538 gives the proportion of gravel and sand to be used in concrete.

Scientific American Supplements 1567, 1568, 1569, 1570 and 1571 contain an elaborate discussion by Lieut. Henry J. Jones of the various systems of reinforcing concrete, concrete construction, and their applications. These articles constitute a splendid text book on the subject of reinforced concrete. Nothing better has been published.

Scientific American Supplement 997 contains an article by Spencer Newberry, in which practical notes on the proper preparation of concrete are given.

Scientific American Supplements 1568 and 1569 present a helpful account of the making of concrete blocks by Spencer Newberry.

Scientific American Supplement 1534 gives a critical review of the engineering value of reinforced concrete.

Scientific American Supplements 1547 and 1548 give a resumé in which the various systems of reinforced concrete construction are discussed and illustrated.

Scientific American Supplements 1564 and 1565 contain an article by Lewis A. Hicks, in which the merits and defects of reinforced concrete are analysed.

Scientific American Supplement 1551 contains the principles of reinforced concrete with some practical illustrations by Walter Loring Webb.

Scientific American Supplement 1573 contains an article by Louis H. Gibson on the principles of success in concrete block manufacture, illustrated.

Scientific American Supplement 1574 discusses steel for reinforced concrete.

Scientific American Supplements 1575, 1576 and 1577 contain a paper by Philip L. Wormley, Jr., on cement mortar and concrete, their preparation and use for farm purposes. The paper exhaustively discusses the making of mortar and concrete, depositing of concrete, facing concrete, wood forms, concrete sidewalks, details of construction of reinforced concrete posts, etc.

Scientific American Supplement 1583 gives valuable suggestions on the selection of Portland cement for concrete blocks.

Scientific American Supplement 1581 splendidly discusses concrete aggregates. A helpful paper.

Scientific American Supplements 1595 and 1596 present a thorough discussion of sand for mortar and concrete, by Sanford E. Thompson.

Scientific American Supplement 1586 contains a paper by William L. Larkin, on concrete mixing machinery in which the leading types of mixers are discussed.

Scientific American Supplement 1626 publishes a practical paper by Henry H. Quimby on concrete surfaces.

Scientific American Supplement 1624 tells how to select the proportions for concrete and gives helpful suggestions on the treatment of concrete surfaces.

Scientific American Supplement 1634 discusses forms for concrete construction.

Scientific American Supplement 1639 contains a paper by Richard K. Meade, on the prevention of freezing in concrete by calcium chlorides.

In **Scientific American Supplement 1605** Mr. Sanford E. Thompson thoroughly discusses the proportioning of concrete.

Scientific American Supplement 1578 tells why some fail in the concrete block business.

Scientific American Supplement 1608 contains a discriminating paper by Ross F. Tucker on the progress and logical design of reinforced concrete.

EACH NUMBER of the SUPPLEMENT COSTS 10 CENTS. A SET of PAPERS CONTAINING ALL THE ARTICLES ABOVE MENTIONED WILL BE MAILED for \$3.40

Order from your Newsdealer or from

MUNN & CO., Publishers, 361 BROADWAY, New York City



NORTH AMERICAN TREES. By Nathaniel Lord Britton, with the assistance of John Adolph Shafer. New York: Henry Holt & Co. Pp. 10+894. Price, \$7.00.

OUR TREES: HOW TO KNOW THEM. By Clarence M. Weed. Photographs from nature. Philadelphia: J. B. Lippincott Co. Pp. 295. Price, \$3.00.

HANDBOOK OF THE TREES OF THE NORTHERN STATES AND CANADA EAST OF THE ROCKY MOUNTAINS. By Romeyn Beck Hough. New York: Harper & Brothers. Pp. 10+470. Price, \$8.00.

These three books sum up, in a very complete and practical way, the latest knowledge relative to American trees. Each has its own particular field, each makes its own especial appeal to the reader and student as well as to the nature lover. Each has its own scope and presents its subject in its own way. Separately and together they constitute a rich addition to our tree literature, and each must find a welcome space on the shelves of the tree lover.

It is a wholesome indication of popular and widespread interest in trees that three such notable books on this subject should appear from three different presses at the same time. Books of this description are expensive to manufacture, since a very abundant illustration is necessary to render their contents available. All of these books are lavishly illustrated, and it is quite possible to obtain a tolerable knowledge of trees from the mere study of their plates alone. This in itself is a boon of no slight value, since familiarity with the aspects of trees is a first step to a real knowledge of them and an immense help to their true appreciation.

Dr. Britton's monograph is a thoroughly scholarly production, and is designed to describe all the kinds of trees known to grow independently of planting in North America, north of the West Indies and Mexico, and to illustrate them by figures showing the character of foliage, flowers and fruit. These figures are drawings, and have the character and value of technical illustrations; they are, however, supplemented with photographs illustrating the general aspect of certain species. Such illustrations are less numerous than the botanical drawings, and it is on these that the illustrative value of the work chiefly depends. Prepared with great care, and in most cases expressly for this work, these illustrations may be depended upon as a ready means of identifying our trees by their foliage, flowers and fruit.

The scope of the book is necessarily very large, and the number of trees described and illustrated is immense. The text, therefore, is obviously restricted to the most condensed descriptions. These, however, will be found entirely adequate, and especial care has been taken to present them in non-technical words, for the book makes a wider appeal than to the technical botanist. The author has been completely successful in producing a book that is notable in every way, and which must, for some time to come, remain the standard monograph on its subject.

Dr. Weed's book is based on more popular models. It does not aim to cover the whole immense subject of American trees, but in discussing and illustrating the more common kinds it covers the subject sufficiently well to make it an excellent medium for acquiring an intimate acquaintance with most of them.

Much dependence is placed on the illustrations, which are wholly from photographs, and have, in each case, been taken directly from nature. These pictures bring together on one page the chief aspect of each tree, and include a general view with larger photographs of leaves, flowers, fruits and winter twigs. The apparatus for the identification of the tree is thus very complete. In the text special attention has been given to the distinguishing characteristics of the various species, as well as to the more interesting phases of the yearly cycle and the special values of each tree for ornamental planting. While manifestly intended for popular use, the author has something to say and something to show. His book is admirable in both respects and merits warm commendation.

Mr. Hough's book has already been noticed in these pages, but it may be noted that its publication has since been taken over by the house of Harper & Brothers. Like each of the preceding books it, too, has its own scheme, which is worked out with great elaboration of detail. Its photographic illustrations are most abundant, and include, as distinctive features, photographs of tree trunks, sections of the wood, and miniature maps showing the native distribution of each tree. The detail photographs of branches with leaves, flowers, and fruits and of the undeveloped twig are very full and complete.

WINDOW GARDENING. By Herman B. Dorner. Indianapolis: The Bobbs-Merrill Co. Pp. 153.

While window gardening may not, perhaps, be considered an important part of the garden amateur's work, it is, nevertheless, a highly interesting subject, and one that gives much pleasure. Mr. Dorner's little book will appeal to many plant lovers, since it treats of one of the most difficult phases of small gardening, the care and growth of house plants. There are few plant lovers who have not met with innumerable difficulties in these matters, and a brief text book that aims to help them is sure to have the hearty welcome it deserves.

ENGINEER'S HANDBOOK OF CONCRETE REINFORCEMENT. New York: American Steel & Wire Co. Pp. 125. Price, \$2.00.

This handbook consists partly of original matter and partly of well selected extracts from standard works on concrete construction. It briefly summarizes the whole subject. The contents include a number of technical tables, diagrams and photographs of work in construction.



"Standard" Bath Room

"Standard" Lavatory

"Standard" Kitchen

"Standard" Laundry

You must have healthful, sanitary Plumbing Fixtures
to have a healthful, sanitary Home

By Equipping with Genuine **"Standard"** Green & Gold Label Plumbing Fixtures

the health of your household is safeguarded for all time
and the problem of home sanitation is solved for good.

No other plumbing equipment provides the same thorough satisfaction in sanitation, service and actual use as genuine "Standard" "Green and Gold" Label Fixtures. No matter how much or how little you wish to invest in your sanitary fixtures, there is a genuine "Standard" equipment for you at that price. The genuine "Standard" equipment is the most sanitary, the most economical, and the most beautiful of all plumbing equipment made for household use.

To protect yourself against prevalent substitution, and to make sure that the fixtures installed in your home are genuine "Standard" Ware, insist that each and every fixture bear the "Standard" "Green and Gold" Guarantee Label. Look for this label and refuse any fixture without it. The "Standard" Label means a full dollar of value for every dollar you invest, and is a protection you cannot afford to be without.

We want every householder to have our beautifully illustrated 100-page book, "MODERN BATHROOMS." This book will save you many dollars when purchasing the sanitary equipment for your home. Sent on receipt of 6c. postage and name of your architect and plumber (if selected).

Address **Standard Sanitary Mfg. Co., Dept. 23** Pittsburgh, Pa., U. S. A.

Offices and Showrooms in New York: "Standard" Building, 35-37 West 31st Street.

Louisville: 325-329 West Main Street.
London, Eng.: 22 Holborn Viaduct, E. C.

Pittsburgh:
949 Penn Avenue.

New Orleans: Cor. Baronne & St. Joseph Sts.
Cleveland: 648-652 Huron Road, S. E.

THE CARE OF THE LAWN

By Ida D. Bennett

THE possession of a lawn supposes a certain sort of social and financial standing, at least a moral standard which makes a slightly and orderly environment essential to one's self-respect. Probably there is no one thing which so presupposes refinement and favorably impresses the observer as the tasteful arrangement of the home grounds, especially where these include a well cared for lawn and an artistic planting of shrubbery. Someway the mere possession of a fine and even imposing house and outbuildings makes little impression, one passes them by with a glance, but the modest little house set down on a well groomed lawn, all its borders trim and beautiful, excites our warmest comments and admiration. And the possession of tasteful home grounds is so entirely within the means of everyone that their absence is a mark of indifference to the refinements of life that stamps the occupant as ignorant and clownish.

The successful grading of a lawn of any considerable size is often beyond the means of the small farmer, especially where it en-

tails much filling in, drainage and the like, but the most unfavorable site may be beautified and made attractive by constant and intelligent care.

The work on the lawn begins very early in the spring—as soon as the frost is out of the ground and while yet the soil is soft and wet. At this time the lawn roller—or where this is lacking a field roller may be used—should be run over the ground until all humps, especially those caused by wheel tracks, moles and the like are leveled even with the remainder of the soil. Where hollows exist they should at this time be filled with good soil and grass seed sown freely over the new earth, or the sod may be loosened and lifted, if of good texture, and sufficient earth to restore the level placed under it. So, too, where there are hummocks too solid to be reduced by the roller, these should have the sod turned back and sufficient earth removed to level them. But the grass may be poor and thin, in which case a top dressing of old, well rotted manure should have been applied evenly over the entire surface late in the preceding fall and in February this should have been added to by a liberal application of wood ashes, all of which should be removed

with the rake before the roller is run over it in the spring.

In raking the lawn the common iron garden rake should never be used, as this tears the roots of the grass and is especially destructive to the white clover which is so important a feature of the summer lawn and one of the most valuable renovators of old and worn sods. The regular lawn rake, which has its teeth bent so as to pass over the soil without entering it, is the proper implement to use. It will require two or more rakings to put the lawn in a clean condition. The first will merely remove the dead leaves and accumulated litter of the winter, and after the litter has been removed from the flower beds and the like it will be necessary to again go over the lawns and all garden paths to put it in condition for the lawn mower and the summer.

A supply of lawn seed should be kept on hand and all thin spots sown before a heavy rain at intervals during summer and it will often be found profitable to sprinkle a little bone meal over the soil at the same time.

The lawn mower should be put in action as soon as the grass is large enough to cut. Letting the grass get high early in the season



First Impressions Are Best

The entrance to your home gives your caller the impression of dignity and hospitality when its construction is honest and its design is in good taste.

Morgan Doors

make most impressive entrances. Not only are they designed correctly according to the best ideas in doors, but they are built honestly from the best grade of hard wood and by workmen who know how to make good doors.

Morgan Doors are all stamped "Morgan" which is a guarantee—one we stand by—to replace any Morgan Door if it fails to give satisfaction. They are guaranteed not to crack, warp, or shrink.

Morgan Doors are made in all architectural styles, mission, chateau, empire, colonial, etc., and for inside or outside use.

"The Door Beautiful" Book Free Send us your name at once and you will receive a copy of this beautiful book which shows and describes the beauties of Morgan Doors.

Morgan Company, Dept. A, Oshkosh, Wis.

Distributed by Morgan Sash & Door Co., Chicago, Ill. Morgan Company Oshkosh, Wis. Morgan Company, Baltimore, Md

Science for the Evenings

The Heavens Without a Telescope

A MOVING PICTURE OF THE UNIVERSE

The Only Combination Sun, Moon, Star and Planet Map



Every Stellar body accurately placed for any date for the next twenty years, in the Northern Hemisphere. Indorsed by leading scientists. Requires no technical knowledge to use it. Complete mastery of the heavenly bodies in a few hours.

Most graphic way of interesting all in the wonderful planetary system of the Universe. Chart is 15 inches square, with revolving disk map showing all stars. Made of heavy cardboard.

Special Offer. For a limited time only, we offer our readers this splendid Planisphere at a special reduced price of \$3.00, postpaid. Send for descriptive circular.

MUNN & COMPANY, 361 Broadway, New York

Vudor Porch Shades

TRADE MARK

are made of thin strips of Linden wood, closely bound with strong seine twine in a lockstitch weave. They are artistically stained in weather-proof colors to harmonize with color scheme of house.



They keep out the sun, but let in the breeze.

Can be seen through from the inside, but not from the outside, giving privacy and seclusion. They are inexpensive—average equipment costing only from \$2 to \$10 according to size of porch. The shades come in various widths.

Vudor Porch Shades last for years and should not be confused with the flimsy, carelessly-made bamboo or imported screens which do not last and always look cheap.

Write for Booklet

handsomely illustrated in colors, and fully describing Vudor Porch Shades and also Vudor Re-enforced Hammocks—the Hammocks that last.

With the booklet we will send you name of the Vudor dealer in your town. Address

VOUGH SHADE CORPORATION, 240 MILL ST., JANESVILLE, WISCONSIN

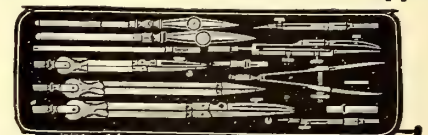
Thread & Thrum Rugs

are different from all other rugs, as you can have the color scheme made to harmonize with your requirements. Wool or camel's hair felt, heavy and durable. If your dealer does not sell them, write for color card and price list to

Arnold, Constable & Co., Distributing Agents, New York.
The Thread & Thrum Workshop, Auburn, N. Y.

We will send
A **AMERICAN HOMES & GARDENS**
and Scientific American
for one year to one address for
FIVE DOLLARS
Regular Price
Six Dollars

St. Louis, Mo. Baltimore, Md.
F. Weber & Co.
1125 Chestnut St., Philadelphia, Pa.
Architects' and Engineers' Supplies



"FABRIANO" Hand-Made Drawing Papers
Superior to any other hand-made paper
F. Weber & Co.'s Illustration Boards, Air Brushes
and Materials

OWN A FACTORY

and make \$10.00 a day making Concrete Building Blocks. Experience unnecessary. Big demand for blocks everywhere and immense profits.

Pettyjohn Machine
for
\$33.25 and
only up.



Guaranteed and sent on trial. Sand, water and cement only materials required. If you intend to build it will pay you to buy a Pettyjohn Machine and make your own blocks. Beautiful booklet on this great industry—FREE.

The Pettyjohn Co., 617 N. Sixth St., Terre Haute, Ind.



BRISTOL'S RECORDING THERMOMETERS

For automatically registering indoor or outdoor temperatures

ARE USEFUL AND ORNAMENTAL

Our Catalogue B sent on request

The Bristol Co., Waterbury, Conn.
New York, 114 Liberty St. Chicago, 753 Monadnock Bldg.

is a great mistake, as it begins to form stalks which, when cut, give the lawn a coarse appearance; the grass must be cut in the leaf to give the rich, velvety appearance so much admired.

During the early part of summer, and in fact at all times except in periods of drought, the lawn should be cut every four days at least and a carrier should always accompany the mower. The practise of leaving the grass on the lawn is untidy in the extreme and has really nothing to recommend it except in times of draught, when its presence may be some protection to the roots of the grass. When the grass is left on the ground it is impossible to do as good work as the falling grass hides the sod and it is impossible to tell whether the machine has made a clean cut or not. The rake can not be depended upon to take the place of the carrier. It gathers up the grass, to be sure, but it leaves the lawn rough and unsightly. It may precede the use of the machine to advantage, but should never follow it.

Another important tool in the care of the lawn is the lawn or grass shears. The use of these should always precede that of the machine. All borders of walks, of beds and foundation walls and fences should be carefully trimmed and the clippings raked up and removed before the machine starts to run. It is the general practise to cut all that can be cut with the machine and then to trim the remainder with the shears, but the result is much better if the shears and rake are used first, then a perfectly trimmed lawn results. In using the shears they should be held level with the ground and the grass trimmed as close and even as possible, cutting a line three or four inches in width.

The tall grass around the boles of trees or about the hitching posts should receive attention. Indeed, there should not be allowed a spear of grass above the level of the lawn anywhere within its confines if a well groomed lawn is to result.

In running the lawn mower it will be economical of time and result in smoother work if those sections of the lawn which can best be handled together be blocked out and cut separately. It will be well to run around all flower beds on the lawn first so as to have straight work ahead of one, and then commence and go round and round the square blocked out rather than back and forth, as in this manner the machine is running in the same direction all the time and leaving smooth cuts, while in going back and forth the grass is turned in one direction on one run and in the opposite direction the next, leaving, always, a rough ridge between a very noticeable line. The cuts should be well lapped or more or less grass is liable to be skipped—about one-third the width of the cut will be none too much to lap.

The machine must be carefully adjusted at all times and it must be watched and at the least indication of bad work be examined for the cause. In some machines the reel works loose very rapidly and needs constant attention. The knives in the reel should be set close enough to the cutting knife to cut a single blade of grass at any point on its edge.

The machine will need oiling frequently during the cutting of the lawn. It must not be supposed that oiling at the beginning of work will keep the machine working easily and smoothly unless the lawn is very small.

The machine should be set to cut rather closely during the greater part of the season, but in dry weather it will be well to leave more grass standing and during a severe drought it may be well to give over cutting the grass at all or to leave the grass on the ground when cut.

The beauty of the lawn will depend in a

NOTE THIS STAMP, EVERY GENUINE

CORTRIGHT SHINGLE

HAS IT

The success of *Cortright Metal Shingles* has induced certain unscrupulous manufacturers to place upon the market imitations so nearly like the original in appearance that even architects may be deceived. The similarity is in appearance only, however, not in quality, and to protect ourselves and our friends we are stamping every shingle as shown. When you specify *Cortright Metal Shingles* remember about the stamp, and be sure it's there; then no dissatisfaction can ever arise.

56-page illustrated booklet free on request

CORTRIGHT METAL ROOFING CO.
PHILADELPHIA AND CHICAGO



A GREENHOUSE SUGGESTION

Just for example, let us assume that you want a house for cut flowers, one for general plants and another with high enough sides for palms or fern trees; then this subject shown meets the conditions. It is ornamental, economically arranged to heat and work, and built of our iron-frame construction, insuring you a freedom from repairs. Let us talk it over with you.

HITCHINGS & COMPANY
1170 BROADWAY, NEW YORK

CARPENTERS

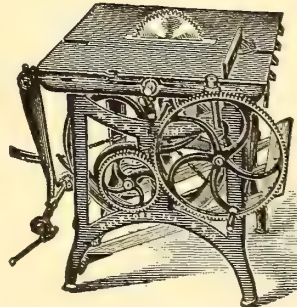
in these days of close competition

Need the Best Possible Equipment

and this they can have in

BARNES' Hand and Foot Power Machinery

W.F. & JOHN BARNES CO.
567 Ruby Street ROCKFORD, ILL.



Send for our New Catalogue

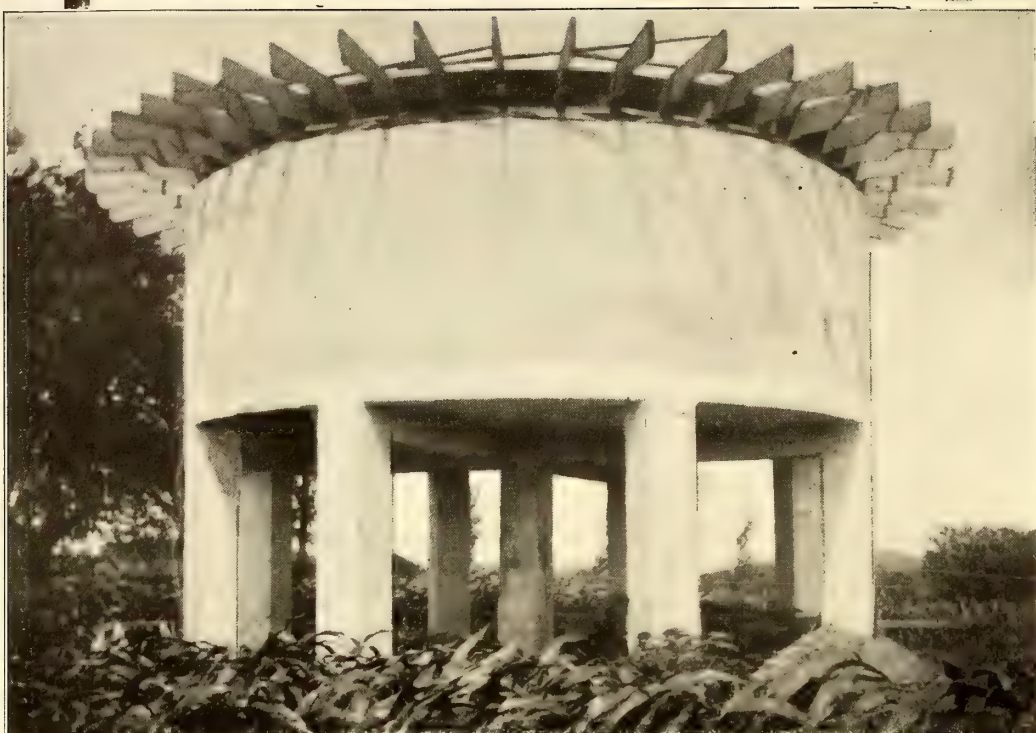
Our New Foot and Hand Power Circular Saw No. 4

THE strongest, most powerful, and in every way the best machine of its kind ever made. For ripping, cross-cutting, boring and grooving.

FLOORS



ROOFS



**A concrete tank erected on estate of Edmund Tatham,
Katonah, New York**

Frederick J. Sterner, Architect - - New York
De Lancey A. Cameron, Builder - - New York

Tank designed for storage supply of 15,000 gallons, built entirely of concrete reinforced with Clinton welded wire. Before roof was placed over tank, and during winter months, ice 10 inches thick formed on water stored therein. No cracks or leakage have developed.

Clinton Wire Cloth Company
CLINTON, MASS.

Cellings

FIREPROOFING DEPARTMENT
ALBERT OLIVER
 1 MADISON AVE., NEW YORK

WASHINGTON: ROSSLYN SUPPLY CO., COLORADO BUILDING
 SYRACUSE, N. Y.: PARAGON PLASTER CO.
 ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
 SAN FRANCISCO: L. A. NORRIS, 835 MONADNOCK BUILDING
 SEATTLE: L. A. NORRIS, 909 ALASKA BUILDING

Partitions

HOW ARE THE BEAMS HELD WHERE THEY ABUT THEIR SUPPORTS?



Are they Cut Away by
Framing?

Do You Depend Merely
on Spiking?

**The Best Way is to Use
Our Joist Hangers.**

LANE BROS. CO. (The Door Hanger Manufacturers) 434-466 PROSPECT ST.
POUGHKEEPSIE, N. Y.

great measure on the variety of grass grown. There is no question that the most beautiful lawns result from the use of Kentucky blue grass. This, however, is rather slow to establish, but once secured leaves little to be desired. It will grow close to the trunks of the trees and make a thick, fine sod in their shade—a quality hard to obtain by other means. To this should be added a little sweet vernal grass and a proportion of white clover. This last is invaluable on the lawn, as it spreads rapidly and quickly covers thin and worn out spots. It roots wherever a joint touches the ground, which accounts for its rapid covering of space. It is beautiful when in bloom and as its leaves shade and protect the roots it is not affected by drought as is grass, which has not this protective habit.

Weeds on the lawn are practically unavoidable on new sod and they must be persistently dug if perennials, like the dandelions and plantains and dock. Annual weeds, if not allowed to seed, are soon eradicated. There are several weed exterminators on the market which are useful in freeing the lawn and garden paths from weeds. On the paths they are used as a spray, wetting the entire path and so removing at once all weeds above ground, but on the lawn they must be handled with more care as they will kill grass and weeds alike. A large oil can with long spout—a machine oil can will do—may be used to advantage and only a few drops of the poison dropped into the heart of the weed, when it will soon perish, top and root alike.

The surface of the lawn should be as little broken as possible, certainly it should not be marred by the presence of flower beds, except it be a bed of ornamental grasses, cannas or other highly ornamental planting—the flower garden proper belongs in the rear or at least at the side of the house. A few fine trees and such drives and walks as may be necessary are all that should mar the broad expanse of the lawn. Certainly no broken up bits of planting or isolated bushes calculated to give a spotted, finicky appearance should be attempted.

But well considered planting along the boundaries of the lawn and about the foundation of the house have much to recommend them, especially is this true if the planting be of the finer ornamental evergreens and, in the outlying boundaries of the lawn, of flowering trees and shrubs. Too much can not be said against the practise of disfiguring such trees and evergreens as may be present by lopping off the limbs to a height of several feet from the ground. Nature does not form her trees in this fashion, and the better class of nurserymen, following nature's precedent, allow all trees and evergreens to grow, practically, as nature intended they should. It seems to me that if the ignorant people who so disfigure trees could have a plain statement of the value of fine specimen trees before they had laid ax and saw to them, and then could realize how utterly worthless they have become because of their abuse, they would, perhaps, hold their hand. A really fine conifer may be worth from thirty to fifty dollars, as it grows stately and fine, its branches sweeping the ground, but hacked and maimed it is worth just what it will work up into for firewood—and nothing more. The toy trees in a child's Noah's Ark furnish the models, apparently, for their shaping and the results are even less beautiful.

Cattle Manure
in Bags Shredded or Pulverized

WIZARD BRAND MANURES

Best for all indoor and outdoor work. No bad odor. Easily applied. Delivered east of Missouri River. \$2.00 per bag (100 lbs.) Write for circulars.

The Pulverized Manure Co.
 21 Union Stock Yards, Chicago.



AMERICAN HOMES AND GARDENS



Price, 25 Cents. \$3.00 a Year

CONTENTS FOR AUGUST, 1908

	PAGE
"CASTLEWOOD": The Colonnade and Terrace of the Ocean Front	296
MONTHLY COMMENT	298
NOTABLE AMERICAN HOMES—"Castlewood," the Villa of Louis Bruguere, Esq., Newport, Rhode Island	<i>By Barr Ferree</i> 299
THE JAPANESE GARDEN OF "YADEMOS"—The Country Seat of Charles Pfizer, Esq., Ber- nardsville, New Jersey	<i>By John Foster Carr</i> 304
"HUCK-WEEN LODGE"—the Summer Camp of William Curtis Demorest, Esq., Loon Lake, New York	<i>By Francis Durando Nichols</i> 308
HALF A DOZEN GREAT HOME TREES	312
THE VALUE OF A PLEASANT SUNROOM.....	<i>By Delia Austrian</i> 313
A HOME SHRUBBERY	<i>By E. P. Powell</i> 318
ECONOMIC METHODS IN MUSHROOM GROWING	318
GLIMPSES OF OLD ANNAPOLIS	<i>By Esther Singleton</i> 319
SUN-DIALS	<i>By Randolph I. Geare</i> 327
"WHITE LODGE"—the Residence of Charles H. Roberts, Esq., Wynnewood, Pennsylvania. <i>By Charles Chauncey</i>	330
WELL-DESIGNED APPLIQUÉ—An Effective Means of Decoration. <i>By Mabel Tuke Priestman</i>	332
CORRESPONDENCE:	
PROBLEMS IN HOME FURNISHING	<i>By Alice M. Kellogg</i> 334
GARDEN WORK ABOUT THE HOME	<i>By Charles Downing Lay</i> 334

New Books

The Care of the Lawn

Blackberries

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada, \$3.50 a year

Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



"Castlewood": The Colonnade and Terrace of the Ocean Front

AMERICAN HOMES AND GARDENS



Volume V

August, 1908

Number 8



"Castlewood": A Vast and Stately Building in the Georgian Style

Monthly Comment



HE flail of the tax assessor has now been wielded in the country for several months past, and a mighty cry and wail has gone up because thereof. The operations of this gentleman are seldom heard of from the disinterested and patriotic gentry who are unselfishly promoting the sale of rural real estate for the purchaser's benefit. The text books on rural life are equally silent on this most important personage. He is, in short, seldom heard of until he begins asking questions or the tax assessment is levied. Then things begin to be doing. Presently they get warm; very soon they are hot; almost immediately they are boiling. Then comes a sickening realization that nothing can be done and that the bills must be paid. It is very terrible and very disconcerting.

So long as taxes are to be paid, just so long, no doubt, there will be dissatisfaction with methods and amounts. It always has been so, and doubtless always will be so. It is impossible to develop a system of taxation that will not have its opponents, and with which more or less fault will not be found. There can be no hope in trying to find a solution that will give universal satisfaction, for human nature is such that general satisfaction can not be looked for in so difficult and intricate a matter. The thing to be done, then, is not to look for a method of universal satisfaction, but to ease and relieve the method of making assessments, and to determine a fair and equitable amount of tax to be paid. Much legislation has been devoted to both these ends, but that no real success has been attained is established by the very general dissatisfaction that prevails on the matter of taxation.

THE problem is hindered and complicated in many different ways. That there is a deep-rooted and general dissatisfaction with taxes, with all taxes, with any taxes, and especially with one's own personal taxes, appears to be indisputably true. However it may be in other countries, Americans, as a rule, do not appear to regard the payment of taxes as, in any sense, a patriotic duty. As a matter of fact, this is precisely what it is, and the payment of taxes should be regarded as a patriotic contribution to the expense of that government of which we are so proud, and which we fondly exhibit to the world at large as the finest model of government the world has seen since the beginning of time.

No business of any kind can be transacted without money; human life itself can not be supported without earning power, which is expressed in money. And what is true of life and business is equally true of government. No matter how it is obtained, money paid for governmental purposes or to the government is a tax. It is a payment that everyone should make and which everyone should be glad to make. Everyone does not pay taxes in America; the fellow citizen who owns property does; the fellow citizen who owns nothing does not. The citizenship of one is quite as good as the citizenship of the other; and it is possible that because of this very many excellent citizens devote a great deal of time and energy to escape the payment of taxes, or at least to reduce them to so small an amount as to make them barely visible.

It is to prevent this avoidance of the payment of the proper tax that the rural tax assessor has his being. To many persons he is highly obnoxious, because he can, if he will, ask the most dreadful questions, and if you don't reply

he will point to the statute which authorizes him to do the best he can, which is often enough to go as high as he dares. No one wishes to tell his private affairs to a stranger, and when this outsider is a fellow-resident of a small rural community, in which one's own affairs are apt to be so much better known to everyone but the person immediately concerned, the situation becomes unpleasant in the extreme.

EVERY taxpayer is aware that taxes are divided into two general classes—taxes on real estate and taxes on personal property. The taxes on real estate should offer comparatively few difficulties, and should provoke little criticism. Of course they do just the opposite, but the theory of land taxation is an equitable assessment, in which property of similar situation, utility and value is assessed at a uniform and identical rate. Thus the man who owns a farm of fifty or a hundred acres is justified in assuming that his property will be taxed at the same proportionate rate as that of his neighbor who occupies and uses land of similar value. This is the theory, and it is a just one; often enough it is carried out in practise, often enough it is violated and ignored in a mysterious way it is impossible to understand. Violations of this rule amount to rank injustice.

THE personal property tax is a very different thing and creates the greatest amount of dissatisfaction and distrust. Different States have their different systems of levying the personal tax, and different ways of enforcing it; but they are all alike in this: that they create, promote and develop the heartiest dissatisfaction. Much of this is unavoidable, perhaps a good deal of it is justified by the unreasonable demands made upon even the smallest accumulation of resources. Thrift is discouraged and debt is encouraged.

It should be obvious that here is a public question demanding instant and immediate remedying. It is a reform so urgent that all good forces should quickly unite in bringing about a better condition of things. As a matter of fact, instead of being better, matters in this direction are yearly becoming worse. The search for personal property is becoming keener as it disappears from sight. The number of persons who own nothing taxable is increasing in leaps and bounds; yet our wealth is greater than it ever was, more money is being spent, the annual crop of millionaires is still large and ample for all necessary purposes. Someone must own our stores of personal property.

IN the midst of all this turmoil the rural tax assessor quietly pursues the even tenor of his ways. Fortified with his little list of questions he can make the rural property owner more uncomfortable than he ever dreamed of being. The policy pursued by one community may be changed by the election of an assessor who is so rash as to look up the laws by which he must be governed, and when this is the case, everything is lost. The law seldom leaves any loophole, and the conscientious assessor can assess a great deal in the way of taxes and make himself exceedingly unpopular. He is, in fact, between the devil and the deep blue sea. On one side is the law and his oath of office; on the other are his fellow townsmen who have always expected to end their days in a region of small taxes. There is not much help for those already located; but the newcomer should familiarize himself with the local tax laws before purchasing land and settling down for assessment purposes.

Notable American Homes

By Barr Ferree

"Castlewood," the Villa of Louis Bruguere, Esq., Newport, Rhode Island

IT IS no new thing to build a palace on a vacant piece of ground—vacant in the sense of possessing no beauties of its own, vacant in its desolation, vacant in the sense of giving, as its most distinguished quality, a profound impression of unsuitableness for decorative treatment and for habitual use. There are many, and, now that they have been carried out, quite justifiable precedents for such procedure. Even in America examples of the complete transformation of site to meet the exigencies of new conditions are by no means rare; but it is not often that a site so unpromising at the outset as that chosen by Mr. Bruguere for his villa "Castlewood," at Newport, has been selected for the erection of a vast house and all the appurtenances of a large country estate. The word large is, of course, used in a relative sense; for the Bruguere property includes but fourteen or fifteen acres—not large literally, it is true, but quite spacious measured by the Newport standard. For Newport, while a city of great houses, gives but small space to many of the most sumptuous of them, and a property of fourteen or fifteen acres is, therefore, quite exceptional in point of size.

This, however, is far from being the chief merit of "Castlewood." That originally the site possessed few natural advantages, save the outlook it afforded over the

sea, has already been hinted. The knowledge of its previous condition is now immaterial. Where once were neglected and vacant fields are now spacious lawns, full-grown trees, and smiling gardens, while as the crown of the whole is the spacious and palatial dwelling that, in accordance with the local nomenclature, is designated a "villa." To the historian it may be a matter of some interest to know that the whole of this property is new—very new indeed—though the superb lawns and even the stately trees—brought here expressly for the beautification of the grounds—give no hint of recent origin. Very elaborate, and, it must be admitted, most costly, have been the works carried out here, although the result, even now at the beginning of its new growth, has fully justified every expenditure made.

The house is, of course, the chief object of interest on the estate, which was created to give it an appropriate setting, and for no other purpose. It is a vast and stately building designed in the Georgian style by Mr. E. P. Whitman, architect, of Boston, and being placed on an eminence, and being quite isolated, having—for Newport—an individuality almost wholly its own. It is a rectangular structure, twice as long as it is wide, and with the longer front overlooking the sea. The dimensions are quite regal—one hundred and ten by fifty-four feet—and the opportunity thus presented to the architect to design a house at once stately and ornate has been



The Palatial Hall Has Paneled Walls and Columns of Polished Marble



The House Is Built of Red Brick with White Glazed Terra Cotta Trim



The Louis XVI Salon Is Walled with Mirrors and Has a Domed Ceiling



The Library Is Finished in French Walnut, Beautifully Carved and Paneled

availed of in a very handsome manner. The result is so fine that it must be a source of constant satisfaction to the owner and the designer.

Stately and ornate are qualities not always the complement of the other. This is particularly true of the ornamental qualities of a design, which may be ornate in the most elaborate sense of the word, while the result may be anything but stately. The Georgian, fortunately, is a style that permits few liberties, and it is difficult, unless refinement of detail is neglected, to go astray in it. On the contrary, its own inherent qualities are so fine and good that stateliness may almost be considered as inseparable from it. In any event it affords fine opportunities for the designer who looks to the creation of ornateness and stateliness. And both these qualities are finely and very amply illustrated in Mr. Bruguere's house.

Long, strong, firm lines dominate the structure. It is almost a perfect rectangle, a slight extension of the service wing being quite subordinate to the main lines of the house. The bringing forward of the center of the entrance front is a thoroughly legitimate architectural device for breaking up the long lines of a facade, and the addition to the bulk of the house thus made is slight enough and is actually compensated for by the recessing of the center of the water front, where the opening thus created is filled with a stately colonnade.

Symmetry and sobriety thus characterize this design as fundamentals; it is true one end has a covered porch, the other a one-story addition to the service rooms, as well as

an enclosed service yard. These features, however, are subordinate to the real structure of the house itself, and in no way detract from the general symmetry of the design.

The house is built of red brick, with details and trimmings in glazed terra cotta, so nearly white as to practically approximate that color. These materials imposed no difficulty in their use, for they fit quite naturally into the chosen style. Great square pilasters, deeply channeled, and with rich Corinthian capitals, stand at each angle; on the corners of the house, at the angles of the central projection, at the opening of the recess on the water front—pilasters of generous size, quite ample to perform their apparent task of buttressing the walls between them. They support the cornice, which is carried uninterruptedly around the building on them, and which is also of terra cotta, save the space technically known as the frieze, in which the red brick of the lower wall reappears. The whole is crowned by a fine balustrade, very beautifully proportioned to the structure it surmounts, in which brick piers, with terra cotta bases and cornices, alternate with terra cotta balusters.

These features form the framework of the design, within which are disposed the walls and window openings. The windows in the first floor throughout the house are round arched, spacious windows, admitting ample light within, and strong, well marked features without. They are without side frames, but their sills rest on slightly recessed pieces of walls, built of plain brick; a string course, which is continued across the intervening space, serves as the base for the

arch moldings, which extend beyond the main wall, as do the high and somewhat narrow keystones which rise above the crown of the arches. Above each keystone, and midway between the windows of the first and second floor, is a circular terra cotta relief. The windows of the second floor are rectangular, without external frames, but with sills supported on simple consoles. A third story is completely hidden within the cornice and balustrade.

Such are the chief items of the exterior, but there still remain some important matters to be noted. The porch of the entrance front is a small rectangular structure applied to the main doorway. It is, in truth, an outer vestibule, its roof supported by Roman Doric channeled columns and its side and front enclosed within elaborate screens of wrought iron-work lined with plate glass. A marquee hangs before the porch, covering the steps and a portion of the driveway and fulfilling the function of a porte cochère. This porch constitutes the single ornamental feature of the entrance front. Mention should, however, be made of the wall inclosing the service yard which is placed to the right; it is divided into rather narrow bays by piers, each of which carries a ball above the crowning cornice. The bays on the front contain oval openings, with heavily blocked frames.

The entrance front is necessarily the more formal part of the house. In this great dwelling, standing in the midst of its own grounds, there is no need for fencing and inclosures, save for the service yard. The social side of the house—the gayer and more intimate—begins immediately on the

left end, with a porch reaching from front to front. Its structure is similar to that of the entrance front—that is to say, channeled Roman Doric columns upholding an entablature which carries a balustrade. The porch is built completely of terra cotta save for the piers of the crowning balustrade, which are of brick.

The water front is, of course, the “*facade d'honneur*.” The treatment of the house wall is exactly identical with that of the other fronts, but the center, as has been stated, is occupied with a magnificent colonnade formed of great Corinthian columns and pilasters, rising the full height of the two stories. These form five bays, with windows in each of the two outer ones, but the central one, being occupied by the fireplace of the living-room within, is closed with brick.

The whole of this front gives upon a terrace, very spacious in dimensions, very splendid in effect. The center projects into the grounds a considerable distance beyond the house wall, and flights of steps at the center and at the ends lead to the lawns below. Bay trees stand on the steps to the colonnade, and vases of gay blooming plants are disposed on the piers of the inclosing balustrade. Very beautiful it is here, with the shining waters of the bays below and in the distance; and very fine it is too, when my lady gives a tea, or her handsomely gowned guests seek respite here from the gay doings at the ball within. I have already used the word *regal* in referring to this house, and must do so again, and especially here; for behind and above one is its truly regal and quite superb facade; to the right and left and in



The Dining-room Is Paneled in Solid Mahogany, with Door Frames of Siena Marble

front, the ample areas of the terrace; below is the beautiful new green grass; and beyond are the myriad delights, natural and human, that form so potent a part in the charm of Newport. Here, indeed, is a rare exterior, stately, ornate and splendid, a truly fitting background for the gayest sort of festivity and the most princely hospitality.

But although the terrace is, in a sense, the culmination of the house, there is much within to see of interest before its supreme attractiveness will be learned. The main doorway leads directly into the grand hall without any vestibule save the glazed external porch. This is a superb and palatial apartment, whose superficial area is perhaps twenty-five by fifty feet. The ceiling, which is decorated with great boldness and vigor in relief, is upheld by four pairs of coupled columns of richly veined marble with Ionic capitals. These are arranged somewhat toward each end, leaving a free central space. Pilasters of similar design are applied to the adjoining walls opposite to them. The walls are of white plaster, with panels formed by narrow bands of verde antique marble, while the door frames are of the same rich material as the columns. The stairway is on the right, rising without the columns at that end. It is continued to a broad landing, and then turns to the right and left; the left arm alone rises to the second floor, but a somewhat symmetrical treatment is effected by continuing the right arm to the outer wall on that side. The lower part of the stairway is supported on half arches, giving a free space below, which is available for an orchestra on occasions of entertainment. The stairs are of white Italian marble, and the hand-rail is a fine example of French wrought iron work.

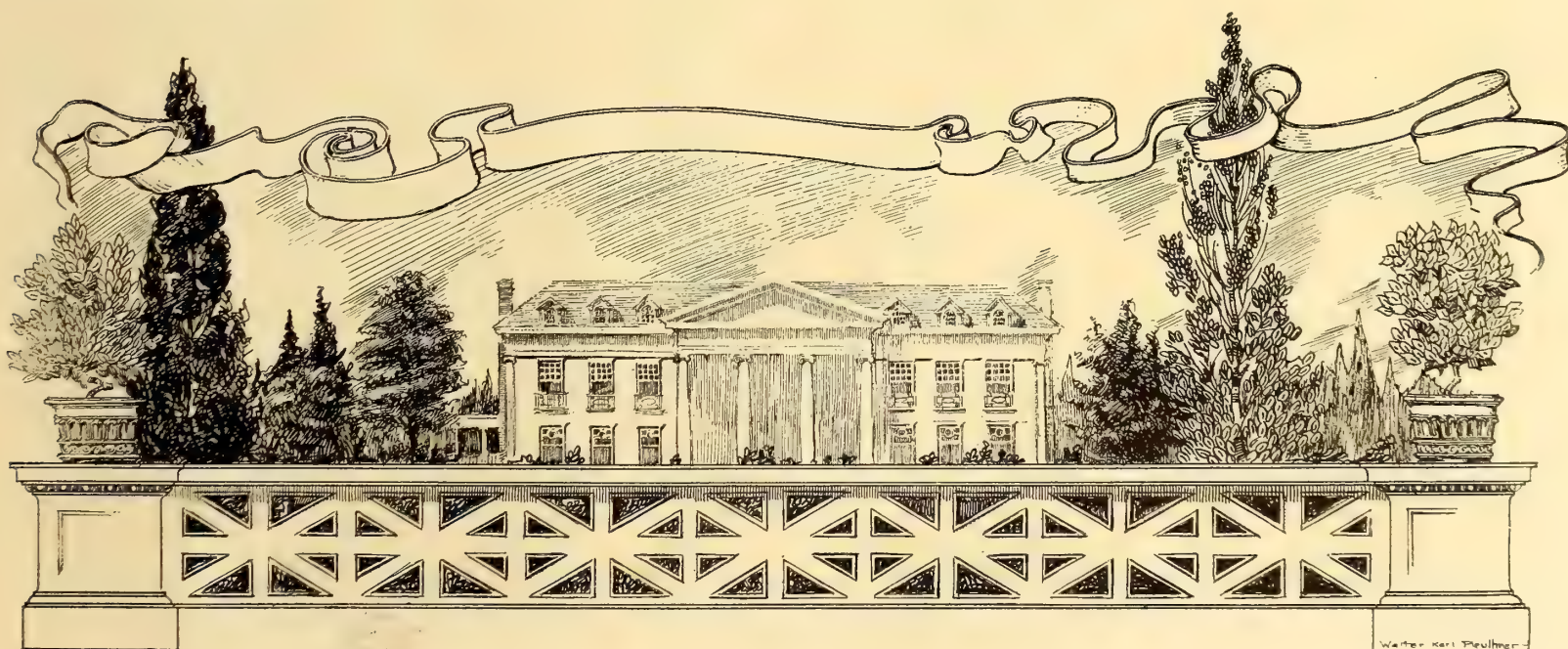
The living-room immediately adjoins the hall and occupies the other half of the center of the house. The walls are paneled throughout in quartered oak. The spaces over the door openings are arched, to correspond with the form of the windows, the main doorway, for its greater size, being necessarily surmounted with an elliptical arch. Four great windows in the opposite wall open to the floor and give upon the terrace. In the center is the chimney fireplace, arranged in a structure that projects well into the room. The ceiling has the form of a low elliptical arch, and from it depend two rich bronze chandeliers.

There are two rooms in the left wing: the library, which faces the entrance front, and the salon, which looks out upon the water. The library is paneled throughout in French walnut, with built-in bookcases. Both the shelves and the paneling form a part of a continuous design, the salient

feature of which is the pilasters, erected on a plain dado, and arranged singly or in pairs as emphasis and situation require. All around the room, and still a part of the interior woodwork, is a carved frieze of rich scroll design. The fireplace is of Caen stone, lined with brick. The panel over the mantel is cut away for the insertion of a portrait of Mrs. Bruguere; a festooned decoration is arranged above and around it. The ceiling is plain white plaster.

The salon is a beautiful apartment designed in the style of Louis XVI. The arches of the windows form the keynote of the design, for arches of less dimension are continued around the walls. Paneled piers support the frames and arches; the latter, however, are without molded frames, but are surrounded with garlands and bands of roses modeled in plaster. A similar floral treatment is given to the panels of the piers, which carry a cornice supported on small modillions. And everywhere, save where there are windows, are mirrors—mirrors in the arched openings on each side of the doorways; mirrors in similar openings on each side of the fireplace; a large mirror over the mantel shelf, and still smaller ones, rectangular in form, in the spaces between the larger panels. The ceiling is domed, with a mirror in the apex, from which descends a rich and beautiful crystal chandelier. It is a room brimful of light and gaiety, conceived in a very happy way and carried out in a thoroughly successful and charmingly playful manner.

The dining-room is on the opposite side of the house, and is larger than either the library or salon, but not so large as the two together; some space is needed here for the ample service requirements, which face the entrance front, the dining-room being on the sea front. The walls are paneled in solid mahogany in plain, simple, rectangular panels that rise to about the height of the doors. The door frames are of buff Siena marble and are quite monumental in character; the richness of their material offsetting, in a measure, the sobriety of their design. At one end is the fireplace, incased within a chimney-piece of Siena marble, a vast and elaborately designed structure that quite dominates the room. The family arms fill the central panel. The ceiling is supported by a double cove. The lower one rises immediately above the summit of the paneling, and against it are finished the crowns of the door frames and the chimney-piece. A band of foliage, behind which are concealed the electric lights which illuminate the room, separates the lower cove from the upper one, which is smaller and merges immediately into the flat surface of the central ceiling.



The Japanese Garden of "Yademos"

The Country Seat of Charles Pfizer, Esq., at Bernardsville, New Jersey

By John Foster Carr

Photographs by Arthur Hewitt



JAPANESE garden is not a garden at all as we understand gardens. It is a landscape in miniature, modeled and arranged to the strict rule of Japanese art. It is formal with the extreme conventionality of the Orient. It abounds in the grotesque. It may be complete with hills, lake, playing fountain and tiny dwarf trees within the limits of a two-foot square. It may be extended to a small park. Patience and a generous money allowance are needed for its building, and a Japanese gardener is an absolute essential. Without him no study of books or photographs will much avail. The incongruous will inevitably creep in, and the result will be a failure of imitation. Remodeling in spots will be attempted and will end with the conscientious in rebuilding from the beginning. This is the story of nearly all of our Japanese gardens. It is especially true of what is perhaps the largest of them all at Bernardsville, N. J. But with reconstruction elaborately completed under two cunning Japanese artists, Mr. K. Takahashi, a landscape gardener, and Mr. T. Uyeda, a carver and carpenter, it is now as perfect in detail as is possible in our western land.

Three acres and a half were chosen for the attempt—one-third of it a piece of marshland spreading from a spring. The marsh was dug out to a depth varying from two to six feet, forming an irregularly shaped lake with a dozen winding brook-like arms. The excavated soil was used to form the smoothly mounded hills and mountains—the highest of them being raised to a height of about twenty-five feet above water level. The whole garden was designed to give the greatest possible number of surprises in new views, so that the widest view—from the mountain top—probably does

not show more than one half of the garden. The central ideas of treatment seem to be formalism and a kind of balanced irregularity. The tops and the sides of the hills, as well as the edges of paths, are everywhere most carefully rounded, and the grass is close shaven. The rocks that are used always have a decorative value, and show smooth surfaces or the picturesque roughness of weather-worn stone. New and roughly broken stone is invariably rejected. The whole garden is inclosed by an eight-foot, hooded, wooden fence of bamboo and paneled cypress, charred and rubbed to a hard and beautiful fire-stained surface by brushes of coarse fiber. The timbered entrance looks like a copy of one of the city gates of Tokyo.

The single spring diverted into a half-dozen streamlets sends its waters winding about through the miniature hills, tumbling in cascades and waterfalls until they are lost in the brook-like arms of the lake. These are crossed by bridges of many kinds, from neatly leveled and spaced stepping stones and trimmed rectangles of stone flags set at a zig-zag on pillars of masonry, to elaborate hooped and arched structures of wood. A number of the latter, roughly but strongly built of unhewn timbers, are floored with bamboo laid like our old corduroy roads, then covered with earth and gravel, and edged with a roll of very fine leafless twigs, bundled and bound tightly together. The edges of the greater sheet of water are lined with large smooth-faced stones, or piles of small logs sawn squarely off and driven into the mud to within a few inches of the surface of the water. The lake is swarming with Japanese goldfish, with their drooping, fanlike tails—things of beauty, and at the same time things of highest use, for they greedily devour the mosquito "wiggler."



An Arrangement of Dwarf Trees



Thuya Obtusa Nana

The success of the whole garden depended chiefly upon Mr. Takahashi, and his work is remarkable as a triumph of garden ingenuity. As it is impossible to bring trees of size from Japan, the large trees are of necessity native grown and pollarded to reduce their height. There are elms, oaks and maples treated in this way. Among them, artistically arranged to give the Japanese air to the whole, are scattered a great number of smaller trees—all planted in the spring—bushes and flowering plants safely imported from Japan packed in water moss. Chief among them is a wonderful "chabohibi," a variety of cedar, about ten feet high, and of a probable age of two hundred years. Other importations obtained from the Japanese nurseries of South

cealed; artifice achieves marvels; and mosses and lichens are used with astonishing skill to counterfeit the appearance of age. Rejecting many of our traditions, the Japanese gardener in the United States has a remarkable faculty for making things grow. He scorns bone dust and all chemical fertilizers, and yet after a trial is willing to discard his home ways and for only fertilizer uses well-rotted horse manure.

Completing this Bernardsville garden, Mr. Uyeda has rebuilt the entire fence to a true model of Nippon. He has carved numerous lamps, built several heavily thatched tea-houses, decorated with the good-luck scrolls called "tomoto," an elaborately carved Buddhist shrine, two boats like dug-outs, and, chief glory of the garden, a Japanese dwelling



A Bit of Old Japan Transplanted to New Jersey

Orange and Long Island are hydrangeas, weeping mulberries, Japanese privets, and a vast array of dwarfed maples, pines, cedars, hemlocks, bush wisteria, cherries and plums. These are all kept in glazed pots and are taken into the greenhouse for the winter. Other dwarf trees are being carefully grown, curiously bent in infancy to grotesque forms, bound by strong wire-like grass, many of them trained to climb picturesque rocks of tufa.

In spite of the patient genius of Japanese gardeners, who are wizards in budding and grafting, it has been found useless to import some of the most attractive of Japanese plants. The cherry, the most famous of all their trees; with its profusion of delicate double blossoms, in our eastern climate within two years loses, by degeneration, nearly all of its characteristic beauty. Yet its absence is wonderfully con-

house, perfect in every detail, from sliding rice-paper-covered room walls to heavy floor mats.

Ornamental additions to the garden are a timber boxed well, a quaint shed housing two "jinrikishas," great storks and tortoises of bronze, conventional grotesques of granite lions on "rockery" pedestals, dogs of stone, a heavy umbrella-like iron "snow lantern," and cumbrous pagoda-shaped lamps of gray stone and glazed earthenware.

In creating a Japanese garden one must be content to accept a hundred compromises. Perfection is impossible, and illusion must be the ideal. For many old plants—and age is essential—the two months' journey is fatal; many others can not stand the severity of our winters; many again are too valuable to subject to rash experiment. Differences in soil, climate and methods work many transforming changes.



The Fence Is a True Model of Japan



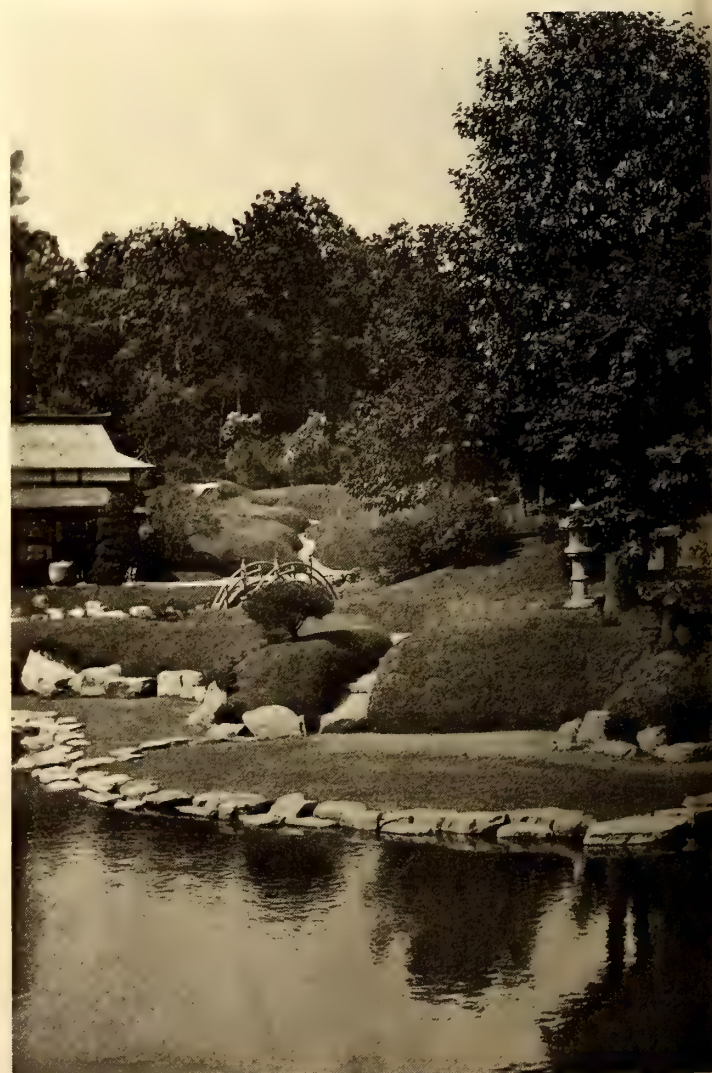
A Real Tea House from Japan



A Hooped and Arched Bridge



Three Acres and a Half Are Utilized



The Lake Edges Are Lined with Stones



l for the Garden of "Yademos"



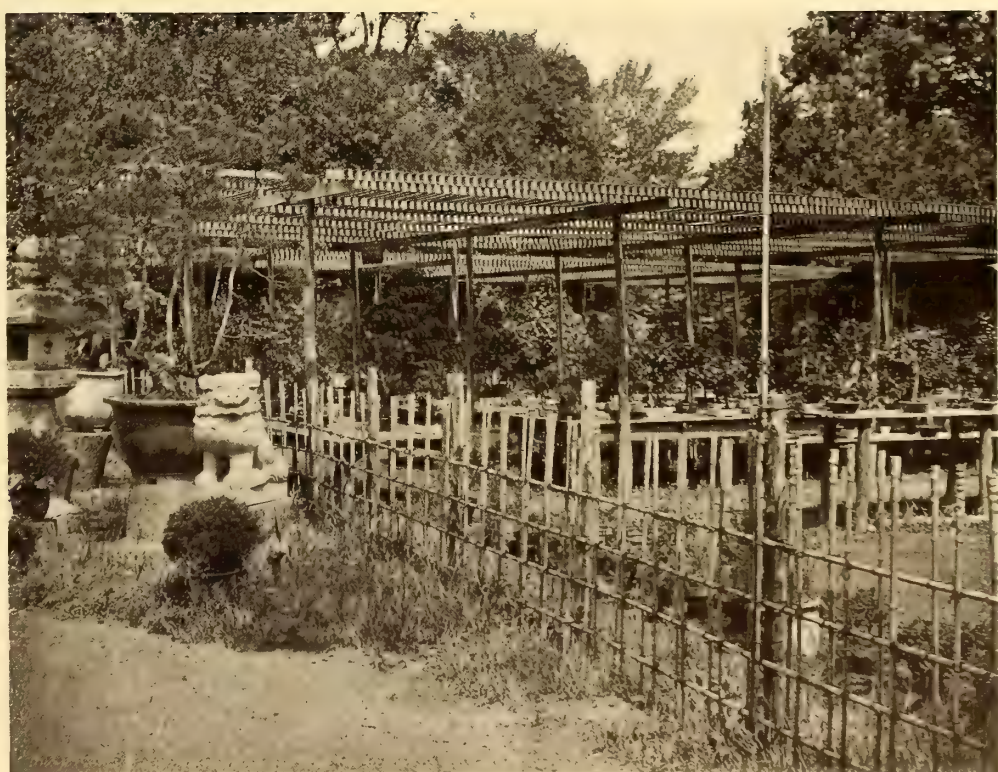
Some Bridges Are Floored with Bamboo



A Stepped Bridge Under the Trees



with Smooth-faced Stones



A Veritable Glimpse into Japan



The Fence Is a True Model of Japan



A Real Tea House from Japan



A Hooped and Arched Bridge



Three Acres and a Half Are Utilized for the Garden of "Yademos"



The Lake Edges Are Lined with Smooth-faced Stones



Some Bridges Are Floored with Bamboo



A Stepped Bridge Under the Trees



A Veritable Glimpse into Japan

“Huck-Ween Lodge”

The Summer Camp of William Curtis Demorest, Esq., at Loon Lake, New York

By Francis Durando Nichols



R. DEMOREST'S attractive summer camp is delightfully situated on Loon Lake, and is called “Huck-ween Lodge,” the former part of the name meaning “Loon” in the Indian language. It was designed by James L. Burley, architect, of New York.

The building has a cellar under part of it, which is inclosed with a stone wall. The first story is built of red cedar logs with the bark left on them, and are so placed as to show them rough hewn as they came from the forests. Red cedar is not indigenous, and these logs were brought from the neighborhood of Poughkeepsie. Native spruce or white cedar might have been used, but the spruce is subject to attack by insects and dry rot and is soon destroyed, while the white cedar is quite smooth and lacks the rugged picturesqueness of the red cedar. Red cedar is practically indestructible by insects or decay.

The second and third stories are of frame, sheathed and stuccoed, leaving timbers exposed, which are stained dark brown, quite in contrast with the silvery gray of the plaster panels. The roof is covered with shingles and left to weather finish. The piazza is an attractive feature of the house.

The interior of the building is lathed and plastered with rough sand finish left in its natural gray color. The interior woodwork throughout is of undressed spruce just as it comes

from the sawmill, and is treated with stains in soft greens and browns. The result is a finish of most pleasing texture and interesting grain development in the wood.

One of the principal features of “Huck-ween Lodge” is the great living-room, which occupies the entire main part of the first floor. The living-room is thirty-five by forty feet, and is used as a living-room in the strict sense of the word, for it is a combination of music-room, library and dining-room. At one side of the room an immense doorway, twenty feet wide, opens into the piazza, which practically brings the piazza into the house when the door is opened. The walls are beamed and ribbed, forming deep panels. Mission furniture is used throughout, and being of a brownish tone, it harmonizes well with the brown stain of the trim and the white plaster panels. The great open fireplace is also a feature of this room. It is built of fieldstone, laid up at random and in a rough manner. The stairs to the second story rise out of the living-room and are of attractive design.

The kitchen and service-rooms are equipped with all the modern conveniences of a large establishment, for any departure from the usual is liable to lead into complications best avoided.

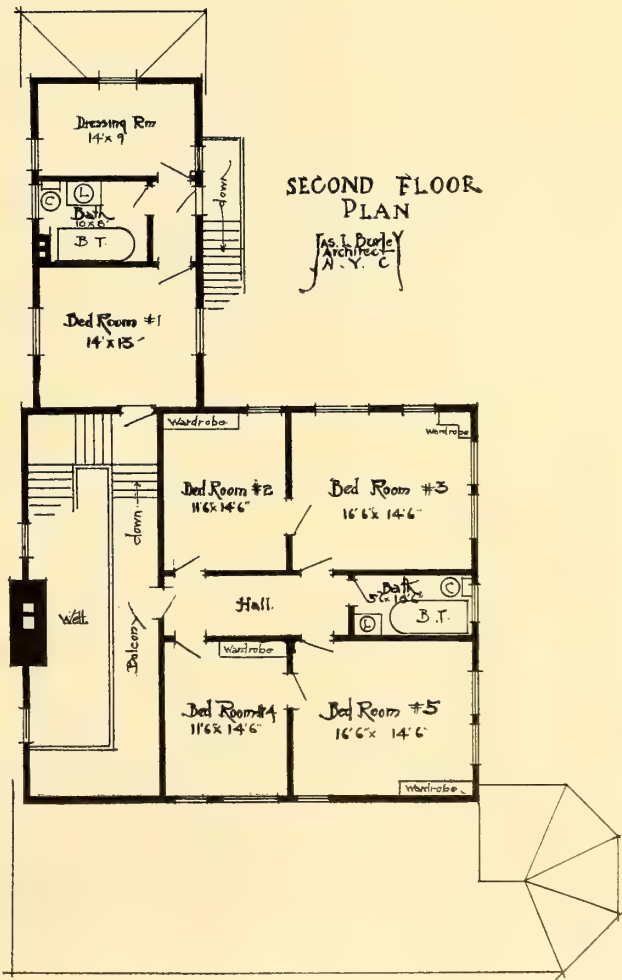
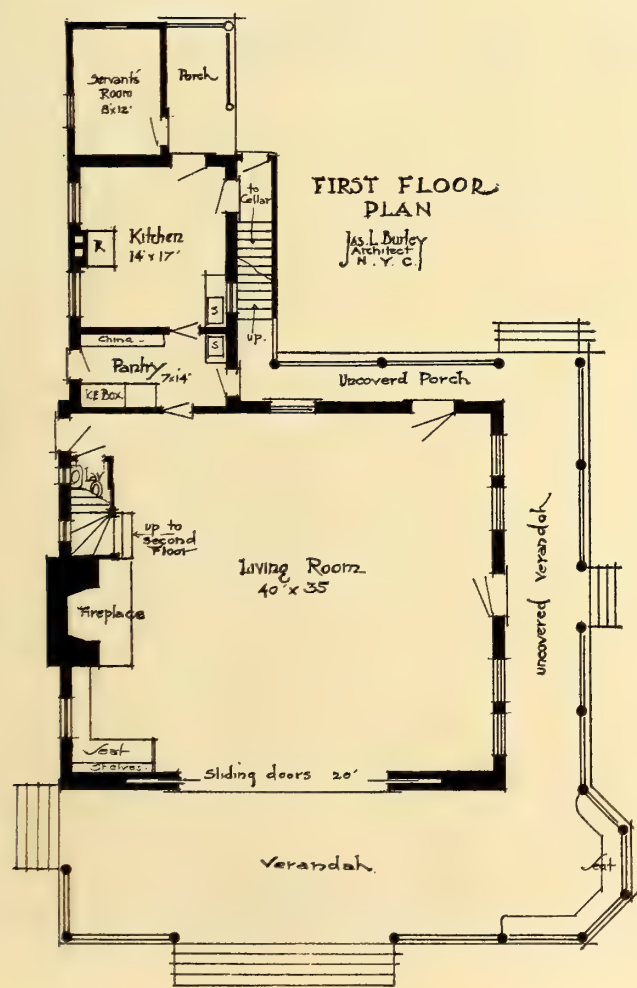
The second story contains four bedrooms and a bathroom, while the extension over the kitchen contains two bedrooms and bathroom with an outside staircase for the use of



The First Story Is Built of Red Cedar Logs ; the Second Is Stuccoed with Exposed Timbers ; the Roof Is Shingled



The Porch Is a Striking and Attractive Feature



bachelor guests. Hand-wrought iron hardware and lighting fixtures of special design are used. Thumb latches and long strap hinges are used for the doors, while large hand-wrought nails are used to hold the woodwork in place. The bathrooms are fitted with open plumbing and porcelain fixtures.

The other buildings on the estate include a thoroughly equipped boat house, which is built on the edge of the lake and provided with a float on the outside and two bedrooms on the inside, and a service building containing the servants' quarters of six rooms, with laundry, ice house and store room.

In the treatment of the grounds no attempt has been made to idealize nature but rather to let her have her own way. Except for a very small space in front of the piazza there is not a blade of grass to be found, the ground being covered



The Twenty-foot Doorway Connecting the Porch and Living-room

entirely with the natural growth of blueberry, kalmia, wintergreen, moss, ferns, etc., found everywhere in this locality. In the building operation where the natural surface was unavoidably disturbed, it was recovered with the natural growth of the woods, which could be lifted up in sheets like sod and relaid in like manner. There was originally a dense second growth of poplar, white and black birch, spruce, etc., between the

Lodge and the lake. All the poplar was cut out and much of the black birch, while only enough white birch and spruce were cut to afford vistas or glimpses of the water.

As a matter of fact outdoor decoration in its modern sense is not needed for a site such as this. Nature is here both wild and lovely, an unimprovable nature that permits only the barest of clearing around the dwelling.



The Fireplace of the Living-room Is Built of Fieldstone Laid up at Random



The Living-room Fills the Entire Main Part of the First Floor



An Outlook Over Loon Lake



"Huck-ween Lodge": The Boat House on the Lake

Half a Dozen Great Home Trees



HERE are about half a dozen trees that are wonderful as ozone breeders, and therefore specially helpful around a country house. (1) Of course the apple tree heads the list, and is far and away the finest home tree in the world. If I could have my way about it every country house would either be built in an orchard or close by an orchard. Other conditions being even tolerable, the owner of that house would have a healthier family. I do not know a better tonic than to breathe the air of an orchard when in blossom.

(2) The basswood is not half appreciated by Americans as a home tree. It is superb every way, for its rapid growth, for its splendid foliage, but most of all for its delicious bloom, out of which the bees make the best honey we have. The German linden is nothing to compare with it, but the Germans know how to appreciate what they have. I had always known the basswood as a bee tree, but one day, when at home on a vacation, and on a load of hay, I drove under a great basswood when in full bloom. Then I learned that it was as glorious for perfume as for honey. I stopped my horses long enough to take a good dose of the ozone.

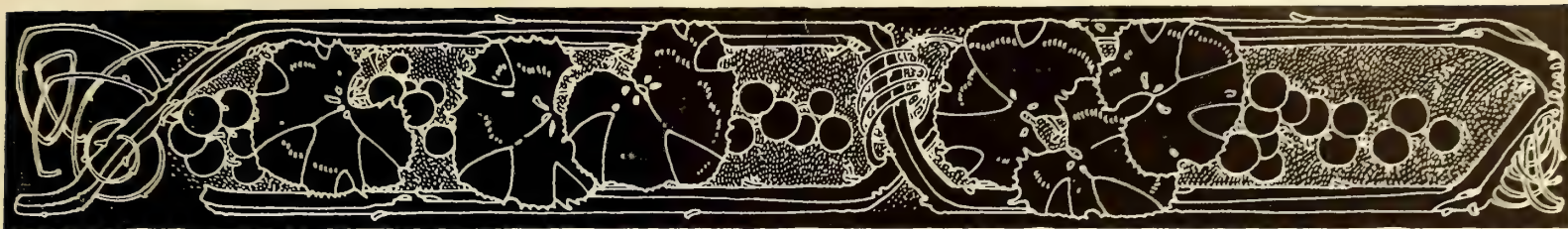
(3) The old-fashioned yellow locust deserves third place in this list; and only for its scraggy growth it should have second place. When loaded, for it is really weighed down with flowers sometimes, with great clusters of leguminous blossoms, there is nothing to beat it for beauty and sweetness. Its perfume absolutely fills the whole homestead, and when brought down with the dew it becomes almost too rich. The locust comes into blossom just between apples and lindens, and pretty nearly fills up the gap. It will grow almost any-

where, and not seldom half in water. Taking care of itself under all sorts of conditions, you rarely find a fine shaped tree. But take a young tree, give it plenty of room, and care for it till it is thirty feet high and you will get a well shaped tree, that will stay in clean wood for many years.

(4) *Catalpa speciosa* certainly deserves the fourth place, and it follows right after the locust in bloom. Take one of these trees forty feet high, and loaded with its elegant and sweet flowers, what can be finer? It is a tree to be loved; grand for timber, noble in appearance, beyond all forest trees for blossoming, and a splendid ozone breeder. This tree is getting to be very popular, and it is hardy as far north as the elm will grow. The *bignonioides* is an entirely different tree, with spreading growth and magnificent flowers, opened later than the *speciosa*, yet the tree is not quite hardy. Better than even *speciosa* for a small home is *Teas hybrid catalpa*. If you can, get a package of seed and grow your own trees. The hybridization will show itself in all your seedlings, giving you a great variety. Some of these will be rich purple in leaf, while others are golden leaved.

(5) If I were writing for the Southern States alone I would place as number five *Magnolia grandiflora*. This tree can never be over-praised. One variety of it is called the honey-flowered, and the fragrance is certainly remarkably fine. But our Northern magnolias are none of them remarkable for sweetness excepting *conspicua*.

(6) The Kentucky coffee tree is overlooked altogether too much. The male tree is loaded in June with delicious flowers, spicy and pungent. The odor is exceedingly healthful, while the tree is interesting in the extreme, for its peculiar adjustment of limbs.



The Value of a Pleasant Sunroom

By Delia Austrian

THERE never was a time when health and sanitation played so important a part in the furnishing of a home. Light and plenty of sunshine are the great forces recognized for the making of health, and are important considerations in the planning of a house. To-day in building houses people give as much attention to the questions of lighting and ventilating as to furnishing and decorating. They are satisfied with few ornaments, but insist on having plenty of windows. It is not unusual for a large room to have from four to six windows, with the curtains pulled up to flood the place with sunshine and one window raised to let in fresh air in coldest weather.

Many families go into the suburb so they can enjoy plenty of sunlight and fresh air. For this reason they build verandas extending all around the house. At times they have the verandas screened off with curtains to keep out the heat and rain. In other homes, especially in the cities, they have the windows built so they can put them in and take them out at will. The sunroom is an addition to the modern home. It has come to take the place of a garden most homes once enjoyed. In the city it is most common to build the sunroom off the hall or living-room. The walls may either be

of natural brick or tinted. The room is often steam heated to make it more comfortable in cold weather. It is often the home for plants, growing in long boxes, kept to a certain temperature by steam. This room is also often made more cheerful by canaries singing in cages. It is common to have a hammock or a swinging bench. Wicker furniture is popular and appropriate. A large tea-table may also find room here. It is often here the family comes to sit of a pleasant afternoon. A desk and a large box for toys is certainly in keeping with the furnishing. It is a good place for children to play and study when tired of the nursery. As soon as the pleasant weather appears the doors are thrown open and the windows taken out to give plenty of air and a beautiful vista.

There are many ways of furnishing this room. An attractive sunroom is done in white. Along the walls are narrow strips of lattice work that hold the climbing ivy. The ceiling is decorated with the same lattice work. The room is inclosed by large windows taken out in the summer; they are protected from the heat by brown and white awnings. The floors are of red tiling, which harmonizes well with the lattice work. It is covered with hand-woven rugs. The furniture is of dark brown wicker upholstered in chintz, a design of large roses. From the



The Sunroom May Be Richly Embellished with Plants



Window Shades and Screens Are often Desirable



A Sunroom with Rough Plaster Wall

ceiling hangs a number of Japanese lanterns. The table, taburetes and stands are covered with growing plants.

Another attractive sunroom is one whose walls are red brick with a large broad hearth. The ceiling is of pine lathe painted brown. The window and door casings are of white enamel. The door is exceedingly large; it is all of glass, except for the casing, and commands a beautiful vista of the

garden. The floor is also of pine painted brown, covered with a large hand-woven rug.

In the center of the room is a Mission table of oak and chairs in the same style. This is used for cards and games and for a dining-table in pleasant weather. In another corner is a large bench of Mission oak. The only other decorations are the stuffed head of animals hung on the walls.



The Open Porch Can Always be Inclosed for Winter Use



A Hanging Swing Seat



d Ceiling and Casings of Quartered Oak



Comfortable Chairs Are an Important Equipment of the Sunroom

Another attractive sunroom is of rough plaster, which covers all the exterior walls; the ceiling and casing of quartered oak of a beautiful finish; the floor is of the same kind of wood, and is covered with handsome Indian rugs. The room has plenty of comfortable wicker chairs and rockers.

A very handsome room is done in white enamel. The heavy ceiling is supported by a double row of pillars. The

floor is a light oak, a splendid contrast to the white wall. The furniture and the table are handsome wicker upholstered in white. This room is made still more cheerful by plenty of palms, rubber plants and cut flowers in vases.

These are only a few of the many ways to furnish a sunroom, but these certainly show that this room is attractive and worth while.



Should Not be Forgotten



A Sunroom with Open Fireplace and Red Brick Walls



Window Shades and Screens Are often Desirable



A Sunroom with Rough Plaster Walls and Ceiling and Casings of Quartered Oak



Comfortable Chairs Are an Important Equipment of the Sunroom

ceiling hangs a number of Japanese lanterns. The table, taburets and stands are covered with growing plants.

Another attractive sunroom is one whose walls are red brick with a large broad hearth. The ceiling is of pine lathe painted brown. The window and door casings are of white enamel. The door is exceedingly large; it is all of glass, except for the casing, and commands a beautiful vista of the

garden. The floor is also of pine painted brown, covered with a large hand-woven rug.

In the center of the room is a Mission table of oak and chairs in the same style. This is used for cards and games and for a dining-table in pleasant weather. In another corner is a large bench of Mission oak. The only other decorations are the stuffed head of animals hung on the walls.

Another attractive sunroom is of rough plaster, which covers all the exterior walls; the ceiling and casing of quartered oak of a beautiful finish; the floor is of the same kind of wood, and is covered with handsome Indian rugs. The room has plenty of comfortable wicker chairs and rockers.

A very handsome room is done in white enamel. The heavy ceiling is supported by a double row of pillars. The

floor is a light oak, a splendid contrast to the white wall. The furniture and the table are handsome wicker upholstered in white. This room is made still more cheerful by plenty of palms, rubber plants and cut flowers in vases.

These are only a few of the many ways to furnish a sunroom, but these certainly show that this room is attractive and worth while.



The Open Porch Can Always be Inclosed for Winter Use



A Hanging Swing Seat Should Not be Forgotten



A Sunroom with Open Fireplace and Red Brick Walls



A Porch Adapted to Inclosure in Winter



The Sunroom Is an Essential Addition to the Modern House



A Sunroom in White with Latticed Walls and Ceiling

A final merit of the sunroom may be noted in that it means an extension of the utilization of the porch. Agreeable and even necessary as a porch is to the modern American country house, it generally remains an unused open vacant space during a good portion of the year, sometimes during the larger portion of the year. The sunroom saves this waste by con-

verting it into an outer apartment that is always more or less ready for use at all seasons. It is true it must be heated to be available in cold weather, but with the large heating plants now so generally installed this means little added expense. And the decorative value of this room is always charming and delightful.



A Home Shrubbery

By E. P. Powell



EVERY small country place, even if there be not more than ten acres, can afford a small shrubbery, and ought to have it. There is nothing that refines and charms more than these blossoming bushes, and at the same time they purify the air. Nature gives over the month of May and a part of June to a succession of flowering displays; beginning with the forsythia and ending with the spireas. Perhaps the Judas tree should be classed with these, for as generally grown it is hardly more than a bush. Many other small trees will blossom as well in the bush form, such as the magnolias, the catalpa and the basswood. All of these make fine shrubs. Then there is the Siberian maple, the cork-barked maple, the wild cherries, and the thorn trees—all making handsome bushes, and flowering superbly. Indeed I think that most of these are more attractive in the bush form.

Any very humble home can create a shrubbery of a quarter of an acre or half an acre by collecting those bushes that grow wild in the neighborhood. There is not a section in the United States that is not rich with nature's gifts of this sort. To these you can easily add, without cost, some of the spireas, lilacs, and probably two or three of the old-fashioned bushes like snowball and flowering almond. I will name about a dozen shrubs somewhat more rare, but not costly. Beginning with early May, forsythia makes a noble show with golden flowers. It is a little tender north of New York City, and liable to lose its blossom buds, unless bent over and covered through winters. The Japan quince makes a superb show in scarlet and in white flowers, but that also occasionally loses buds. A third noble shrub, which becomes a small tree in the South, is the *Prunus triloba*. This is covered with rose-like flowers very double. Of the lilacs the old-fashioned sorts are easily obtained and are good enough, but if one can afford it he should have a collection of the newer sorts, some of which are double, and of all shades of blue, purple, white and red. Nothing is finer in early May than a big bush of Mahonia, a native evergreen shrub. The blossoms are huge balls of gold. The stems are fine for cutting in winter. It is best to throw autumn leaves over the Mahonia during the winter, as the foliage is

sometimes browned by frost. The Tartarian or bush honeysuckle, in white, in pink and in red, is one of the finest bushes we have. It grows with great rapidity and blossoms profusely. There is no bush that makes a finer hedge than this honeysuckle. All the deutzias are fine, especially *gracilis*. Some of these will kill back without covering. The way to grow the old-fashioned snowball is to let it stand out fully exposed to sun and air, otherwise it gets very much infested with lice. The Japan variety is finer than our native. Indulge as freely as you can in mock oranges. There are at least a dozen sorts, and you can grow as many more as you please from seed. I have varieties that cover nearly two months in bloom. Be sure and get the elder that grows by the brooks, and the wild barberry—there are few things finer than these. The dogwoods can be got almost everywhere, and for winter there is nothing nicer than a huge bush of the red-barked. The weigeliass can be easily gotten nowadays, and they have but one fault, the wood must be renewed frequently, for as it gets old it dies out. The best spirea is *prunifolia*, unless it be a Van Houtti. I find around the farmers' yards occasionally the strawberry bush, and not seldom the *Euonymus*, or as they call it, the fire-bush. The first of these is excellent for early spring, and nothing is better than the latter for late fall. The altheas and the hydrangeas are getting into common use, and well deserve it. I do not know when I have seen a dwarf horsechestnut, but it deserves a place everywhere. It is simply a creeping horsechestnut, profuse in bloom and covered with tiny fruit later in the season. One of the *virburnums*, of the same stock as the snowball, deserves special attention, because it is not only pretty in flower, but superb in fruitage. It gives a lot of golden berries through the autumn, and these turn scarlet for winter. They will draw the beautiful pine grossbeaks and the cedar-birds in January.

I have given more than my promised dozen, but I hope it will incite the lover of flowers to plant a shrubbery. Those who work hard on flower beds, where they plant annuals and biennials and costly plants from greenhouses, do not know what they are losing, or rather how much more comfort they would get, with less work, if they would pay more attention to the common bushes.

Economic Methods in Mushroom Growing



THE most important economic problem confronting the grower at this time is that of increasing the yield and "life" of the mushroom bed by fertilization. Ordinarily a mushroom bed produces from two to four months, and the average yield is approximately one pound per square foot of surface. After a careful study of the nutrition of the mushroom it has been possible to supply the essential food elements to the bed in the form of an artificial fertilizer with exceedingly satisfactory results. Fertilized beds begin bearing a week to ten days earlier after the latter cease to bear. The yield per square foot of surface has been increased to two pounds (an increase of one hundred per cent.). It is expected that in the near future we shall have entirely eliminated manure as a factor in mushroom culture, and that any good soil, to which food elements are applied in correct

proportion, may be used for making a mushroom bed. It is a well-known fact that the flavor of the mushroom is much improved where the plant is propagated on soil instead of manure.

The introduction of the pure culture method has revolutionized the mushroom industry. From a meager occupation of a few gardeners, shrouded in mystery, it has risen during the past four years to an industry of first importance to all who are interested in horticulture. It has become a staple crop with truck growers and farmers near large cities. Even in the remotest districts the progressive farmer has a bed of mushrooms in his garden, barn or cellar from which to supply his own table. Abandoning the old "chance method," still adhered to by the English grower, Americans have called in the aid of science in producing "tissue-culture pure spawn," and the element of risk or the possibility of failure in mushroom growing is now as nearly eliminated as can be possible.

Glimpses of Old Annapolis

By Esther Singleton

TOWNS that spring from the earth as the fabled Minerva from the head of Jove, full grown and vigorous, and exhibiting all the latest inventions of the nineteenth and twentieth centuries, are more frequently to be met with in this country than towns that are surrounded with an atmosphere of the past. Although many cities and towns on the Atlantic seaboard still contain old landmarks of great interest, the visitor, as a rule, has to search—sometimes in out-of-the-way streets—for Colonial buildings; and these are not infrequently in such a dilapidated condition that it is very difficult to picture the life of elegance that the old walls and halls have witnessed.

There is no town more thoroughly helpful and delightful to the student of Colonial history and architecture than Annapolis; not only because it contains so many fine specimens of eighteenth century work, but because it is both prosperous and unspoiled. The waves of modern life have scarcely touched it, and its citizens would consider the removal of even a paving-stone a frightful desecration. They are proud of their quiet little city, and appreciate its nameless charm. Perhaps this may be attributed to the substantial old houses, low and wide, with white facings and doors, and columned porticos wreathed and framed with creepers, which, with the gardens of blooming flowers and shrubs and thick green hedges, in which they stand, speak of another period—one in which abundant leisure and abundant means naturally resulted in abundant hospitality. The very names of the streets, too—Calvert Street, King George Street,

Prince George Street and the Duke of Gloucester Street—carry one back into the age of stage coaches, sedan chairs, powdered wigs, hoops and brocade petticoats and minuets.

Annapolis, named in honor of Ann Arundel, Lady Baltimore, in 1695, so beautifully situated on the glittering waters of the Chesapeake Bay, or, to speak more definitely, on its arm, the Severn River, ranked in Colonial days with New York, Boston, Charleston, Philadelphia and Williamsburg.

The splendid harbor, the fertile country and the quality of the settlers and planters in the vicinity, had much to do with making the town one of importance; and apart from its commercial and social attractions, the climate was, as it still is, delightful and health-giving.

In 1781, the Abbé Rodin, who traveled extensively in the northern and southern colonies, wrote:

"There appears to be more wealth and luxury in Annapolis than any other city which I have visited in this country. The extravagance of the women here surpasses that of our own provinces; a French hairdresser is a man of great importance; one lady here pays to her *coiffeur* a salary of a thousand crowns. This little city, which is at the mouth of the Severn River, contains several handsome edifices. The State House is the finest in the country; its front is ornamented with columns and the building surmounted by a dome. There is also a theater here. Annapolis is a place of considerable shipping. The climate is the most delightful in the world."

In 1795-97 another French traveler noted that

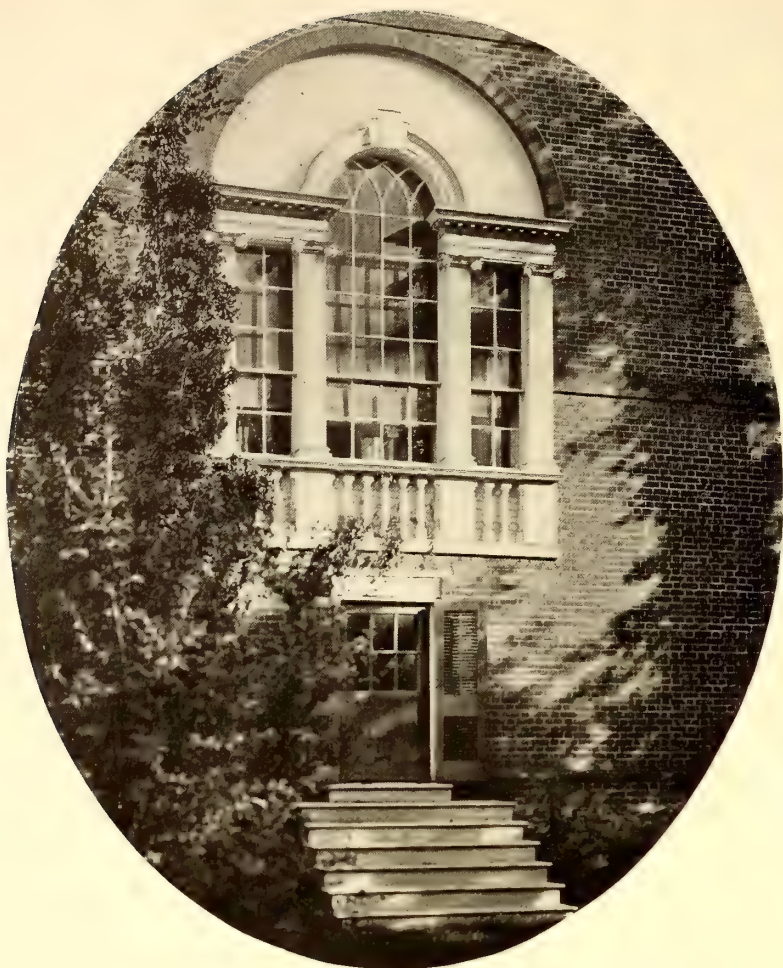
"The English fashions are as faithfully copied as the sending of merchandise from England, and the tradition of tailors and mantua-makers will admit of. The distribution of the apartments in their houses is like that of England, the furniture is English, the carriages are English, or in the English taste; and it is no small merit among the fashionable world to have a coach newly arrived from London and of the newest fashion."

Eddis, who held office under the Crown in the middle of the eighteenth century, wrote of Annapolis:

"Several of the most opulent families have here established their residence; and hospitality is the characteristic of the inhabitants. Party prejudices have little influence on social intercourse. . . . The quick importation of fashions from the mother country is really astonishing. I am almost inclined to believe that a new fashion is adopted earlier by the polished and affluent American than by many opulent



I—Dining-room, Chase House



V—Window, Chase House



III—Hall and Stair



II—Door, Chase House



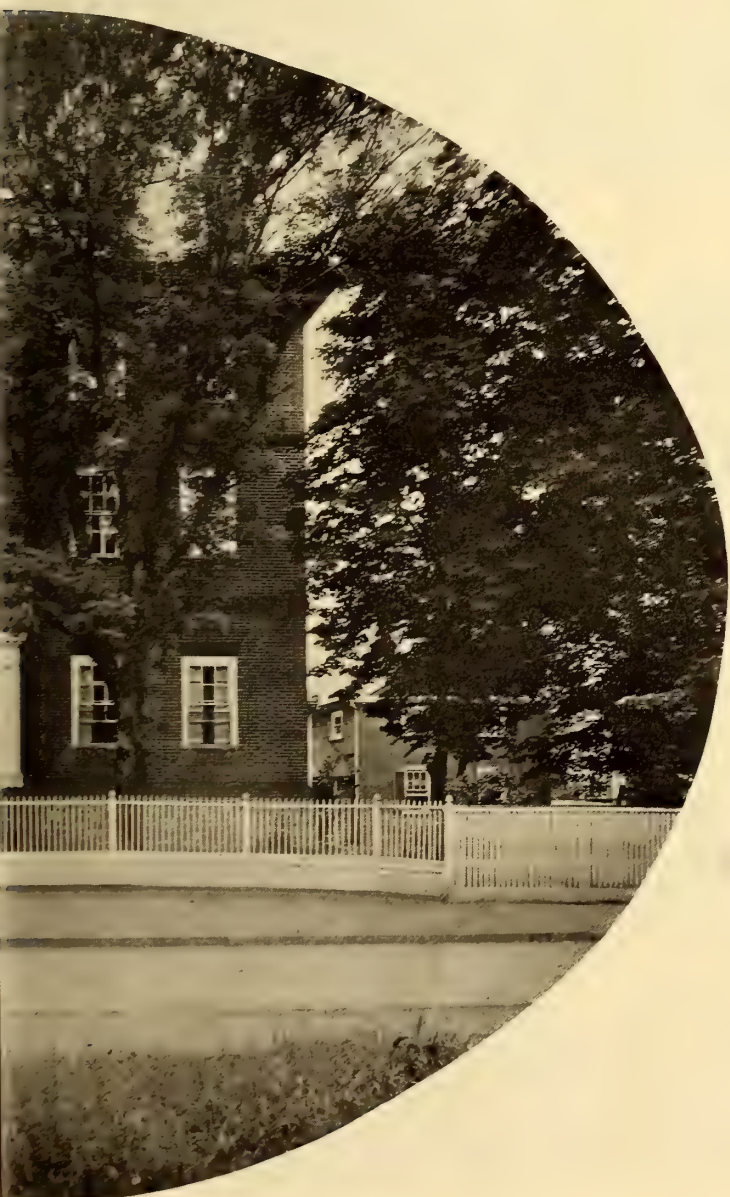
VI—Chase House



y, Chase House



VII—Stairway, Chase House



, Annapolis



IV—Fireplace, Chase House



V—Window, Chase House



III—Hall and Stairway, Chase House



VII—Stairway, Chase House



II—Door, Chase House



VI—Chase House, Annapolis



IV—Fireplace, Chase House

persons in the great metropolis; nor are opportunities wanting to display superior elegance."

"The buildings in Annapolis," he tells us, "were formerly of small dimensions and of an inelegant construction; but there are now several modern edifices, which make a good appearance. There are few habitations without gardens; some of which are planted in a decent style and are well stocked."

Notwithstanding the outside pleasures of the assemblies, theatrical entertainments, horse racing and cock fighting, there were card parties, dinners and dances given in the affluent Annapolis homes. Weddings also often took place within their walls.



VIII—Landing on Stairway, Chase House

"In this country," Eddis remarks, "the marriage ceremony is universally performed in the dwelling houses of the parties. The company who are invited assemble early in the evening, and, after partaking of tea and other refreshments, the indissoluble contract is completed. The bride and bridegroom then receive the accustomed congratulations; cards and dancing immediately succeed, an elegant supper, a cheerful glass and the convivial song close the entertainment."

The same writer also gives us a hint of the bounty and hospitality of the Maryland home of this period. In a handsome house near Annapolis, the Governor and a numerous party made a visit



IX—Carvel Hall, Annapolis



X—Carvel Hall

during the winter. "All the good things of a plentiful country decorated the table of our magnificent host; the wines were excellent and various, and cheerful, blazing fires, with enlivening conversation, exhilarated the spirits and rendered us totally regardless of the rigor of an American winter. On the ensuing day, the whole company proceeded to Rousby Hall, where we continued in the full enjoyment of genuine hospitality till the third month, and it was with the utmost reluctance we were then permitted to take our departure."

They also visited "most of the principal families in Calvert, St. Mary's, Charles, Prince George's and Anne Arundel Counties, and were everywhere received with the most obliging proofs of regard and attention. From the severity of the weather," our informant continued, "we occasionally encountered some hardships and inconveniences, but we were amply compensated at the end of every stage by excellent accommodations and sumptuous fare."

The period immediately preceding the American Revolution was the most brilliant for Annapolis. To the famous balls, Washington frequently drove from the not far distant Mount Vernon, and during the races, which always lasted four days and attracted many guests, assemblies and theatrical and social entertainments afforded varied pleasures. Such families as the Bordleys, Bladens, Dulans,

Chases, Johnsons, Pacas, Carrolls, Chalmers, Jennings, Ogles, Hammonds, Pinkneys, Ridouts, Gibsons, etc., lived in attractive homes, appointed and furnished with every luxury of the time, including numbers of slaves to serve and wait upon them. They followed the English fashions and imported, or had made to order by the local cabinet makers, the latest and the newest styles in furniture and upholstery. The sideboards, china closets, cupboards and cabinets were bright with handsome plate and choice porcelain and china. The cellars were well stocked with wine and spirits, and the black cooks in the distant kitchens knew full well how to prepare the wild ducks, turkeys, terrapin, sheep's head and other "delicacies of the Chesapeake," not to speak of the pastries, cakes and innumerable kinds of breads, from "corn pone," "butter bread," "butter cakes" and waffles to the famous "Maryland beaten biscuit."

A few of these typical Maryland homes are shown in the accompanying illustrations.



XI—Chase House

"The first that we shall examine is the "Chase House," which has been described as "the most stately house in Annapolis." It stands on Maryland Avenue and was built in 1770 by Judge Samuel Chase, one of the signers of the Declaration of Independence. However, before looking at the house, we may pause to note something about its owners.

Chief Justice Chase was the son of an Episcopal clergyman, an early friend to and supporter of Colonial liberty and a member of the Continental Congress, and in 1776 he went with Charles Carroll and others to stir up rebellion in Canada. In 1796, he was appointed associate justice of the United States Supreme Court, which post he held until his death in 1811. Its next occupant was Governor Lloyd, who was Maryland's chief executive from 1809 to 1811; and he, in turn sold it to his son-in-law, Henry Harwood. Captain Edward Gibson, of the United States Navy, was the next purchaser; and in 1847, it was bought from him by Miss Hester Ann Chase, the daughter of Chief Justice Jeremiah Townley Chase. Mrs.

Hester Ann Chase Ridout, granddaughter of the two Chief Justices, Samuel and Jeremiah Chase, was the next

owner; and she, by bequest, left it as a home for aged, infirm and destitute women. This "Chase Home" was opened in 1897.

No. VI shows the facade of the front with its ornamental door, represented again at closer range in No. XI. The front door, it will be noticed, is paneled, surmounted by a fanlight and flanked by a window on each side. These windows have a practical use because they light the hall, which is one of the chief features of the Chase House. This hall is forty-five feet long and more than fourteen feet wide. The stairway (see No. VII) is directly opposite the front door. It starts with a single flight of eleven steps to the first landing, from which a double flight of steps

ascends to the second floor; these separate flights are supported by Ionic pillars, which stand on either side of the



XII—Doorway, Harwood House



XIII—Harwood House, Annapolis

first flight of stairs. The landing on the second floor is ornamented with two niches for statues on either side of a door that opens into a room over the hall. This door is surmounted by a broken pediment, which, in this case, happily contains an ornament. The details are shown in No. VIII. Doors at the top of each flight of stairs (see No. VIII) lead into bedrooms. Above the first landing behind the clock (see No. III) is a triple window, the central pane of which is arched. This window is shown from the outside in No. V.

The handsome door (No. II), which, of course, should have a bust, vase, or other ornament in the center of the broken pediment, still carries its original worked metal handle, as does its companion (see No. I). The marble chimney-piece



XIV—Mantel in the Brice House, Annapolis

in this room is severely plain and does not correspond with the doors. In all probability this was substituted for the original carved one in the early days of the nineteenth century, when the marble mantelpiece, often imported from Italy, became so fashionable.

Another chimney-piece from the same house appears in No. IV.

Very little Colonial furniture is to be seen in the Chase House, but the visitor will not fail to notice the china cupboard containing some choice pieces of old china that stands in the hall, and also the two unique mirrors that may still be seen.

Another attractive old house is the Harwood residence on Maryland Avenue and King George Street, appearing in No. XIII. The Harwood



XV—Brice House, Annapolis

House is a fine example of Colonial architecture. The foundation walls are five feet thick and are of stone. The courses of the bricks should be noted, for the alternation of a large with a small brick produces a very pleasing geometrical effect. The entrance door, shown again in No. XII, is extremely handsome, with its fanlight, moldings, entablature and heavy swags of roses above the fanlight. Wings of two-stories are connected to the main house by



XVI—Old State House at Annapolis

corridors. The carved woodwork of the interior is exceptionally fine, even in Annapolis, where there are so many beautiful specimens of Georgian work; the carvings of the wainscot, doors, door frames and window frames in the drawing-room (nineteen by twenty-seven feet), are said to be the handsomest in Maryland. It was not difficult to find carvers, for the many detailed advertisements of carvers in the "Maryland Gazette" show that skilled labor was both procurable and in demand in Annapolis and its vicinity, on both shores of the Chesapeake. There was a romance connected with the Harwood House, which was built for Mr. William Hammond between 1770 and 1780. This gentleman prepared it for his expected bride, but the engagement was broken off and he remained a disappointed bachelor, never to occupy the house he had built with such happy expectations and sentiment. Its first tenant was Chief Justice Jeremiah Townley Chase, who moved into the unfinished dwelling in 1781 and who bought it in 1811 with some additional ground for his daughter, Mrs. Lockerman. The dwelling next came into the possession of Judge Chase's granddaughter, Mrs. William Harwood, and is now owned by Miss Lucy Harwood.

The Brice House, or, as it is sometimes called, the Jennings House, was built by Edmund Jennings about 1770 for his son-in-law, one of the Brices. It is situated on East Street, near Prince George Street. This appears in No. XV, in which one wing only is visible. An idea of the beautiful carved wood-

work of the interior of this fine old home is exhibited in No. XIV.

Another distinguished house that has seen wealth and fashion within its walls is the Paca dwelling on Prince George Street, near East Street, which was built by Governor Paca about the same time as the Chase House.

William Paca was a successful lawyer of Annapolis, who in 1771 was a delegate to the provincial legislature, and who later became an enthusiastic

Son of Liberty. He was a delegate to the Colonial and Continental Congress and a Signer of the Declaration of Independence. He was State Senator, a justice of various courts, and, in 1782, was elected Governor of Maryland, to which post he was re-elected in 1786. In that year he became a member of Congress. For ten years, until his death in 1799, he was judge of the United State District Court for Maryland. Arthur Schaff purchased the house from the Governor, and the next tenants were Louis Neth and, after him, Chancellor Theodorick Bland.

The garden of the Paca House was particularly noted for its beautiful flowers and shrubbery, as well as its trees, artificial brooks and springs, bath house and two-story summer house. Some of it is fairly representative of the past (see No. XVII). The Paca House is now part of the Carvel House. The latter, brought recently into notoriety by the novel of Richard Carvel, was built by Dr. Upton Scott, about 1770. This is shown in Nos. IX and X.



XVII—Garden, Paca House, Annapolis

These few examples by no means exhaust the Colonial homes of Annapolis, among which mention should be made of the Stewart, built in 1763, the residence of Anthony Stewart, owner of the famous brig; the Pinkney House, the Oglehart House, the Ogle House, the Dulany House (now the City Hotel), the Ballroom, built about 1765; the first Governor's House, occupied by Gov. Francis Nicholson, governor from 1694 to 1709, and the second Executive Mansion, "Bladen's Folly," built by Thomas Bladen.



A Pocket Sun-dial with Compass in Leather Case

Sun-Dials

Curious Forms of a Useful Instrument

By Randolph I. Geare



A Pocket Sun-dial with Compass

NOT many years before the middle of the nineteenth century the New England villagers commonly told the time of day by means of a "noon-mark," perhaps a groove in the floor just inside the house door and at an angle with the threshold, or else a series of rude notches cut in the window casement. A yet earlier device was a pole stuck in the soil, the shadow of which reached certain marks on the ground as the day passed by—a plan not unlike that adopted by the Montagnais Indians of Canada, who set up a staff in the snow and approximated the time of day by noting the angle between shadows from time to time. A later method among New Englanders was to incline the pole so as to point to the north star and run parallel with the earth's axis.

All of this antedated the construction of the complete dial,

shuts down flat, and figured for latitudes 43° , 46° , 49° , and 52° , while the latitudes of twenty-four important cities are engraved on the back. A very interesting dial in this collection is so devised that it can be set for any one of one hundred and fifty-eight different places, including points as far distant from each other as Berlin, London, Copenhagen, Constantinople, Palermo, Stockholm, etc. Another dial in the same collection—apparently made in Italy, and finely constructed of brass—not only indicates the time in many different latitudes, but is also used for making observations of the planets. It has a folding gnomon and compass, and is covered inside with very elaborate astronomical tables bearing inscriptions in Latin.

A student of Biblical archæology states that the invention of the pole and gnomon combined, producing an instrument perfect in itself for all observations, was probably connected



A Brass Sun-dial with Plumbob for Leveling

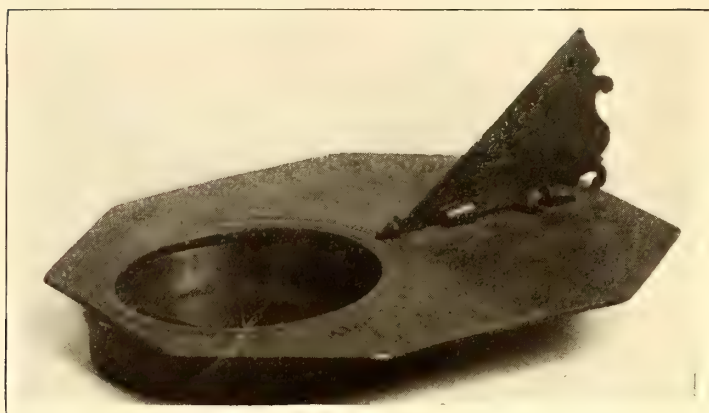


A Folding Pocket Ivory Sun-dial

marked with regard to the special locality for which it was made, or, by special contrivance, adaptable to several localities. There is a combined pocket-dial and compass of this kind in the collections of the National Museum at Washington, made by Menant, of Paris, with a hinged gnomon that

with the rectification of the Babylonian calendar in B. C. 747—nineteen years before the accession of Ahaz. A flight of steps caught the shadow in the open air, or more probably within a closed chamber, into which a ray of light was admitted from above, and which passed from winter to summer

up and down an apparatus in the form of steps. Such chambers, he remarks, were in use in Eastern observatories till the middle of the eighteenth century. The celebrated



A Pocket Sun-dial with Compass Arranged for Twenty-four Important Cities

dial of Ahaz, which was probably set up about 800 years before Christ, was in all likelihood nothing more than a circular staircase leading up to a column or obelisk, the shadow of which, falling on a greater or smaller number of steps, according as the sun was low or high, indicated the position of the sun, and thus told the time of day. According to the Bible story, the shadow was miraculously made to recede ten steps, as a sign that Isaiah's prayer in behalf of Hezekiah for an extension of his life had been favorably answered.

The almost universal use of sun-dials in ancient times is well assured. In the history of ancient Greece, frequent references occur to a shadow by means of which the time of day was determined, but it is not known what means was employed for casting the shadow. One theory advanced was that the gnomon was each man's figure, the shadow of which he measured, probably by pacing off the distance it covered. But whatever the method was, it was imperfect and the dial required frequent alterations during the year. Far less determinable, however, is the secret of the method employed by



Brass Dial for Telling Time and Observing the Planets

of the wonders of that imperial city. On the triumphant return of Augustus from Egypt he brought with him a towering obelisk, which he set up as the gnomon of a huge sundial among the stately arches and porticos where the Roman citizens were wont to assemble at the public games. The hours were marked out by a circle of gigantic figures, so arranged that they might catch the earliest and latest rays of sunlight



Brass Pocket Sun-dial Elaborately Engraved with Astronomical Signs and Tables

and thus mark the dawn and close of each day. Not a trace of this obelisk is left. How long it remained in position is not known, but, like many others of note, it disappeared, and



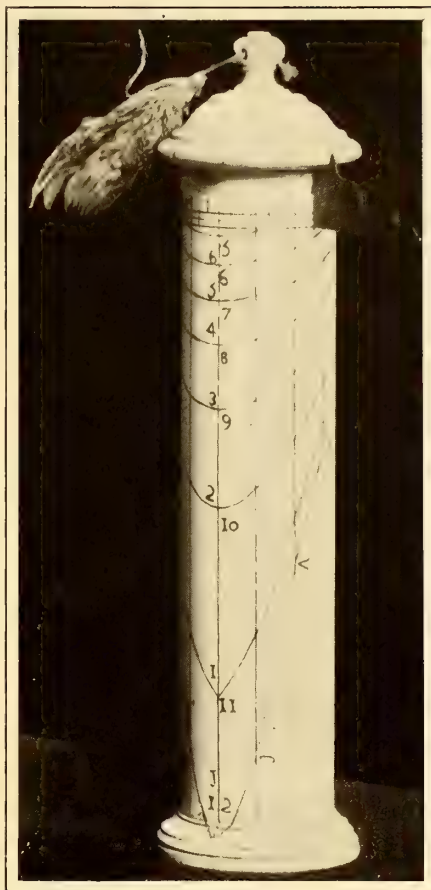
A North Shore Sun-dial

the first inhabitants of Arabia, who without the use of any instrument could determine the time of year or of day with accuracy. At a later date, when Rome was at the height of her glory, the great sun-dial in the Campus Martius was one

the practise of setting up sun-dials gradually fell into disuse. The usual form of the Greek and Roman dials was the "hemicyclium," which is described as "an excavation nearly spherical in a square block of stone, within which the hour

lines were traced, and having the anterior face sloped away from above so as to give it a forward inclination, adapted to the polar altitude of the place for which the dial was made." The hours were unequal, and varied according to the season of the year. The gnomon was placed upright on the edge of the hollow and was then bent at a right angle over it, so that the horizontal portion projected as far as the equinoctial line. Such a dial was found in 1852 at the base of Cleopatra's Needle, and is now in the British Museum. At Athens there was the "Tower of the Winds," built by the astronomer Andronicus, forty-five feet high and octagonal in shape. Figures representing the winds are carved on them, while the hour lines were engraved below. This formed both a wind and sun-dial, and formerly a bronze Triton, holding a wand, stood on the marble roof and served as a weathervane.

In Mahometan countries sun-dials are very common, and on many of the mosques they are to be found bearing a line which points toward the sacred Mecca, and also marks for the five divisions of the day when prayers are regularly offered. In China, too, dials are frequently met with, and in various places, such as on the flat board in front of a palankin, on the houses, or dials that are portable, fixed in boxes with silken strings for gnomons, and sometimes combined with moon-dials and compasses. In Iceland, not a hundred years ago, the method of telling time was very crude. The natural horizon of each township was divided into equal parts, either by mountain peaks or by pyramids of stone, which had been kept in repair for many generations. There is a dial on the Isle of Man which is formed of a ring mound forty-five feet in diameter, and has eight radiations. Parallel rows of stones regularly placed on these form the dial. The ancient Mexicans had a huge, vertical sun-dial weighing nearly fifty tons and known as the "calendar stone." It was cut out of porphyry by the priests about one hundred years before the Spanish conquest and was set up in one of the temples. In 1790 it was discovered buried in the great square of what is now the city of Mexico, was excavated, and was built into the wall of the cathedral. Later it was taken down and installed in the National Museum of that city, where it may be seen at the present time. The civil day was divided by the Mexicans into sixteen parts, and, like most of those of the Asiatic natives, began with sunrise. This colossal calendar stone proves



A Shepherd's Dial

that the early Mexicans had the means of settling the hours of the day with precision, the periods of the solstices and of the equinoxes, as well as that of the transit of the sun across the zenith of Mexico. There have also been discovered pillars of curious and costly workmanship erected by the Peruvian Indians, which served as dials, and from which they learned to determine the time of the equinox. These columns are believed to have been destroyed by the Spaniards.

The moral use and beauty of the sundial are unquestionable, but as life became more practical and strenuous it gradually gave way to clocks and watches. It was the primitive clock—the horologe of the first world and dignified recorder of the passing of time. "It was the measure appropriated for sweet plants and flowers to spring by," writes one authority, "for the birds to apportion their silver warblings by, for flocks to pasture and to be led to fold by. The shepherd carved it out quaintly in the sun, and turning philosopher by the very occupation, provided it with mottoes more touching than tombstones."

Astronomy and mathematics played their part in the construction of the finished dial, but once fixed, these chronometers were good for all time, and only one thing was essential to the performance of their duties, and that was sunshine. In order that a sundial may give correct results it is necessary that the gnomon, the shadow of which points the time on the dial, slope to the horizontal plane at an angle equal to the latitude of the place, and also lie due north and south.

During the Middle Ages the progress made in the manufacture of sun-dials in England is hardly traceable, but during the Renaissance their construction was revived and received much attention. They were either portable or were set upon pillars or on walls of houses. A favorite place for them was on the top of crosses in the churchyards. It is recorded that in 1631 the Company of Clockmakers in London "was given jurisdiction not only over clocks and watches, but over dials also, and was authorized to search for and break up all bad and deceitful works."

In those days sun-dials were the fashion in England among people who prided themselves on having up-to-date gardens. At Hampton Court, at Windsor and other royal palaces, they were to be seen. In the courtyard of St. James Palace was one which King James had caused to be set up at a cost of between six and seven pounds, while at Whitehall was an elaborate specimen costing forty-six pounds.



A Sun-dial on W. S. Spaulding's Estate, Prides Crossing, Massachusetts



The Living-room Is Trimmed with Oak with Mustard Color Walls

“White Lodge”

The Residence of
Charles H. Roberts, Esq.

Wynnewood, Pennsylvania



By Charles Chauncey



R. ROBERTS' house at Wynnewood is quite unusual and distinctive in its character. It is designed and built for a suburban site and is so arranged that the entrance to it is placed at one side, reserving the entire front of the house for the living-room. The lines of the exterior are square, and the color scheme emphasizes this fact, with the setting of the pine trees which surround it forming a background for the landscape picture.

The color scheme of the exterior is rich and warm, adding much to the already charming structure effect of the house by the contrast between the stucco walls treated with a white cement wash and the shingles of the roof which are stained red, and the whole provided with a fine setting by the trees with which the house is surrounded.

The first story of the house is built of stone and splashed with white mortar in a rough manner, leaving an uneven surface. The second story is of frame, built for the stucco walls, which it has on the exterior. The porch, with its great circular arches and pergola and the great chimney built at one side of the house, with chimney pots of red pottery, are interesting features of the exterior. This is a most effective structural feature, for the massive lines of the chimney gives an impression of rugged strength.

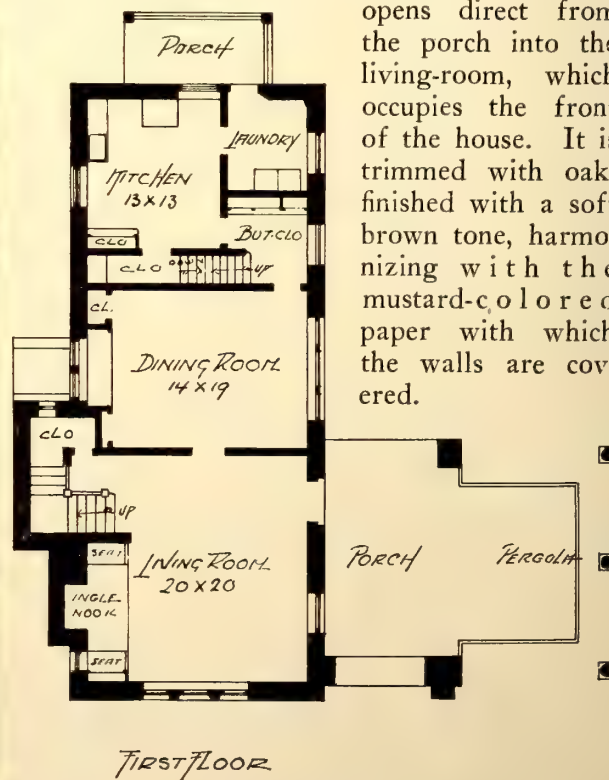
The front porch leads to the interior of the house and forms an outdoor section to the living-room when it is inclosed with glass in winter. The arched openings in the cement walls give a charmingly quaint and sheltered effect.

The interior of the house is divided into three rooms on the first floor, three bedrooms on the second, and two on the third floor, an economical arrangement of the space.

The entrance opens direct from the porch into the living-room, which occupies the front of the house. It is trimmed with oak, finished with a soft brown tone, harmonizing with the mustard-colored paper with which the walls are covered.



The House Is of White Stucco with Shingles Stained Red



The stairs to the second story are placed on the opposite wall from the entrance and rise direct from the living-room. The projection for the semi-inclosure of the stair-way forms a break by which an inglenook is obtained. This inglenook has seats on either side with bookcases built over the same. The fireplace is built of rock-faced stone laid in a unique manner with wide white mortar joints.

The dining-room is treated with a white painted trim, and the walls below the plate rack are covered with a white and green paper, while the walls above the plate rack are covered with a yellow and green wall paper. At one end of the dining-room there is a seat, on either side of which is built a china closet with doors glazed in lattice design.

The butler's pantry is fitted with drawers, dressers and cupboards complete. The kitchen and laundry are trimmed with yellow pine, treated natural, and are fitted with all the best modern appointments.

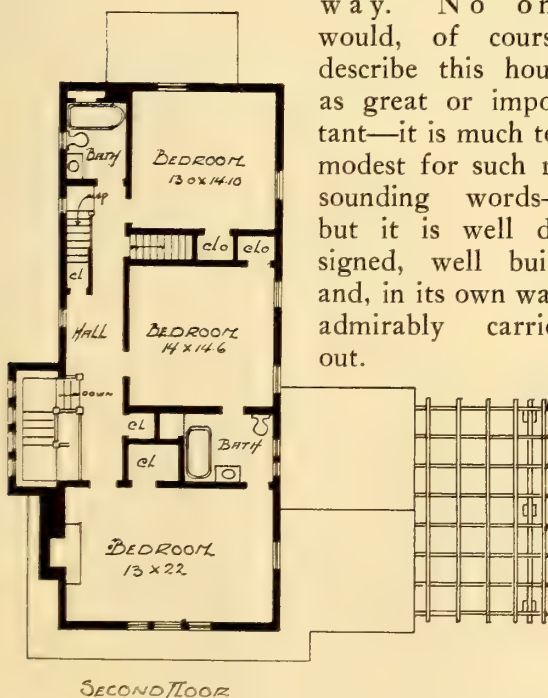
The second story is treated with white enamel paint throughout. Mrs. Roberts' room, which is in the front of the house, has an open fireplace of brick. The walls are covered with a wall paper in crimson poppies on a white ground. Mr. Roberts' room adjoining is finished with a dark green wall covering. The guest room at the rear has a wall covering in blue and white stripe. The two bathrooms on this floor have tiled wainscoting and floors, and porcelain fixtures and exposed nickelplated plumbing.

A cemented cellar under the house contains the heating apparatus, fuel rooms and store room.

The real merit of this little house is clearly apparent. It is essentially a modest dwelling, designed with a care and feeling that has lifted it out of the category of ordinary houses, and made it one of real beauty and interest. It is utterly unpretentious, yet amply sufficient for every demand its owners may make of it and for every use to which it may be put.

The accomplishment of these ends is worthy of the warmest praise. It is good work well done. It is work worth

doing in a worthy way. No one would, of course, describe this house as great or important—it is much too modest for such resounding words—but it is well designed, well built, and, in its own way, admirably carried out.



The Dining-room Has White Trim and Walls of Green and White

The design was worked out with a due regard for the needs of the proprietor and for the landscape background. Had the structure been the palace of a multimillionaire, it could not have been more painstakingly planned.

It is no slight task to design a small house in an interesting way. The architect, like many another, must look after the income side of his affairs, and the commissions from the designing of small houses are too often wholly inadequate; so inadequate, indeed, that few architects can afford the time and interest they demand. This is the real reason why so many of our small houses are such highly unsatisfactory works of architecture—this and the fact that good architecture costs good money like any other good thing. This house, therefore, is notable in representing a high grade of workmanship in a type of dwelling from which it is too often absent.

Messrs. McIlvane & Roberts, of Philadelphia, Pa., were the architects of this house of delightful character.



The Entrance Porch Is an Outdoor Living-room

Well-Designed Appliqué

An Effective Means of Decoration

By Mabel Tuke Priestman



SIMPLICITY in ornament is the highest art, but it is very difficult to make people believe it and appreciate it. The power of restraint must be properly understood if the result of it is to be felt. The knowledge of why a space should be filled, or why left empty, comes from experience and a willingness to adapt the material to its requirements.

There is a charm and simplicity about appliqué work that appeals to the lover of good ornament and color; the latter should be expressed in broad, flat tones, masses of color rather than shading and small lines. Points of construction should be emphasized to add interest to the work, but must not be an incumbrance to the object it is intended to ornament. There are many excellent ways of treating appliqué. After first stitching it to the ground very neatly at the edge it is ready for the outline, which can either be embroidered in art stitch or a fine cord. A couching of silk is often used to cover the edges, and in some cases a narrow ribbon is couched down in place of the cord, or several strands of embroidery silk or linen. Some workers use button-hole stitch to bind the edges, but this takes longer than couching or working in art stitch.

The most elaborate appliqué work is backed, and is done in the following manner: A piece of muslin or linen is tacked on to a drawing-board and pasted all over with a thin layer of shoemaker's wax. The fabric which is to form the appliqué is laid over the pasted muslin wrong side down, and pressed firmly on to the board; this must be left until perfectly hard. The design is then drawn or traced on the muslin, and the parts that will form the appliqué are cut out, either with nail scissors or with a stencil knife. The foundation material, having been already placed in a needlework frame, the parts can be marked out where the pieces of appliqué are to be applied. These can be pinned temporarily in place and afterward pasted on to the foundation and left to dry, or they can be carefully basted on. The work can be done in the hand if desired, but for elaborate work it is better to use a frame. The stems and thin lines should be embroidered, as thin, narrow pieces of appliqué should be avoided. The most suitable designs for this kind of work are conventionalized flower-motifs. These may follow Persian, Egyptian or Art Nouveau designs, accord-

ing to their environment. Portières are especially suited to this bold style of decorative work, and may have a dado, frieze or border treatment, according to the taste of the designer.

The tracing of the design is by no means so complicated as most people imagine, as simpler methods are now used instead of the old-fashioned method of tracing the design over carbon paper. The design is laid over the material and the surface of the paper showing the design is rubbed over with a square of blue sold for the purpose. A warm iron is passed quickly over it, and on lifting the design the pattern is found to be beautifully marked out on the material with

sharp, clear lines, very different to the old-fashioned tracing. The advantage of this method is particularly desirable on a rough, twill material, as one knows from experience how the point of a tracer will always wobble on twilled material.

Hardly any other kind of needlework opens such splendid opportunities of expressing one's individuality, either in the design itself or in the effective way in which it is worked out. The canvas portière with the pine-cone motif shows one of the simplest forms of appliqué. The foundation is a coarse kind of burlap called arras cloth. The band of material at the bottom is a coarse linen. The slender spikes of the cone are so massed that none of the fineness of design is noticed, which would be apparent if such a design was differently treated.



Outlining the Disk in Art Stitch. The Apple and Leaf Were First Done on the Disks and Were then Pasted Smoothly on the Background

Heavy flax embroidery outlines the spikes of the cone, while the cone itself is interlaced with another shade of coarse flax. This portière was made in the Craftsman studios at Syracuse, N. Y.

The nasturtium table-cloth shows a good deal of detail, and for a table-center such detail is necessary. The flowers, leaves and edge are outlined with satin stitch, while the flowers themselves are made of yellow linen, and the leaves are of green linen in dark and light shades. It is a beautiful piece of work, extremely rich in coloring.

A very original curtain was lately exhibited at the Handicraft Exhibition in Brooklyn by Miss Helen Turk. The curtain was made of gray, hand-made Russian crash, usually sold for tea towels. The flowers were first cut out and then outlined with a double row of art stitch with Berlin wool, and afterward applied to the curtain. They were invisibly sewn with cotton to the crash, but appeared to be held in place by

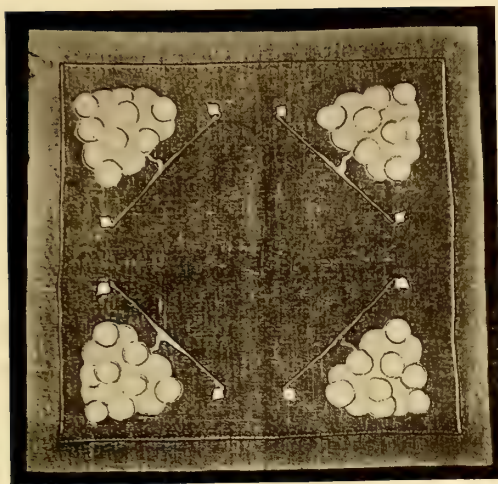


Table-cover with Grape Motif
a Good Design



Table-cover of Linen Outlined
in Art Stitch



Portière of Russian Crash with Appliqué
Designs Worked with Berlin Wool

the stamens. The stalks were composed of two or three strands of green wool worked in crewel stitch. The widths

were joined together by a clever contrivance of alternate overcasting of satin stitch, which seemed to be characteristic of this very original piece of work. The flowers were outlined in dull rose, while the stems and the joinings of the crash were of green. This would make an effective bit of color decoration in a summer cottage, its barbaric ap-

a very clever design in some fruit motif. The work is well done and the design is characteristic of modern appliqué exhibited at some of the arts and crafts exhibitions in New York.

Appliqué is also very much used for curtains, and although the designs are often very ordinary, we occasionally see some good specimens in the stores. The bobinet curtain in our illustration has a decoration of white muslin outlined with a tiny cord, which is sewn by the machine.

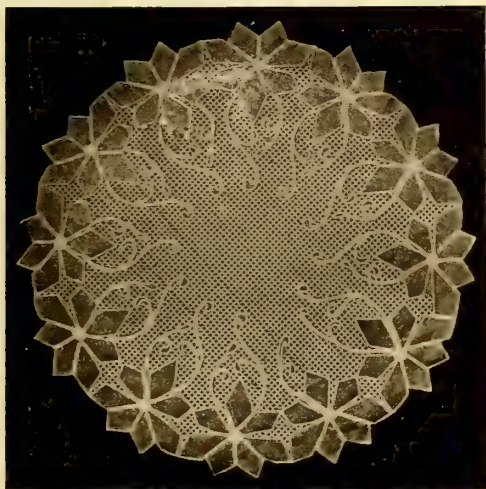
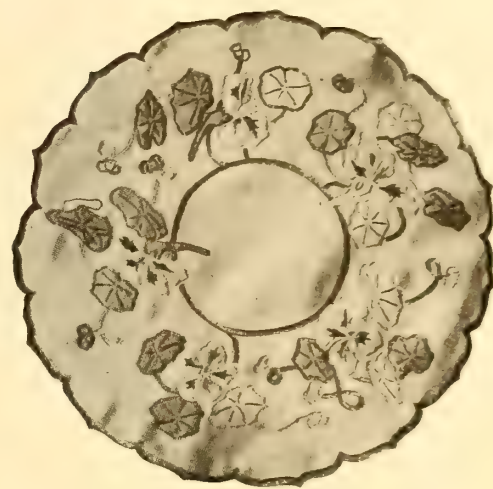


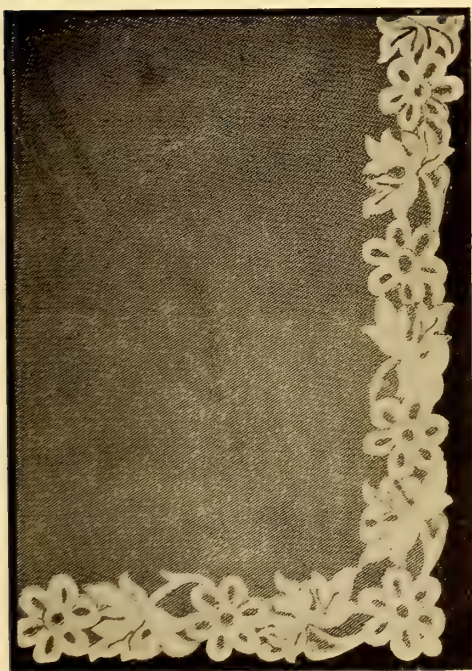
Table-center of Bobinet Denim and
White Cotton Cord



A Nasturtium Table-cloth
with Much Detail

pearance being its chief charm. The same idea could be carried out in burlap with linen or denim appliqué. A cream linen table-cover outlined with a border of green linen shows

another specimen procurable at the stores is of coarse net with a denim appliqué in green. This is also outlined with a heavy white cord sewn on by the machine.



Bobinet Window-curtain with White
Muslin and Cord Appliqué



Pine-cone Motif



Applied Linen Design in
Three Shades of Blue



CORRESPONDENCE



The Editor of *American Homes and Gardens* desires to extend an invitation to all its readers to send to the Correspondence Department inquiries on any matter pertaining to the decorating and furnishing of the home and to the developing of the home grounds.

All letters accompanied by return postage will be answered promptly by mail. Replies that are of general benefit will be published in this Department.

Problems in Home Furnishing

By Alice M. Kellogg

Author of "Home Furnishing: Practical and Artistic"

PICTURES FOR A BUNGALOW

FROM a correspondent in New York State, F. de N., comes the inquiry: "What would you suggest in the way of pictures for our summer camp or bungalow? The walls are of Georgia pine, and the photographs that we have heretofore pinned up have not been very satisfactory. We are ten miles from the railroad station and do not wish to transport framed pictures."

The yellow pine walls of this camp will be more interestingly decorated if colored prints rather than the monotonous are selected. The best effect at the minimum cost can be attained with the three-color and four-color English prints that are made to paste against the upper walls as a frieze decoration. These are outlined with a vigorous touch and are strong enough in color to show against the pine walls. There are farm yard scenes for the children's enjoyment and Holland views for the older folks. There are also coaching, country club, automobile and hunting scenes. The prices range from fifty cents to three dollars each. Brass thumb tacks may be used to fasten the prints to the wall, if a tiny piece of muslin is placed underneath to prevent tearing at the corners.

A better idea for protecting the prints is to make a simple frame of picture molding, without using glass. At wall paper stores the oak molding is sold in twelve foot lengths at six cents a foot, and a working outfit—miter box, saw, hammer, nails and glue—may be bought for a dollar and a quarter, making the total cost for the frames very slight.

COVER FOR A PIANO

C. H. B., of New Jersey, writes: "Is there anything new in the line of piano covers? I have hunted the shops in vain and find nothing suitable for my own use. The piano is a mahogany upright, and it stands against a rose-colored wall paper."

A strip of brocade in Elizabethan design will make an attractive cover for the piano in this room, giving a mixture of colors in soft tones. The edges may be finished with an antique braid or galloon, laid on flat. Another suggestion for this correspondent is to use a length of pongee silk lined with pale green sateen, and decorate the

(Continued on Page x)



On the Island of Maarken

Garden Work About the Home

By Charles Downing Lay

THE DISPOSAL OF HOUSEHOLD WASTE

WE HAVE several times been asked by correspondents who live on small places in the country, where there is no organized system for disposing of household waste, how to get rid of trash and garbage of all kinds, and we have always been impressed by the disorder and confusion about the back doors of such houses when we have seen them.

The heaps of ashes, old shoes, tin cans, waste paper, old bottles and junk are not found only about the hovels of the town but are too often behind the best houses.

Indeed, in old neighborhoods such rubbish piles are sometimes full of interest and charm for the collector. We have found on such heaps rare old bottles of stone and glass, blue china and earthen dishes—even pewter lamps and platters and tin lanterns!

On a small place properly kept up there is no room for bonfires or even pigs, so an old ash can should be punched full of holes, and the papers, old shoes, and all rubbish put in there, with a dash of kerosene to start it, and be burned.

In England they make a "rubbish destructor," or incinerator, for dealing with garden and domestic rubbish. We wish such a thing might be introduced here.

Coal ashes had best be put in a special bin and carted away at regular intervals. They can be used to fill swamps and low places, or may be buried. If much wood is used with the coal, then the ashes can be sifted and the fine part put on the land as fertilizer.

Wood ashes, of course, are kept in covered cans and spread on the lawn every spring.

Glass bottles are hopeless—give them a special bin and hire someone to cart away the ones that can not be sold.

Tin cans may be put in the incinerator, and when the tin and solder are melted off it will be easy to straighten them out and bury the pieces in small bundles in the earth.

The garbage should be kept in a covered pail which is emptied on the compost heap every day—no paper, tins or glass should be put in the garbage pail. It is easier to sort things before putting them in the can than afterward. It will be better if the cook can be induced to burn all bones, fat and meat scraps, because their value for fuel is greater than for compost, and in the compost heap they attract rats and mice, not to speak of stray dogs.

The compost heap should never be lacking on a country place, as its purpose is to save humus to be used in enriching and improving the soil.

Excelsior, straws, leaves, weeds and lawn clippings are put there with the garbage to heat and decay, and in the course of a year make an excellent dressing for the garden.

Manure for the garden may be bought a year ahead and worked in with the compost.

In our house we burn everything, except the kitchen scraps, in the large open fireplaces. Have you ever burned an old paint bucket? Try it some day and see if it is not a pleasant fire to watch.

Burning paper in the fireplace is objectionable, however, because the black cinders of partially consumed paper destroy the clear gray color of hard wood ashes.

In houses which have no sewerage system the chamber slops should be emptied on the lawn every day in a different spot. This though brings us to the question of disposal systems, cesspools, earth closets, etc., which we may consider in a later issue.

SEASHORE PLANTING

From Long Island comes a query about seashore planting.

The planting which can be done about cottages on the sandy shores of our coast is very limited, because there are not many things which

(Continued on Page xii)



A Concrete Residence at Clifton, Mass.

Houses of Concrete are recognized as the most inexpensive, durable, fireproof and sanitary houses known. They need no paint or repairs, are cool in summer, warm in winter, and combine the qualities of stability, utility and beauty. The second edition of our book,

Concrete Country Residences

contains photographs and floor plans of over 160 *Concrete Houses* that have been constructed in various parts of the United States. It illustrates numerous styles of architecture, besides showing several types of *concrete construction*, and is invaluable to those who contemplate building.

A copy of this book (10x12 inches) will be sent, express prepaid, upon receipt of \$100.

The Atlas Portland Cement Company, Dept. 10, 30 Broad St., New York City

BOUND VOLUMES OF American Homes and Gardens

480 Pages :: 1,050 Illustrations :: Price, \$5.00

American Homes and Gardens covers a wide scope; it deals with design and construction of modest cottages on tiny lots to the building of mansions on large estates. All degrees of gardening, from laying out a landscape to the planting of a window-box, are dealt with. Practical questions of water supply, of sanitation, or of the arrangement of the kitchen receive equal treatment with draping of windows or the arrangement of old china.

American Homes and Gardens is beautifully printed. The year's volume contains more than a thousand engravings, as full of details and finish as actual photographs. They depict some of the old and historic mansions of America, and the most beautiful of gardens or of natural scenery. The following list of a few of the principal practical articles which appeared in *American Homes and Gardens* during 1907 will show the wide choice of subject:



Historic Mansions of the James River—Small American Homes—Inexpensive Log Bungalows—The Iris Garden—House-Boating in America—A Boy's Summer Camp—The Choice of a Dog—Ventilation—The Water Garden—Curtains and Draperies—The Wild Garden—Concerning Driveways—Heating the House—The Modern Bedroom—Touring in an Automobile—Flowers for House and Table Decoration—What is a Fireproof House—Interior Woodwork—White Lilac Culture—How to arrange Window Curtains—Street Entrances—Collection of Old Blue Staffordshire Ware—Novel Uses of Electricity—The Question of the Fire Place—Orchid Culture—Hand-wrought Iron work—Kitchen Furniture—Water Supply.

A limited number of volumes for 1907 are available. 480 pages, 1,050 illustrations. Price, \$5.00. Volume for 1906, \$5.00. Volume for 1905, \$3.50.

MUNN & CO., Publishers, 361 Broadway, New York

Inexpensive Country Homes

A Practical Book for Architects, Builders,
and Those Intending to Build

A HANDSOME CLOTH-BOUND PORTFOLIO, consisting of 88 pages, about 11x14, printed on heavy plate paper, and containing 43 designs, with floor plans of practical, tasteful and comfortable country homes, ranging in cost from \$1,000 to \$5,000 complete. The designs have been carefully selected, as embodying the best efforts of various architects throughout the country. Every one of the houses has already been built, and all of the illustrations are half-tone engravings, made direct from photographs of the completed structures, taken specially by the SCIENTIFIC AMERICAN artists. In many cases two perspective views of the same house are shown. Several illustrations of inexpensive stables are also included among the designs.

¶ The location of the dwellings, the cost, owners' and architects' names and addresses are given, together with a description of the dwelling, thus enabling, if desired, a personal inspection of the dwelling or direct correspondence with the architect or the owner.

ARCHITECTS, BUILDERS, AND THOSE
INTENDING TO BUILD

will find many new and valuable suggestions among the up-to-date designs illustrated in this handsome portfolio.

PRICE \$2.00 POSTPAID

MUNN & CO., 361 Broadway, New York



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.

Denver

CHICAGO

Trenton

Actual Size



Plant SOBER PARAGON CHESTNUT

The only
Large, Sweet

The nuts are large in size, being from 3 to 4 inches or more in circumference, and have a sweetness of flavor equal to the native sweet chestnut.

For lawn or park its beautiful, dark, rich, waxy green foliage makes it a most stately tree.

The *Sober Paragon Chestnut* is a hardy, rapid grower, and begins bearing when two years old.

Prof. N. S. Davis, of Bucknell University, says:
"It is one of the most remarkable discoveries of this decade."

To every *Sober Paragon Chestnut Tree*, when shipped, is attached a metal seal upon which is impressed the words "SOBER PARAGON" as illustrated herewith.

For full information, testimonials, etc., address

GLEN BROTHERS, Sole Agents, ROCHESTER, N. Y.



Copyrighted 1908.

The SCIENTIFIC AMERICAN BOY

By A. RUSSELL BOND

12mo. 320 Pages. 340 Illustrations. Price, \$2.00, Postpaid.



STORY OF OUTDOOR BOY LIFE, suggesting a large number of diversions which, aside from affording entertainment, will stimulate in boys the creative spirit. Complete practical instructions are given for building the various articles. The book contains a large number of miscellaneous devices, such as scows, canoes, windmills, water wheels, etc.

MUNN & CO. "SCIENTIFIC AMERICAN" 361 Broadway, New York

PROBLEMS IN HOME FURNISHING

(Continued from page 334)

piece that hangs over the front of the case with a stenciled border in a pine cone design. A narrow silk fringe in tan color may finish the edges. Some readymade piano covers may be found in the first-class Oriental shops in the Bulgarian embroidery, but these are quite expensive.

WHERE TO USE WICKER FURNITURE

A Minnesota correspondent, J. F. T., asks: "Would the wicker furniture described in the May number of your magazine ('Furniture for the Bungalow,' by Esther Singleton) be appropriate in a house that is lived in all the year round? I already have some mahogany pieces and some Mission furniture. Could I add the willow chairs? I should also like to know which is preferable, the natural color or a stain or paint?"

The wicker furniture, although popularly associated with summer furnishings, is also suitable for a home that is occupied during the entire year. Its desirable qualities are (1) lightness of construction, (2) good shapes, (3) moderate cost. The natural color being practically neutral in effect, is the right choice where there are already several colors in the room, but green, mahogany red, gray or yellow will add to the color charm of a room when they are rightly introduced. As to combining the wicker with Mission and mahogany furniture, it would be better not to have three varieties. Wicker with Mission styles or with Colonial designs is satisfactory.

ON THE HANGING OF CURTAINS

A Southern subscriber, J. E. S., inquires about the correct length for hanging window curtains. "Should they hang only to the sill, or be carried to the floor? Shall I hold them back at the sides or let them fall straight? Shall I fasten them to hooks to slip into rings, or sew them to the rings? Or shall I make a hem to run the rod into at the top? These details may seem trivial to you, but they are of importance to me, as I notice so many different ways of putting up curtains, and do not know which is the best, nor why." The different methods for hanging curtains that have been noticed by this correspondent have probably been adopted to suit the special conditions. In formal rooms it is the custom to hang a curtain to the floor without looping back. This permits the design to be displayed and adds a decorative element to the room. When several windows are grouped together, as in a bay, the long curtains show too great an aggregation of material, and the rule would not be followed. In rooms of ordinary use the short curtain is more practical. This may hang to the sill or as many inches below as the casing extends.

In city and suburban homes a thin curtain is usually hung straight across the glass as a screen from neighboring windows. Looping back the curtain permits a freer passage of air, a greater degree of light, and also prevents the blowing of the curtain against the casement.

A muslin or net that is kept looped back against the casement does not require rings, but may be put up by running a thin brass rod through a loose hem at the top of the material. If it is desirable to move the curtain back and forth, a flat brass ring may be sewed to the hem. Or, if the curtain is to be taken down for frequent airing and dusting, it may be sewed to brass hooks, which are slipped into the eye of the brass ring. These suggestions, it is understood, apply to unlined curtains of thin materials, scrim, net, muslin or madras.

FURNISHING AN OLD-TIME PARLOR

A correspondent from Illinois, W. D. B., writes: "How should the trim in a parlor that resembles the one illustrated in AMERICAN

HOMES AND GARDENS for March (page 107, Governor Wentworth's parlor) be finished? Also, how should the walls and ceiling be treated, and what kind of furniture, rugs and curtains are appropriate?"

As indicated in the illustration, the low wainscot and all of the trim in a parlor of this character may be painted white. On the low ceiling a cream-white tint may be applied. For the wall decoration a two-toned yellow, buff or ivory paper may be selected, the shade following the color in rug and furniture covering. If a large Oriental rug may not be afforded there are Oriental effects that can be produced by American manufacturers in standard materials. Or another idea is to have a Wilton carpet with a border, in tones of green and brown, made up as a rug. This gives good satisfaction at a moderate outlay.

White grenadine curtains by the pair may be hung to the sill, with cotton loops holding them back to the sides of the casement; or a white filet net may be bought by the yard and finished with an edge of torchon lace. During the winter some over-curtains would add very much to the evening comfort of the room. These may be of golden brown wool damask or a cotton or a wool repp, made up in straight lengths to hang to the floor, and drawn over the lace curtains in the evening.

In selecting the furniture the uses of the room would determine the suitable pieces. The illustration suggests some appropriate styles in antiques, but for a formal room the spinning wheel, tall clock, rocker and secretary would not be correct. Reproductions of Sheraton and Chippendale chairs and tables may now be found in all the large cities, and copies of the old-fashioned andirons and candlesticks are not difficult to obtain. In a modern home the severity of the Colonial period would not be enjoyed, but there is so much refinement in the designs of that time that we do well to follow them in a degree, at least.

BUYING A WASHSTAND

E. F. asks if walnut washstands are made now. In her letter she says: "I have looked in all of our furniture shops and do not find a single washstand in black walnut. I have had a present of an old-fashioned walnut bedstead, bureau and armchairs and would like to complete the set for my own bedroom. Can you give me some ideas?"

No black walnut furniture is made now, and the fine French walnut in Louis XV and Louis XVI periods would not accord, either in design or color, with our American type. A weathered oak in plain pattern would not look out of place with the present pieces in walnut. The open washstand in white iron, however, is suggested for this room as being more sanitary than a closed wooden one. One of these white ones, twenty-seven inches long, may be bought for seven dollars, and a smaller size for less. As so many homes have a bathroom for each bedroom, there is not much interest in making up handsome washstands. When a mahogany stand is necessary and can not be found in the shops, a dressing table of this wood may have the mirror taken off and a brass rod for holding a splash inserted in the back. This was successful done lately by a professional house decorator.

SUMMER COVERS FOR FURNITURE

"How can I make my city parlor look cool and attractive during the hot weather? My gray linen furniture covers are about used up, and I would like to replace them with something different this season if I hear from your home furnishing department in time. Some members of my family dislike the bare appearance of the windows with the fine lace curtains removed for the summer. Would it be worth while to substitute another and cheaper set of curtains for only a few months? Please sug-



CREX
Grass Carpets and Rugs
TRADE MARK

**Summer Time
Porch Time**

This is the time people live outdoors, so to speak, the home is turned inside out, the porches are furnished with rockers, settees, decorative plants, etc., and upon the floors are spread the **fresh, clean and sanitary**

Crex Grass Rugs

giving that cool and inviting atmosphere that affords solid comfort even in the most sultry days.

This same air of coolness and restfulness which prevails on the porch can be enjoyed throughout the entire house by covering your floors with **CREX CARPETS or RUGS**.

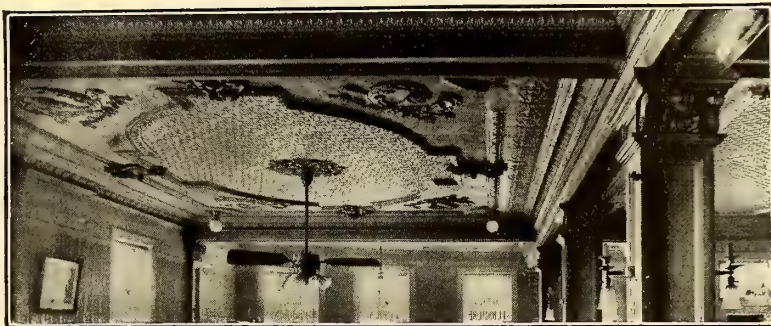
CARPETS—Plain and striped effects, in all widths.

RUGS—All sizes, in a large variety of designs.

AVOID IMITATIONS: Look for the **CREX** trade mark

For sale at all up-to-date Department, Furniture and Carpet Stores.

AMERICAN GRASS TWINE COMPANY, - 377 Broadway, New York City



Solve the Problem of effective Ceiling and Wall Decoration by installing

Berger's Handsome Artistic Embossed Steel Ceilings

DESIGNS FOR ALL SIZES AND STYLES OF ROOMS

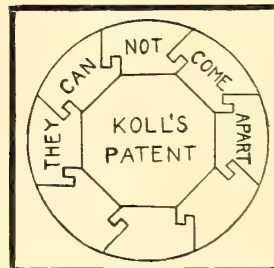
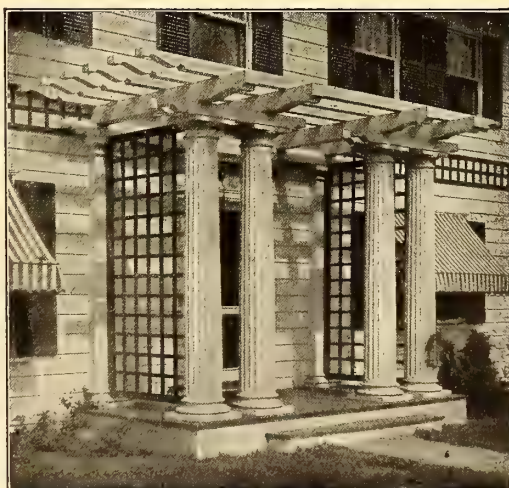
Berger's "CLASSIK" is the largest and most complete line of artistic STEEL Ceilings in existence. It covers the field so completely you can get just what is required, whether bold, massive or elaborate designs, or something comparatively simple. Before buying a Steel Ceiling of any description, whether for business or residence structure, get full details of Berger's "CLASSIK."

ASK FOR CATALOG D-64

Send sketch and dimensions of rooms for free suggestions and exhibition drawings

THE BERGER MFG. CO. :: CANTON, OHIO

New York Philadelphia Boston Chicago St. Louis Minneapolis San Francisco Atlanta



KOLL'S PATENT Lock-Joint Columns

Suitable for Pergolas, Porches or Interior Use are made exclusively by

HARTMANN-SANDERS COMPANY

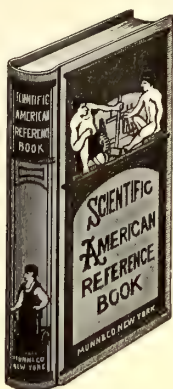
Elston and Webster Avenues, CHICAGO, ILL.

Eastern Office, 1123 Broadway, NEW YORK

Send for Catalogue A-19 of Columns, or A-29 of Sun-dials, Pedestals, etc.

SCIENTIFIC AMERICAN REFERENCE BOOK

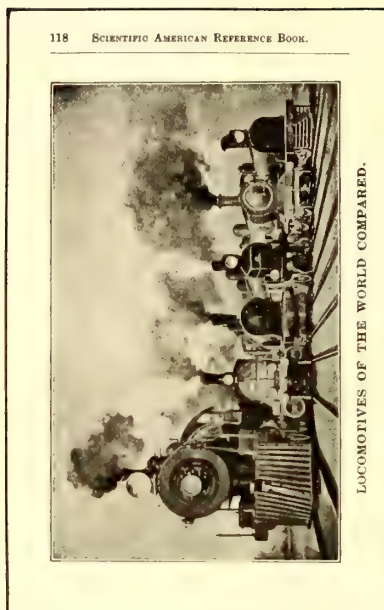
12mo; 516 pages; illustrated; 6 colored plates. Price \$1.50, postpaid



The result of the queries of three generations of readers and correspondents is crystallized in this book, which has been in course of preparation for months. It is indispensable to every family and business man. It deals with matters of interest to everybody. The book contains 50,000 facts, and is much more complete and more exhaustive than anything of the kind which has ever been attempted.

The "Scientific American Reference Book" has been compiled after gauging the known wants of thousands. It has been re-

vised by eminent statisticians. Information has been drawn from over one ton of Government reports alone. It is a book for everyday reference—more useful than an encyclopedia, because you will find what you want in an instant in a more condensed form. The chapter relating to patents, trademarks and copyrights is a thorough one and aims to give inventors proper legal aid. The chapter on manufactures deals with most interesting figures, admirably presented for reference. The chapter dealing with Mechanical Movements contains nearly three hundred illustrations, and they are more reliable than those published in any other book—they are operative. Weights and measures occupy a considerable section of the book, and are indispensable for purposes of reference. Sixty years of experience alone have made it possible for the publishers of the Scientific American to present to the purchasers of this book a remarkable aggregation of information. The very wide range of topics covered in the "Scientific American Reference Book" may be inferred by examining the table of contents sent on request. The first edition of this work is 10,000 copies. The readers of the Scientific American are requested to send in their orders promptly. Remit \$1.50, and the book will be promptly mailed. Send to-day.



REDUCED FACSIMILE PAGE 118.

MUNN & CO., Publishers
Scientific American Office
361 Broadway, New York City

gest also some light-weight rugs to take the place of my heavy Oriental ones."

The slip covers of gray, white and buff linen are being superseded, in rooms that are occupied during the summer, by pretty chintzes, cretonnes, printed linens and taffetas. These are made up without binding the seams with braid, as formerly done. If there are heavy portieres and lined window curtains, these are left hanging but covered with slips of the same material, but made into loose bags.

If very fine wood is exposed on the frames of the chairs and sofas, a cretonne with a swan's down backing will prevent injury to the surface. The same kind of material may be made into covers for polished tables, leaving an edge six inches wide to hang over.

Of the many kinds of summer rugs, jute, cotton, grass, wood pulp and fiber, the last-named is probably the most satisfactory, and the neutral tones will be found more helpful in creating a cool-looking interior than bright red, blue, yellow or green.

By removing some of the heavier of the upholstered chairs, and using the Chinese rattan chairs instead, another means will be found for rendering the summer sitting-room pleasant.

In regard to the question about buying an extra set of curtains for the warm months, to take off the bare look of the windows when

the lace ones are stored away, this would be an excellent plan, and not expensive to carry out. An ecru fishnet may be bought from twenty cents a yard upward. By sewing this material to flat brass rings it will be easy to push it back in the extremely hot weather, and, on cooler days, to draw it across the glass to soften the light.

GARDEN WORK ABOUT THE HOME

(Continued from page 334)

will grow in shifting sands or survive the gales of wind and the salt spray.

One should preserve all the things which are growing on the place and disturb them as little as possible, because nothing can be more beautiful than the tangled masses of scrub oak, the bay-berry and cedar, beach grass and roses.

I have in mind a charming bungalow built just at the edge of the inmost dune at Amagansett. The dune rises steeply some eight feet above the arable land behind it, and then drops perhaps fifteen feet, in a long irregular slope to the salt meadow, over which the sand dunes are marching in an endless though unobserved procession. On this side is the shore drive, or highway, and consequently the front of the house.

The bungalow is in two stories, but only one is seen in front. The first story is on the

level of the good meadow at the back, and contains the kitchen and servants' quarters. On this level is the drive to the house, and the service court, etc. This side of the place is more civilized and more conventional, with its lawns, garden and play grounds. The second story is just on a level with the top of the dune, and the piazza barely touches it.

The dune is now nicely covered with beach grass, small cedars, golden rod, scrub oaks, poison ivy, and other common plants.

No paths lead through it, as it was not considered safe to give any excuse to people to walk through. Instead of paths we have built a picturesque plank walk in the Japanese manner, supported on stakes driven in the sand. This walk is about three feet from the ground, and leads from the piazza to the shore road. As one walks along the bridge, as it is now called, one sees all the plants of this wild garden from above, and they are a wonderfully beautiful foreground for the view from the piazza.

At one end of this dune there is a peak higher than the rest which must be protected with the utmost care or it will be blown away. If this happens its picturesque effect will be a severe loss. Little can be done to save it except to leave it absolutely alone.

The further treatment of this wild space in front of the house will be a constant endeavor to increase its beauty and variety without destroying its character. This can be done by planting other native shrubs and plants, by cutting out those which grow too fast or too strongly and by the introduction of plants which are not native but which seem likely to grow well and promise to be in keeping with their surroundings.

Back of the dune where there was formerly a potato field the planting will be of similar character, though not strictly indigenous. Pitch pines (*Pinus rigida*) and red cedars will be planted for the beauty of their wind-tossed tops and knarled branches.

Oaks will be planted in the hope of their struggling above the line of the dune, but only in the following varieties:

Quercus digitata—Spanish oak.

Q. nana—scrub oak.

Q. Marylandica—black Jack.

Q. minor—post oak.

Q. Prinoides—scrub chestnut oak.

Of other trees the Ailanthus and Oriental plane (*Platanus orientalis*) will be given a trial.

Among other shrubs which will be planted are the following: Bay-berry, *Myrica cerifera*; with shiny fragrant leaves and waxy berries.

Beach plum, *Prunus maritima*, which has beautiful pink or white blossoms and wine colored fruit which makes a delicious jelly.

Wild roses, such as *Rosa humilis*, *R. Carolina*, *R. nitida*, *R. setigera*, *R. multiflora*, all beautiful and giving a long season of bloom.

The Tamarisk, *Tamarix gallica*, with its feathery foliage and mist of pink flowers will be used, as it does not mind salt spray.

The groundsel bush, *Baccharis halimifolia*, which will grow on the salt marsh, will be used in quantity.

Among the tangled masses many lilies will be planted—all will be tried in the hope of finding many that will increase.

For covering bare spots of sand we shall try heather, *Calluna vulgaris*, the red bearberry, *Arctostaphylos Uva-Ursi*, the most beautiful trailing plant that grows, and two *Hudsonias*.

All of these things and many more can be obtained from collectors in large quantities and at low prices.

If they are properly cared for the luxuriance of their growth will be as surprising as their beautiful effect, and at any rate it will be a comfort to see a place on Long Island without a hydrangea or a crimson rambler.



"WILWEAR"
NIAGARA LAWN SPRAY

A new Spray for lawn and garden. Made in "Wilwear" fashion, nickel-plated on heavy brass. No loose or movable parts to get lost or out of order. Stamped into three angles to produce "Niagara Spray," so fine it will not wash dirt or injure flower beds. Great grass saver from effects of sun. Direct for \$1.00 if dealer cannot supply. Catalog of "Wilwear" metal goods and bathroom fittings upon request. NOVELTY MFG. CO., 215 Maple St., WATERBURY, CONN.

Take off your Hat to the
Write for Circulars
and Prices to
F. E. MYERS & BRO.
Ashland, Ohio

THE PUMP THAT **PUMPS** **HAY** **TOOLS**
BARN DOOR
HANGERS
MAY RACK
CLAMPS

Lawrence Park, Westchester County
Fifteen Miles from New York

For Sale or Rent, Colonial house, 12 rooms, 3 baths, servants' dining room, large laundry, glass enclosed piazza, electric lights, open fireplaces, good heating system. 1/2 acre of high land within ten minutes walk of Bronxville station. The property is located in one of the best residential districts of Westchester County.

Cornelius B. Fish & Son, Inc.

Westchester County Properties

527 Fifth Avenue

New York

BLACKBERRIES

By E. P. Powell

AUGUST is memorable for its blackberries. No recollection is more pleasurable to me than going blackberrying with my dog. In those old times one-fourth of the land was wild pasture, with either raspberries or blackberries filling up a good deal of the space, and not seldom a patch of delicious strawberries. We used to go and pick these berries wherever we pleased, and frequently we went out as a whole neighborhood, with the town minister in the lead. Even now there are some wonderful glens in New England and New York where one can find pails full of the old-fashioned fruit. In the Southwest we come on the running blackberry, or dewberry, a superb fruit, clambering over the rocks and bushes, and sometimes turning a rail fence into a wall of fruit. Once in a while I come on a basket of these old wild berries in market, and I know just one place where I can fill my own basket. Nothing better can be found for pies and puddings, although I confess that in a bowl of milk I like better the Eldorado and the King Phillip. The value of this berry is not only for eating out of hand, and for canning, but it surpasses all others in good old-fashioned cooking. My mother's blackberry pies stand out sublimely in my memory. They were among the really great creations of genius. Strawberries should go with cream; raspberries make marvelous short-cakes; blackberries make the grandest pies that even New England genius could devise. I pick out the black raspberry as a distinct fruit, never to be picked but when dead ripe, and then to be eaten liberally in bowls of Jersey milk and homemade bread.

Cultivated varieties were at first rejected from our gardens, because they proved unable to stand anything like zero weather. Among the first to come was New Rochelle, and this froze out easily. Wilson and Wilson Jr. proved to be about equally good berries, but about equally unfitted for the colder States. All these varieties have been thrown out, as a rule, north of New York City. The New Rochelle was called Lawton sometimes, and many of the berries that now are placed on



THE "GLOBE"
is built on honor
and sold on merit

The "Globe" Ventilator

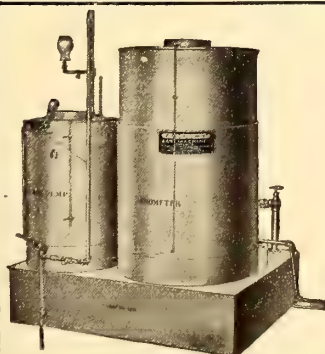
In Galvanized Iron, Brass and Copper
Also with Glass Tops for Skylight

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. *Smoky Chimneys Cured.*

"GLOBE VENTILATED RIDGING"

Manufactured by

Globe Ventilator Company :: Troy, N. Y.



GAS FOR COUNTRY HOMES

Clubs, hotels, churches, laboratories. **Economy Gas Machine** gives a clear, steady, brilliant light and supplies gas for cooking, water heating, etc. Cheaper, cleaner and more satisfactory than acetylene, kerosene or electric light.

Economy Gas Machine

Automatically generates gas as consumed. None stored, so no danger. Self operating. Lighted the same as electric light, but without batteries. Eleven years success proves its merit. Write for booklet "LIGHT."

ECONOMY GAS MACHINE COMPANY

Stationary Gas Engines for Every Purpose

437 MAIN STREET EAST,

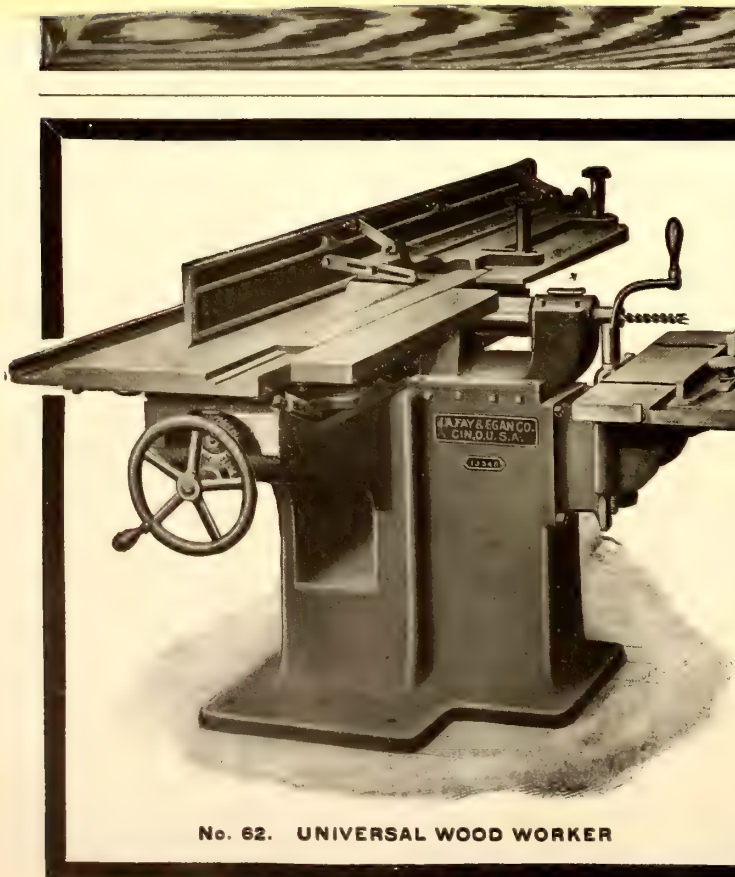
ROCHESTER, N. Y.

the market go by that name. The dealers are not expected to know the difference between half a dozen berries that look something alike; and so many people think the Lawton is still in cultivation. The Kittatinny soon followed the Wilson, and although equally tender, it had the habit of sending up fall-bearing canes. Some very stout canes would live through the winter, and so we got more or less berries—of a splendid flavor, when dead ripe. The Kittatinny can still be grown in sheltered situations. The Erie was and is stoutly advertised, but it is utterly unfit for general planting. Unless climate and soil suit it, it becomes a ferocious stock, without fruit, and very hard to eradicate.

The Early Harvest is one of the best sorts among the older stock, and is very nearly hardy. It is an enormous bearer of medium-sized fruit. The Ancient Briton is still better, and entirely hardy. The Minnewaski is a large berry of fine quality, sweet and aromatic and juicy, but this, too, I have to relegate to the list of tender plants. I grew Ohmer for a while, because the berry is of fine flavor, although acid; but this also has to be set down as too tender. Rathbun is a late applicant for favor, but with me it is a sprawling affair, not entirely hardy, and therefore not worth the while. It roots at the tip, like a black raspberry. Where it will do its best, I presume it is a fine thing. The Snyder is the berry commonly grown for market. It is the oldest variety of the hardy sort. The berry is not the largest, at the best, but if you will give the Snyder a good footing in moist soil—not wet, only never dry—you will find a rich and fairly good sized berry that will take well in the market. Taylor is a vigorous-growing and very prolific sort, very popular for its fine flavor. It does not, however, grow erect like the Snyder. The Agawam is a thoroughly hardy berry of medium size, jet black and very sweet, and without a core—a really good berry, but not erect enough for field culture. The Wachusett Thornless very much resembles the Snyder in growth and general appearance; it is not quite thornless, but is absolutely hardy and gives a good crop in good soil.

I now come to a few very recent productions, and at the front of these I shall place the Eldorado. This variety has pretty nearly all the good qualities. It is absolutely hardy, and the yield of large jet black and high flavored berries is immense. It is also a good shipper. Right close after this I place my own berry the King Phillip—a seedling from the Snyder—erect growing, with yellow canes instead of the reddish hued cane of the Snyder. The berry averages a little larger than the Snyder, and takes better to all sorts of soil. It is in the hands of Mr. Crawford, of Cuyahoga Falls, Ohio, and will sometime be given to the public. It is absolutely hardy, standing twenty degrees below zero. It is also a good drought resister. The Kansas and the Illinois have recently been sent to me with strong commendations, and I have no reason to doubt that they are very valuable, but I have not yet got them through their test. The Iceberg, a white berry from Mr. Burbank, is simply a tolerably good fruit to grow for home use, but even for that purpose I question its value. I have thrown it out. The Blowers is another new claimant for favor, but I have not found it absolutely hardy. Perhaps my test is not conclusive, and I hope not, because it has some very high qualifications, in vigor and in the quality of the fruit. Mr. Blowers is a very skilful grower, and his berry is at least well worth the trying.

The blackberry likes a cool and moist situation, and does not object to some shade. The soil should be deep and enriched with composting, not with barnyard manure. I think that unfermented barnyard manure is in-



ARE YOU LOOKING FOR A MACHINE THAT WILL

plane out of wind, surface straight or tapering, rabbet door frames, rabbet and face inside blinds, joint, bevel, gain, chamfer, plow, make glue joints, square up bed posts, table legs, newels, raise panels, either square, bevel or ogee, stick beads, work circular mouldings, etc., rip, cross cut, tenon, bore, rout, rabbet, joint and bead window blinds, work edge mouldings, etc. If so, drop us a postal card, and we will send you a descriptive circular showing two views of our No. 62 Universal Wood Worker.

Write
209-229 WEST FRONT STREET
J. A. FAY & EGAN CO.
CINCINNATI, OHIO

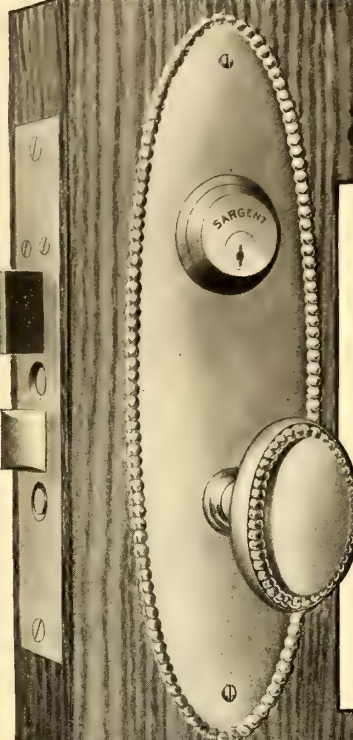
No. 62. UNIVERSAL WOOD WORKER

jurious to both the raspberry and the blackberry, and I have become convinced that it is provocative of root disease, possibly of rust. If planted on sandy soil, I should spread mulch very heavily among the canes. On the southern lines of blackberry growing I would use pine needles freely—to prevent the soil from ever becoming dry. The object of this mulch is not fertilization, but to equalize the temperature around the roots. You know that the wild blackberry grows in shady places and in wet glens, and the cultivated likes the same sort of soil and treatment. Bear in mind that there are two sorts of blackberry canes; those that stand sturdily erect, and these are fit for cultivating with the horse; while those that sprawl can only be grown by keeping them sharply trimmed. I have no use for the sprawling sorts, unless it be to grow in fences and stone heaps or over stumps. For this reason I would throw out Rathbun, and am compelled to drop out Agawam.

I choose those varieties which can be allowed to take care of themselves after the first two years, or mainly so. I grow the Snyder, the King Phillip and the Eldorado all summer without trimming. In October or during the winter I cut them back to about six or seven feet in height. Then I cut the passages open through which the horse can draw a cultivator. This cultivating is not absolutely necessary in a small home patch, that is, after the roots have absolutely filled up the ground. A well cultivated field for market berries should be cut back when two or three feet high, to induce the growth of laterals. In this case your rows must be narrow and the openings wide, so that the cultivator can be in constant use. I like the plan of growing blackberries, the very thorniest sort, around the borders of my gardens and orchards, where boys are liable to crawl through and devour. They are just as good as Growlers Teeth.

The blackberry is frequently attacked by rust, a fungoid disease that destroys large stools very quickly. I have never been able to understand why one plant will be taken and another left while in close proximity. I know no remedy but to dig up and burn. In 1907 I found that a large part of my blackberry canes had been assailed by a scale, and were practically dead. This mischief was done in 1906, and I had not suspected it. I cut out the affected canes and burned them, and eradicated the nuisance with strong kerosene emulsion. I am going to give AMERICAN HOMES AND GARDENS an article on these remedies, and will not stop now to describe the fight more fully. Borers are occasionally found in blackberries, but I think they do not generally make much trouble. The blackberry is easily multiplied, and if it is desirable to facilitate this multiplication, you can use root cutting. Make them in the fall and plant them in furrows like potatoes. You can plant them in the spring if the ground is in good condition. The blackberry is the only fruit we have left that will not give up uncivilized manners. Its thorns grow worse and worse under cultivation. Possibly by and by we shall get to a thornless sort of high value.

The dewberry is simply a running blackberry, and I do not grow it. I did give a pretty fair test to the Lucretia, but finally threw it out. I could not always get a good crop, even after covering the plants heavily through the winter, and tying them to trellises or stakes. In Florida I grow the dewberry with success. I think it can be recommended for any section where it will not kill back in the winter. The berries are of enormous size and two weeks earlier than the common sorts of blackberries. The Austin is another variety that is peculiarly adapted to the Southwest. On the whole, notwithstanding its thorns, we have few fruits that do more to make home pleasant than the blackberry.



Hardware as a Decorative Feature

When selecting the hardware trimmings, remember that their importance as a Decorative Feature must always be borne in mind, and special care exercised to obtain the most artistic effect.

Your own discretion and your architect's experience should dictate one of the many beautiful patterns of

Sargent's Artistic Hardware

Designed in wide variety to harmonize perfectly with any chosen style of architecture or finish and give long wear and absolute satisfaction in every case. Send for a copy of a valuable little book prepared by us at considerable expense:

Sargent's Book of Designs—Free

Shows the wonderful decorative possibilities of hardware. Tells about the Easy Spring Principle of Sargent's Locks and is replete with suggestions to home builders. Write for it to-day.

The *Colonial Book*—showing various fittings along Colonial lines—also free.

SARGENT & CO., 156 Leonard St., New York.



Overlooking Lake Champlain

Just placed on the market—beautiful residence occupying the most sightly location in Burlington, Vermont. Has an unobstructed view of Lake Champlain and the Adirondacks for over fifty miles, with another view of the Green Mountains. Three-story-and-basement house, first story pressed brick. First and second floors are finely finished in quartered oak and other woods. Large finished basement contains well-equipped laundry; parlor, library, reception hall, dining-room, kitchen, etc., on first floor; six bedrooms and bath on second floor; two bedrooms, billiard hall, study and storerooms on third floor. House is supplied with gas and electricity. Property includes a fine brick stable and beautiful grounds. An ideal modern summer or all-the-year home, and a splendid value. Price, \$20,000. Address **O. S. Presbrey, Port Henry, N.Y.**



The expense and annoyance of painting will not recur every year or two if you use

DIXON'S SILICA-GRAPHITE PAINT

the "Proven Shield for Steel Work." Durability records in all climates; write for a few.

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.

516 Pages, 107 Engravings

NOW READY

Price, Four Dollars

Industrial Alcohol

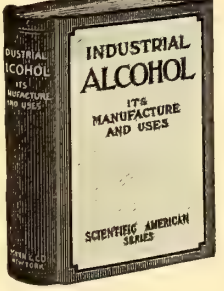
ITS MANUFACTURE AND USES

A Practical Treatise based on Dr. Max Maercker's "Introduction to Distillation" as revised by Drs. Delbrück and Lange

COMPRISING

Raw Materials, Malting, Mashing and Yeast Preparation, Fermentation, Distillation, Rectification and Purification of Alcohol, Alcoholometry, The Value and Significance of a Tax-Free Alcohol, Methods of Denaturing, Its Utilization for Light, Heat and Power Production, A Statistical Review and the United States Law

By **JOHN K. BRACHVOGEL, M.E.**



THE value and significance of a tax-free alcohol have been so widely discussed in the press and periodical literature of the entire country, that it is unnecessary to emphasize the great importance of the subject, especially to our agricultural and industrial interests. For years we have been far behind the nations of Europe in this regard, and in consequence our literature has been sadly lacking in authoritative works covering this phase of industrial activity. This book was designed with the especial purpose of filling this want, and it is the latest and most comprehensive work of its kind which has been published in this country.

Few in number are those to whom this book would not prove of interest and value. The farmer, the manufacturer, the power-producer, the householder, will all find that denatured alcohol is of such importance to them, that its use and introduction will effect savings and economies which were hitherto impossible of accomplishment.

FOR SALE AT ALL BOOKSTORES

Will You Aid the Fight for Children?



DAVID—HAPPY AT SEA BREEZE. THOUGH STRAPPED FLAT ON HIS BACK DAY AND NIGHT

4,500 of them in New York City and 60,000 in the United States are being crippled by tuberculosis of the bones and glands. Many who are now

In Pain and Helpless can be made Happy and Strong.

They are *innocent victims* of dark, unventilated tenement homes and of ignorance and neglect, which can and will be corrected by aroused public interest.

Despaired of 7 months ago, David will soon be put on his feet, like Smiling Joe, by the good care, good food, good cheer, sun and salt air at Sea Breeze Hospital.

In calling attention to these unnecessary cripples and in showing how to cure them

Sea Breeze Hospital

is rendering a *National Service*.

Prompt gifts are urgently needed to continue this work. Will you help give these little ones a *fighting chance*?

Can you not spare \$1, \$5 or \$10?

Sums large or small will be gratefully acknowledged if sent to R. S. MINTURN, *Treasurer*, Room 225, No. 105 East 22d Street, New York.

NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR

R. FULTON CUTTING, *President*

1843-1908.

Tasty Green Corn Dishes

It is so easy to have tasty green corn dishes at *all* seasons if you have

Kornlet

(The Heart of the Kernel)

Far different from canned corn—and far better. Kornlet is the creamy *pulp* of green sweet corn at the height of its milk, free from husks and hulls.

You have no idea how delicious young corn can be until you have tried Kornlet.

Look for the recipes on every wrapper.

Valuable book of recipes sent free on request.

If your grocer hasn't Kornlet, write us.

The Haserot Canneries Company
Cleveland, Ohio, U. S. A.



Van Dorn Iron Works Co.



PRISON, HOUSE & STABLE WORK

JOIST HANGERS
LAWN FURNITURE
FENCING, ETC.

CLEVELAND, OHIO



Standing Seam ROOF IRONS

CLINCH right through the standing seam of metal roofs. No rails are needed unless desired. We make a similar one for slate roofs.

SEND FOR CIRCULAR

BERGER BROS. CO.
PHILADELPHIA

Styles of Ornament

Exhibited in Designs and Arranged in Historical Order

A Handbook

for Architects, Designers, Artists, etc. Also for
Schools, Libraries and Private Study

By ALEX. SPELTZ

EXHIBITING the entire system of Ornament in all its different styles. 400 Plates of Illustrations, containing about 5000 Figures. With illustrated descriptive text. *Descriptive Circular sent on request.*

One Volume, 8vo, 656 pages. Bound in Cloth, \$6.70

MUNN & CO., 361 BROADWAY, NEW YORK CITY

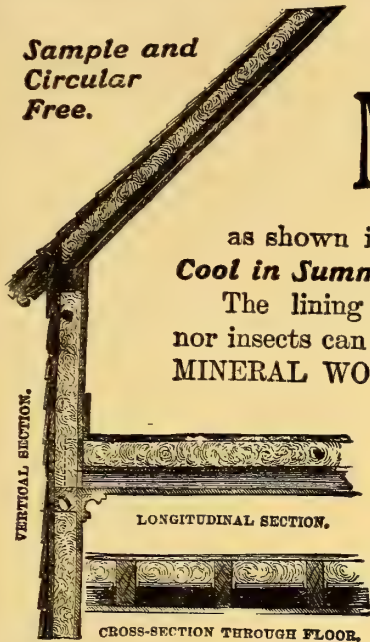
AMERICAN HOMES and GARDENS and SCIENTIFIC AMERICAN

will be sent to one address for

\$5.00

Regular Price... \$6.00

Sample and
Circular
Free.



A House Lined with Mineral Wool

as shown in these sections, is *Warm in Winter,
Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice,
nor insects can make their way through or live in it.
MINERAL WOOL checks the spread of fire and keeps
out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.
140 Cedar St., NEW YORK CITY.



At this time,
when Period
decoration
obtains to such
an extent, it is
a satisfaction
to know that
your lighting
fixtures not
only properly
light your
rooms, but also
are strictly in
accordance with the
history and tradition of
the period followed in
your other decorations.
We are thoroughly
equipped to design and

manufacture lighting fixtures strictly correct in line
and detail in all recognized styles
For the protection of our clients, our trade-mark will
be found on each and every piece of work made by us.

The Enos Company

MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
San Francisco, 1748 California Street
Toronto, 94 King Street, West
Pittsburg, G. P. Norton, Penn at 4th St.
Chicago, W. K. Cowan & Co., 203 Michigan Blvd.

NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & CO. BOSTON

Illustrated catalogues will be furnished on application



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER TILING

An Ideal Floor Covering for Court
Houses, Banking Institutions, Churches,
Hospitals, Libraries, Business Offices,
Restaurants, Vestibules, Elevators,
Kitchens, Laundries, Pantries, Bath-
rooms, Steamships and Floating Pro-
perty generally.

We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street

JUST PUBLISHED

THIRD EDITION OF

KIDDER'S Churches and Chapels

By F. E. KIDDER, Architect

This edition has been thoroughly revised by
the author, and enlarged, many new designs
being added, including several new designs for
Catholic churches. There are 120 illustrations in
the text and more than 50 full-page plates.
The book contains a large number of plans and
perspectives of churches of varying costs. Be-
sides this there is much concise and practical in-
formation relating to planning and seating;
details of Construction, Heating and Ventilation,
Acoustics, etc., making it in its present form

*The Best American Book on
Church Design and Construction*

One oblong quarto volume. Price, net, \$3.00

Munn & Co., 361 Broadway, New York City

?
**What
Do You Want
to Buy**
?

We can tell you where to buy anything you
want. Write us for the addresses of manu-
facturers in any line of business—Novelties,
Special Tools, Machinery, Equipments, new
patent *Labor-Saving Devices*.

MUNN & COMPANY

Publishers of Scientific American

361 BROADWAY, NEW YORK, U. S. A.



MELBA



HOMER



SCHUBERT-HEINK



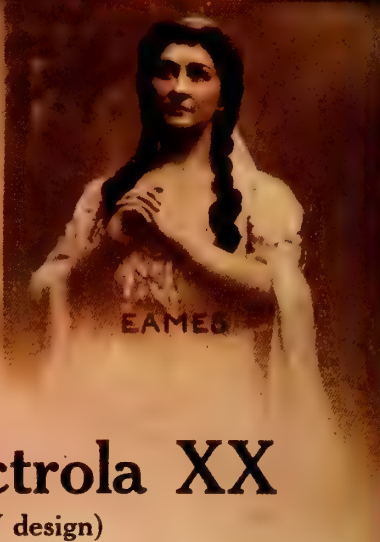
CARUSO



FARRAR



GALLE



EAMES

Victor-Victrola XX

(Louis XV design)

\$300

The horn and all moving parts are entirely concealed in a handsome mahogany cabinet, elaborately hand-carved and embellished with antique gold. The volume of tone is increased or diminished by opening or closing the small doors.

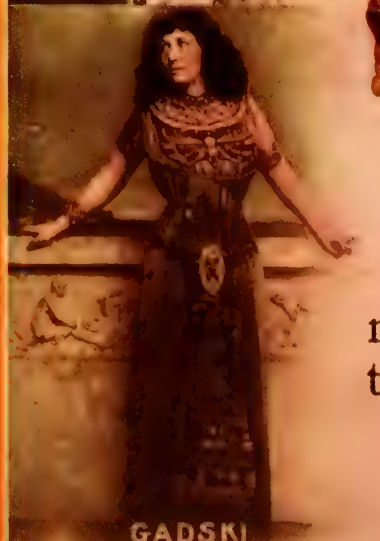
The cabinet contains albums for 150 records and drawer for accessories. All metal parts heavily gold-plated.

All the beautiful Victor music and entertainment, played in the richest, sweetest, most mellow tone ever heard—as pure and true as life itself.

See and hear the Victor-Victrola at any music-house or talking-machine merchant's. Write to us for descriptive catalogue.

Victor Talking Machine Co., Camden, N. J., U. S. A.

Berliner Gramophone Co., Montreal, Canadian Distributors



GADSKI



PLANÇON



SCOTTI



SEMBRICH



TETRAZZINI

To get best results, use only Victor Needles on Victor Records

FNA
7100
A512
Hort.

AMERICAN HOMES AND GARDENS



SEPTEMBER 1908

Vol. 5.

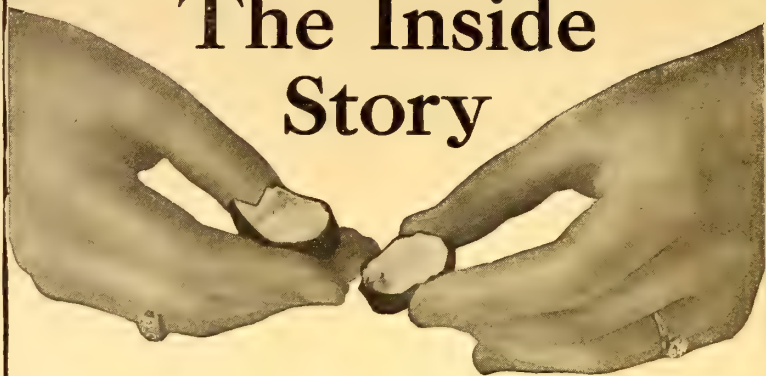
No 9

PRICE

MUNN & CO. PUBLISHERS

25 CENTS

The Inside Story



All confectionery looks about alike. You have to buy it and try it to know it.

Necco Sweets are so much better than ordinary confectionery that they are given a name and seal to identify them.

Among 500 different varieties are

Lenox Chocolates

the best you ever tasted—smooth, fine, dainty centers, crisp, thick, rich coats of best chocolate.

Wholesome and good—always the same—a reputation for quality to sustain. Ask for Necco Sweets—look for this seal.

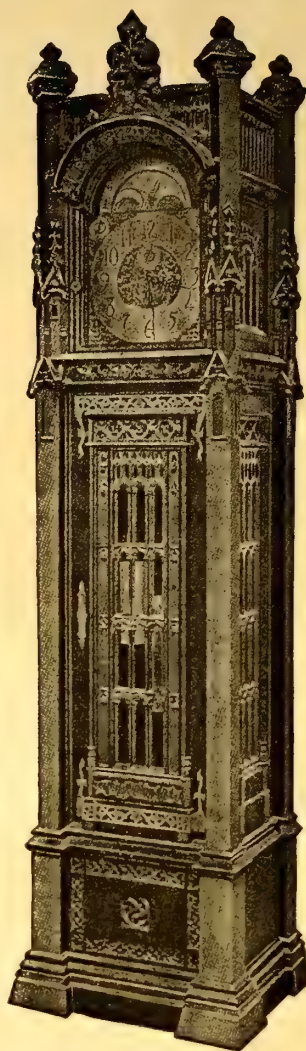


Necco Sweets are sold by all dealers who sell high grade goods. If your dealer does not have them, send us 25 cents for an attractive package of **Lenox Chocolates**; or, better still, order one of our special \$1.00 packages in a handsome art box. Either package sent postpaid.

For 15c. stamps or cash, we will mail, postpaid, to any address a beautiful 1909 Art Calendar, size 2 feet long by 10 inches high, lithographed in 14 colors, without advertising. An artistic decoration for mantel or wall, living room or den.

NEW ENGLAND CONFECTIONERY CO., BOSTON, MASS.

HALL CLOCKS



The most useful and ornamental article you can have in your home is a fine HALL CLOCK. We make many styles and kinds, with or without chimes.

The "Banjo," which is so popular for dining-room and library, is a most satisfactory clock.

We also make a full line of Marble Clocks and Regulators.

If your local dealer does not sell our line, send direct for new illustrated catalogue.

Waltham Clock Company
Waltham, Mass.



ONE OF A SET OF ELEVEN CHIP-PENDALE DINING-ROOM CHAIRS

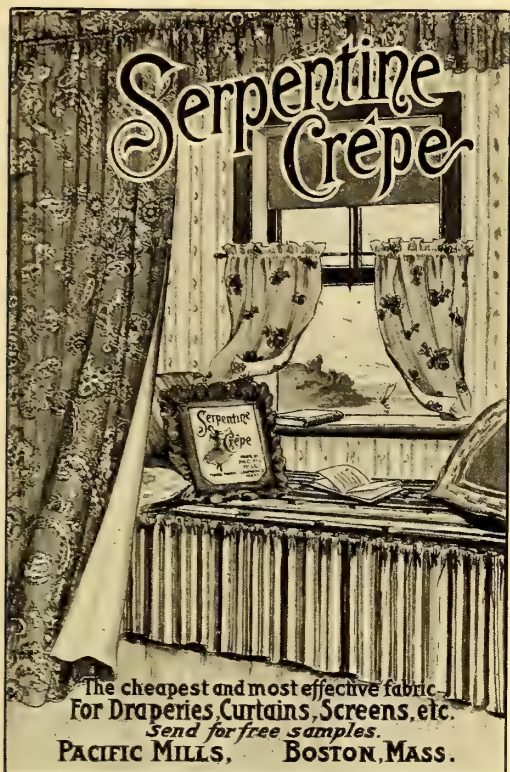
The A. J. Crawford Co.

We are specialists in furnishing and interior decorating in the English Periods.

The largest collection of English furniture in America.

Reproductions of our exclusive models at moderate prices.

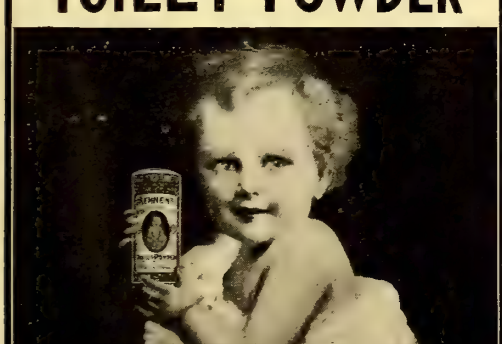
251-255 Fifth Avenue
New York



Serpentine Crepe

The cheapest and most effective fabric
For Draperies, Curtains, Screens, etc.
Send for free samples.
PACIFIC MILLS, BOSTON, MASS.

MENNEN'S
BORATED TALCUM
TOILET POWDER

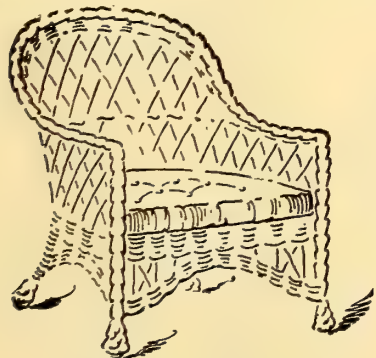


"Baby's Best Friend"
and Mamma's greatest comfort. Mennen's relieves and prevents Chafing, Sunburn, Prickly Heat and Chapping. For your protection the genuine is put up in non-refillable boxes—the "Box that Lox," with Mennen's face on top. Sold everywhere or by mail 25 cents. Sample free.

Try Mennen's Violet (Borated) Talcum Toilet Powder—It has the scent of Fresh-cut Parma Violets. Sample Free.

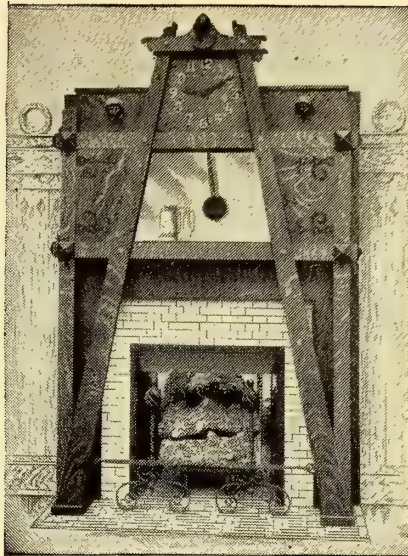
GERHARD MENNEN CO., Newark, N. J.
Mennen's Sen Yang Toilet Powder, Oriental Odor { No Samples
Mennen's Borated Skin Soap (blue wrapper) {

JOSEPH P. McHUGH & COMPANY
OF NEW YORK: ESTABLISHED 1878:
Will ship on receipt of \$5.00
(Money Order or N. Y. Draft)



THE BAR HARBOR CHAIR,
(Natural Willow, Floss Cushion)
Will mail for 25c. in Stamps
(to be allowed on first purchase)
THE PORTFOLIO OF 1000 SKETCHES,
illustrating Quaint and Unusual
Willow, Mission and Upholstered
FURNITURE OF ORIGINAL DESIGN.
2 W. 42d St., Opposite Library.
(SIGN OF THE "POPULAR SHOP.")

Artistic
Mantels



Our Catalogues contain 130 designs, including Mission, Colonial, White, Mahogany and Oak. Everything, from the very cheapest to the best.

Fireplace Hardware and Tiling of every description.

Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.
Unity Building Chicago, Ill. Clark Building Jacksonville, Fla.
Factory, Knoxville, Tenn.

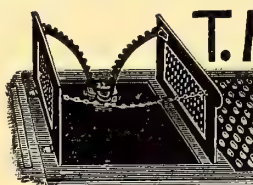
"Bulletin 26"
SENT FREE: "HOW TO KEEP AWAY CHICKEN-LICE AND MITES," by only ONE APPLICATION A YEAR
Successfully used upward of 30 years
Carbolineum Wood Preserving Co.
350 West Broadway, New York, N. Y.

MANLOVE AUTOMATIC GATE
can be attached to ordinary posts. Is opened and closed by any vehicle, including Automobiles. Machinery is all above ground. Simple, durable, inexpensive. Especially adapted for Summer Homes and Country Clubs.



MANLOVE GATE CO., 272 E. Huron St., Chicago

T.H. BROOKS & CO. CLEVELAND, O.
FLOOR & SIDEWALK LIGHTS.
OF EVERY DESCRIPTION.
SEND FOR CATALOGUE.



Cottage Designs

No. 1. Cottage Designs
Twenty-five designs, ranging in cost from \$600 to \$1,500

No. 2. Low Cost Houses
Upward of twenty-five designs, costing from \$750 to \$2,500

No. 3. Modern Dwellings
Twenty designs, at costs ranging from \$2,000 to \$5,000

No. 4. Suburban Homes
Twenty selected designs, costing from about \$3,000 upward

By far the most complete collection of plans ever brought out. Illustrated with full-page plates.

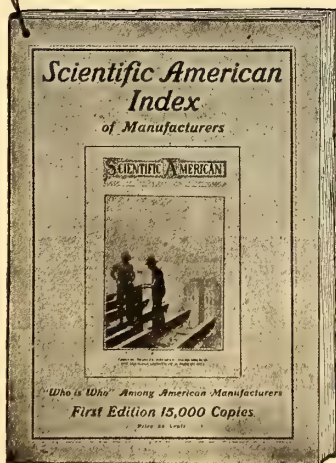
\$1 each. Sold separately

MUNN & COMPANY, PUBLISHERS
361 BROADWAY :: NEW YORK

**SCIENTIFIC AMERICAN INDEX
OF MANUFACTURERS**

NEWLY EDITED
EDITION OF 1908

64 PAGES 2500 ENTRIES FREE



SOME TEN YEARS AGO the publishers of the SCIENTIFIC AMERICAN issued an index of leading manufacturers. This book has proved so popular that the demand has warranted an entire new edition. The invaluable list tells where to buy almost any article, and buyers who fail to find the information they desire can have their wants specially looked up without charge, and if necessary we will advertise their wants in our inquiry column without expense. The first edition of this index is only 15,000 copies, so that early application is necessary.

MUNN & CO., Publishers Scientific American, 361 Broadway, New York

BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont

THE METROPOLITAN MAGAZINE

The Great Monthly for the American Home

SEPTEMBER

The FALL FICTION number offers some remarkable short stories, including "The Case of Alaboneur," by Arthur Colton; "The Comedy of the White Rat," by Robert A. Bachmann; "L'Etrangère," by F. H. Lancaster; "A Captain of Indigence," by Avery Abbott; "Excommunicated," by J. S. Thomson; and "Exit: The 'Honorable' Benson Hikes," by Jerome Uhle; also several unusually important articles, among them:

"THE NAVAL BATTLE OF THE FUTURE," by Hudson Maxim

"OSTEOPATHY," Part I, by E. M. Downing

"GOLD," by W. F. Fitzpatrick

15 Cents a Copy.
\$1.50 a Year.

Every direct purchase of five dollars' worth of R. H. Russell's books will entitle you to a year's subscription to this great magazine.

The Best Summer Reading

THE TIGER AND THE INSECT

By John Habberton. \$1.20

Illustrated by Walter Russell. If you have read "Helen's Babies" you won't be in danger of missing this long-awaited sequel to that famous and laughable book.

MORE WOLFVILLE STORIES—THE BLACK LION INN

By Alfred Henry Lewis. \$1.50

Illustrated by Frederic Remington. Stirring stories of adventure on the frontier, told by Westerners snowbound in an old inn.

THE WIND IN THE TREE

By The Duchess of Sutherland. \$1.50

An introduction, through a series of charming love adventures, to people and manners of the widest interest.

HER MAJESTY THE KING

By James Jeffrey Roche. \$1.50

Illustrated by Oliver Herford. Full of wit, originality, and satire.

CHARLES DANA GIBSON

on his recent return to this country, reiterated his statement that he would not return to the pen-and-ink work which made him famous. Mr. Russell has collected these drawings and offers seven volumes:

The Social Ladder, Americans, A Widow and Her Friends, The Education of Mr. Pipp, Sketches and Cartoons, Pictures of People, People of Dickens.

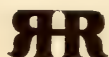
Printed on heavy plate paper and bound in Japan vellum. \$5.00 a volume.

He offers many other important art publications, including Frederic Remington's books and prints. Enriched editions of Rossetti, William Morris, Burne-Jones, and one of the wittiest satires ever penned, by James McNeill Whistler.

He will, upon request, send information about limited editions, signed personally by James McNeill Whistler, Charles Dana Gibson, Frederic Remington, and others.

Write for a list of other important publications.

R. H. RUSSELL, Publisher



Dept. A., 3 W. 29th St., New York

CRYSTAL Domino SUGAR



5lb Sealed Boxes Only!

BEST SUGAR FOR TEA AND COFFEE.

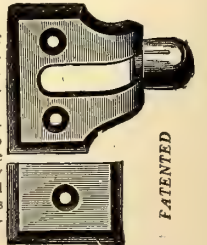
SPECIAL OFFER to Carpenters

BUILDERS AND OWNERS OF HOMES

IVES PATENT WINDOW VENTILATING LOCK.

A Safeguard for Ventilating Rooms. Pure Air, Good Health and Rest Assured.

To introduce this article. Four Ventilating Locks in Genuine Bronze, Brass or Antique Copper Finish will be mailed to any address prepaid for One Dollar. Will include a forty page Hardware Catalogue and Working Model to carpenters who wish the agency to canvass for its sale. Address



PATENTED

The H. B. Ives Co. NEW HAVEN, Conn., U.S.A.

BOOKS

RELATING TO

Architecture

Decoration

Furniture

Rugs

Ceramics, etc.

will be recommended and supplied by our well equipped Book Department.

MUNN & CO.

361 Broadway

NEW YORK

"To have your roof last—
Use Ruberoid Roofing first"

Roofing Facts

In every quarter of the globe
and in every kind of climate,
you'll find Ruberoid Roofing.

Why?

Ruberoid was the first
elastic, smooth surfaced, fire
and acid resisting roofing
made. Since it was placed
upon the market, there have
been numberless imitations.

Why?

Imitators try to copy only
the best or standard articles,
not the poor ones, and only a
roofing that possesses great
intrinsic merit, would be
ADOPTED BY THE WHOLE WORLD. If you are looking for a truly
serviceable roofing, one that is less costly and lasts longer than metal or
shingles, that is weather-proof, water-proof, and fire and acid-resisting,
write us about

RUBEROID ROOFING

(TRADE MARK REG. U. S. PAT. OFF.)

"The only permanent roofing with permanent colors"

It is made in Red, Brown, Green and Slate color, and is in use on prominent
buildings all over the world. It is the *only* roofing made, that has a record of
over 16 years of unvarying satisfactory service to its users.

For further particulars, write for Booklet 15

THE STANDARD PAINT COMPANY

Manufacturers of Ruberoid Roofing, Building and Sheathing Papers, etc.
100 William Street, New York

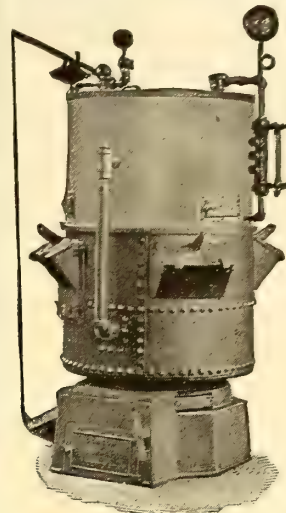
CHICAGO. ST. LOUIS, KANSAS CITY, BOSTON, PHILADELPHIA, NEW ORLEANS
THE STANDARD PAINT CO. OF CANADA, LTD.
Imperial Bank Bldg., Montreal
THE RUBEROID CO., LTD.
81-83 Knightbridge St., London, England
RUBEROID GESELLSCHAFT, m. b. H.
Hamburg and Berlin, Germany
COMPAGNIE FRANCAISE DU RUBEROID
20, Rue St. George, Paris, France



The STANDARD

GORTON

SIDE FEED BOILERS SIDE FEED



For Steam
and
Hot Water
Heating

Insure a
Warm
Building
Day
and Night in
Coldest
Weather

Send for
Catalog

GORTON & LIDGERWOOD CO.
96 LIBERTY STREET, NEW YORK
Old Colony Bldg., Chicago 77 Oliver St., Boston



THE NEW CEILING AND SIDE WALL ON THAT ROOM

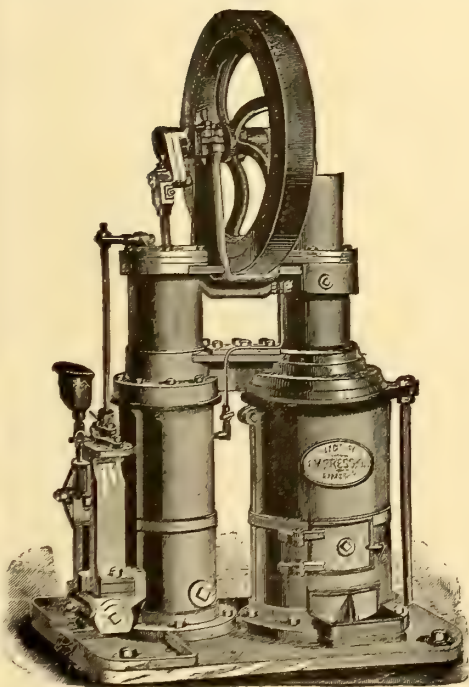
What shall it be? Steel, of course—because it is
the most **modern, sanitary** and **inexpensive**,
practically **lasts forever**.



Write to-day, giving dimensions and par-
ticulars. We will go into the matter with
you thoroughly.

"When it has the ELLER trade-mark,
it's the best in steel."

ELLER MFG. CO.
CANTON, OHIO



Improved Rider Hot Air Pumping Engine

— AND —

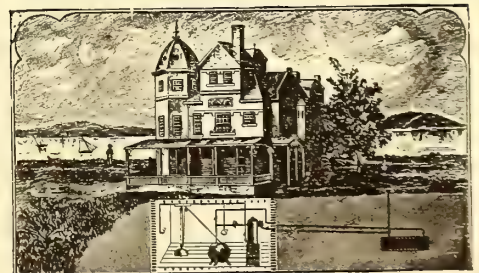
Improved Ericsson Hot Air Pumping Engine

PRICES GREATLY
REDUCED

Send for Catalog "E" to nearest office

Rider-Ericsson Engine Co.

39 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



Our remarkable recent inventions enable us to
offer the public an intensely brilliant

Smokeless Gas

at much less cost than city gas, better, safer and
cheaper than electricity, and costing but one-
fourth as much as acetylene.

Most Durable and Least Expensive
Apparatus to Maintain

in effective perpetual operation. Gives services of
lighting, cooking and heating. Fulltest satisfac-
tion guaranteed, and easy terms.

The Very Apparatus for Suburban
Homes, Institutions, Etc.

WE construct special apparatus also for fuel
gas for manufacturing, producing gas
equivalent to city gas at 50 cents per 1000
cubic feet, and made to respond to very large
demands; also for lighting towns, etc.

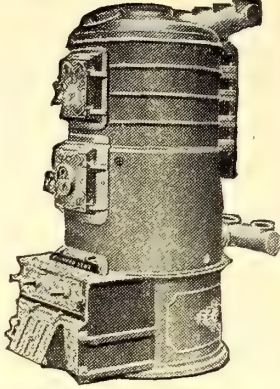
C. M. Kemp Mfg. Co., Baltimore, Md.

GURNEY HEATERS

GURNEY HEATERS, measured by quality, economy and efficiency, are the standard of value.

- ☐ They are made of the best materials and by the highest grade of mechanical and engineering skill; constructed under these conditions, they are unequalled in durability.
- ☐ There is also complete combustion of fuel and no waste of heat units, thus insuring great economy.
- ☐ The **GURNEY HEATER**, made either for hot water or steam, distributes the heat evenly and with a certainty that gives complete satisfaction to the user.
- ☐ Easily installed in old or new buildings they appeal to those who want to eliminate extra care and waste, or who want greatest value for amount expended.
- ☐ Send for illustrated catalogue.

GURNEY HEATER MFG. CO.
188-200 Franklin St., Corner Pearl St., BOSTON, MASS.
NEW YORK BRANCH, 12 East 42d Street




BUILDING A HOME. A Book of Fundamental Advice for the Layman About to Build. By H. W. Desmond and H. W. Frohne. New York: The Baker & Taylor Co. Pp. 222. Price, \$1.80.

The very accomplished editor of "The Architectural Record" and his associate have laid the building public under a distinct debt of gratitude by this admirable volume. It is "meaty" stuff, just the sort of practical advice every one needs who sets in to build, and abounds in suggestions and ideas that those who have already embarked on this momentous task may well assimilate and profit by. The text is comparatively brief, although presented in as many as seventeen chapters; but there is a distinct advantage in this since the authors start out with the thought of presenting definite ideas, and many of these are better stated briefly and in a concise way, than with the elaboration of treatment many writers are apt to affect.

The little page describes the book as "thoroughly illustrated," and it is truly that; the illustrations, taken chiefly from photographs, being very numerous, and, on the whole, admirably selected. Notwithstanding the purpose of this book is to heighten the layman's regard for architecture, the name of no architect is given to any of the illustrations, nor is their location or ownership cited. The two latter points may not be of especial importance, since it is much more important that a good house has been built somewhere by some one than to know where it is and who owns it. But architectural progress is not possible without the aid of the architect, and all the architectural progress noted and illustrated in this book has been accomplished in the actual work of architects. It would have been graceful to have recognized this debt of house betterment by indicating the authors of the various dwellings selected for illustration. Unless these architects had first built these houses this book could not have been produced in this way. Why, then, suppress them? Moreover, the number of architects who are turning out successful houses—houses successful in the widest use of the word—are by no means numerous, and they are clearly entitled to all possible credit for what they have achieved.

The book is one to be both read and studied, and either process will yield pleasure and profit. The authors attack their problem from the humble platform of common sense, and they tell their readers many things they ought to know. As types of recent successful houses their book will give equal pleasure, for the selection has been well done, and the illustration pages are crowded with interesting and beautiful structures and details. It is a pleasure to commend this book, which amply deserves the widest possible success.

FIRST PRINCIPLES OF SOIL FERTILITY. By Alfred Vivian. New York: Orange, Judd & Co. Pp. 265. Price, \$1.00 net.

Professor Vivian intends this book primarily for home reading, although also available as a text book for short courses. His purpose is to show not only the value of good soil, but how its value may be retained and increased. He deals, therefore, with the fundamental fact of all agriculture, and has produced a book that, while confessedly not exhaustive, is amply complete in all practical

Will You Aid the Fight for Children?



DAVID—HAPPY AT SEA BREEZE, THOUGH STRAPPED FLAT ON HIS BACK DAY AND NIGHT

4,500 of them in New York City and 60,000 in the United States are being crippled by tuberculosis of the bones and glands. Many who are now

In Pain and Helpless

can be made

Happy and Strong.

They are *innocent victims* of dark, unventilated tenement homes and of ignorance and neglect, which can and will be corrected by aroused public interest.

Despaired of 7 months ago, David will soon be put on his feet, like Smiling Joe, by the good care, good food, good cheer, sun and salt air at Sea Breeze Hospital.

In calling attention to these unnecessary cripples and in showing how to cure them

Sea Breeze Hospital

is rendering a *National Service*.

Prompt gifts are urgently needed to continue this work. Will you help give these little ones *a fighting chance*?

Can you not spare \$1, \$5 or \$10?

Sums large or small will be gratefully acknowledged if sent to R. S. MINTURN, Treasurer, Room 225, No. 105 East 22d Street, New York.

NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR

R. FULTON CUTTING, President

1843-1908.

aspects. The subject is treated with commendable brevity, but with sufficient detail to give every important aspect ample treatment. Although it makes its chief appeal to the practical agriculturist, the book is one that may well be read by any one interested in agriculture, or even in the basic facts of national prosperity. It deals, very obviously, with essential facts concerning the soil and the production of crops, with which every one should be familiar.

THE COMMUTER'S GARDEN RECORD. By Amy Carol Rand. New York: H. M. Caldwell Co.

This is a highly ornamental garden record prepared expressly for the garden amateur. Its pages are elaborately decorated and printed in tint, and include a table of planting, which gives useful data concerning the growing of ordinary garden plants, and provides space in which the flower lover may record her own record of how her seeds were raised and developed. A good deal of valuable help can be gained in keeping such a record, and the pleasant form in which it may be done in this book will doubtless induce many to fill out the blank spaces provided for this purpose.

A HOME ORCHARD

By E. P. Powell

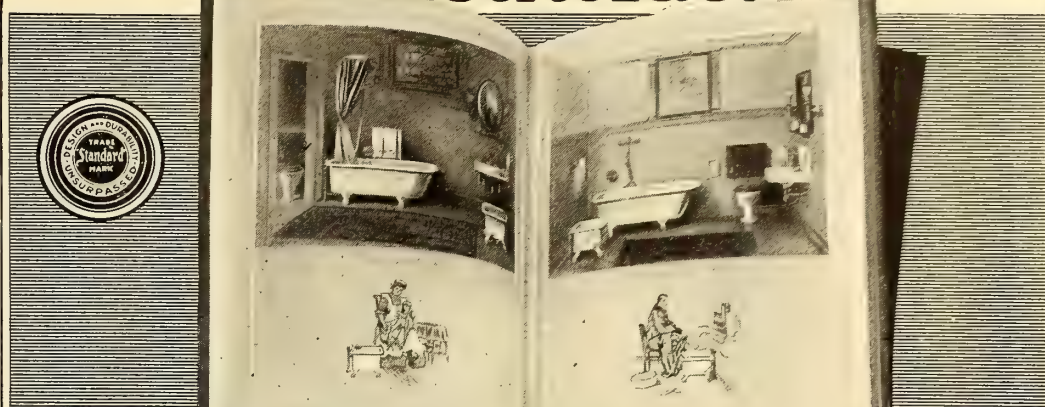
THE selection of trees and the proper planting of a good home orchard comes among the very first necessities of a country home. Every country home should grow every possible sort of fruit that the climate will permit, enough for home supply, and I think a surplus for market. In other words, no matter how well-to-do its occupants, the land should pay for its keep.

The arrangement of a small piece of ground may be such as easily to supply apples, pears, plums, cherries, as well as all sorts of berries. The first of these to come into bearing will be plums and cherries and berries. Apple trees should be planted at least forty feet apart. Five of these, each way, will take up a space of two hundred feet. Between the apples may be four rows of pears. This will leave, running in the other direction, wide spaces to be filled with plums and cherries. These may stand twelve feet apart—better fifteen. This leaves free cultivating in one direction. You have still room between the plums and cherries for raspberries, currants and gooseberries.

In selecting your trees invariably specify that you will receive nothing but stocky, well-grown trees—five to six feet for apples and pears, and four to five for plums and cherries. Slim, whip-stalk trees are generally pinched in the nursery, and will not recover for many years. I have had such trees stand for ten years without growth. If you receive such trees at all cut them close to the ground and make entirely new wood. About planting trees, there is no necessity for half the fussing that is frequently displayed. Simply plant in dry soil (that is, not sticky), set them about as deep as they were in the nursery, tramp the dirt firm, raise it a trifle above level, and then mulch with coal ashes or with some litter—whatever is convenient. If set in the fall stake the trees to prevent working about and loosening the soil.

As a rule trim your young trees very close. I leave no limbs at all on peaches and plums, and very short limbs on apples and pears. In all cases trim for low heading—especially in sandy soil and warm climate. The intent will be to shade the body of the tree, and the ground as well. Although this low-limbing may be raised somewhat as the trees develop, so as to accommodate cultivating, yet in a small home orchard there should be more use

This Book is FREE to every Householder



"Standard" MODERN BATH-ROOMS

Every man and every woman who wants to have a healthful, sanitary home should send at once for a copy of this free book. Send for it now and read it.

This is the modern bathroom book. It contains over 100 beautifully illustrated pages of information that every householder should have. You want a healthful, sanitary home. This book tells you how you can secure it. You want to know whether your present sanitary conditions are what they ought to be. This book tells you what you ought to know. If you are building or remodeling your home, it gives you a mass of information that will be invaluable to you in deciding on your sanitary arrangements. "Modern Bathrooms" completely solves your sanitary problem for you. It is the most instructive and beautiful book ever issued on this subject. And there is a copy—free—for every one.

"MODERN BATHROOMS"

gives actual photographs and describes in detail 16 different bathroom interiors ranging in price from \$69 to \$542. No matter how much or how little you can afford for your bathroom equipment, it tells you how you can make your bathroom absolutely healthful and sanitary, and how to get the best and most valuable equipment for the least possible money.

"MODERN BATHROOMS"

also contains many beautiful illustrations of modern kitchens and laundries. It tells exactly what fixture to use for every purpose; how much these fixtures cost, and how to plan, buy and arrange them in the most economical and attractive way. Every householder should have a copy of this book. It will pay you to send for and read it.

You cannot get this book from any publisher. You cannot buy it at any price. But you can secure it free from us by writing for it today. Enclose 6c. postage and send us the name of your architect and plumber if selected. Write now.

Address, Standard Sanitary Mfg. Co. Dept. 23, Pittsburgh, Pa., U. S. A.

Offices and Showrooms in New York: "Standard" Building, 35-37 West 31st Street.

Louisville: 325-329 West Main Street.
London, Eng.: 22 Holborn Viaduct, E. C.

Pittsburgh:
949 Penn Avenue.

New Orleans: Cor. Baronne & St. Joseph Sts.
Cleveland: 648-652 Huron Road, S. E.

of the digging fork and less of the plow and cultivator. The mulch should spread out wider as the tree grows higher and should be renewed each year. Its influence is not only to shade, but to equalize the temperature of the soil. This is aided still farther by sowing cover crops, that is, something like clover or cow peas, to remain on the ground during the winter and plow under in the spring. In a very small orchard spread litter or straw. In Florida, where I have my winter home, I also wrap each tree, when planted, with strong paper. This will remain on for a year and protect the bark from the hot sun. It is not at all a bad plan for your young trees, in the North also, to protect them from severe cold in the winter.

There is a marked difference in the growth of different varieties of apples and pears, as well as plums and cherries. Many of these are very compact, and are best used as "fillers"—that is, to grow between other trees while they are young. As the trees develop in size and come to full fruitage, these fillers can be cut out. Among apples some of the best for fillers are McIntosh, Wagner, Wealthy, Excelsior Crab, Summer Strawberry. Among the pears you may take for early bearing and

early removal Buffum, Seckel, and Belle Lucrative. A very large crab apple, called the Excelsior, makes us a splendid filler. Quinces may also be grown as fillers, as well as peaches—where these are hardy. In Florida I use not only peaches but figs.

An orchard expert knows that each year brings around a special difficulty of its own. This is rarely repeated two years in succession. The prime trouble of 1907 was an enormous development of aphidæ. These came just as the leaves were putting forth in May, and they continued until the young fruit was far enough developed to be seriously damaged. The foliage was literally covered in all the orchards of half a dozen States. I found them quite as abundant in Massachusetts and Connecticut as in New York. Most people said "merely lice," as if that minimized the difficulty. But these lice utterly destroy the power of the leaves to perform their natural functions. As a consequence the young fruit is unfed and pinched at the very outset. About the last of June a lady beetle larva appeared in almost infinite numbers, making quick work of the lice. The foliage recovered some of its strength during July, and we had a moderate crop of apples. This lice pest is one



First Impressions Are Best

The entrance to your home gives your caller the impression of dignity and hospitality when its construction is honest and its design is in good taste.

Morgan Doors

make most impressive entrances. Not only are they designed correctly according to the best ideas in doors, but they are built honestly from the best grade of hard wood and by workmen who know how to make good doors.

Morgan Doors are all stamped "Morgan" which is a guarantee—one we stand by—to replace any Morgan Door if it fails to give satisfaction. They are guaranteed not to crack, warp, or shrink.

Morgan Doors are made in all architectural styles, mission, chateau, empire, colonial, etc., and for inside or outside use.

"The Door Beautiful" Book Free Send us your name at once and you will receive a copy of this beautiful book which shows and describes the beauties of Morgan Doors.

Morgan Company, Dept. A, Oshkosh, Wis.

Distributed by Morgan Sash & Door Co., Chicago, Ill. Morgan Company Oshkosh, Wis. Morgan Company, Baltimore, Md

Science for the Evenings

The Heavens Without a Telescope

A MOVING PICTURE OF THE UNIVERSE

The Only Combination Sun, Moon, Star and Planet Map

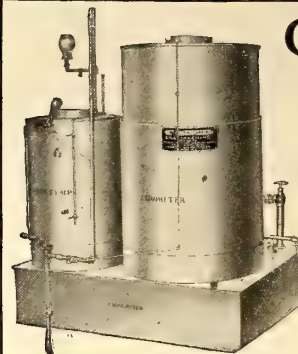


Every Stellar body accurately placed for any date for the next twenty years, in the Northern Hemisphere. Indorsed by leading scientists. Requires no technical knowledge to use it. Complete mastery of the heavenly bodies in a few hours.

Most graphic way of interesting all in the wonderful planetary system of the Universe. Chart is 15 inches square, with revolving disk map showing all stars. Made of heavy cardboard.

Special Offer. For a limited time only, we offer our readers this splendid Planisphere at a special reduced price of \$3.00, postpaid. Send for descriptive circular.

MUNN & COMPANY, 361 Broadway, New York



Gas for Country Homes

Clubs, Hotels, Churches, Laboratories.

ECONOMY GAS MACHINE gives a clear, steady, brilliant light and

supplies gas for cooking, water heating, etc. Cheaper, cleaner and more satisfactory than acetylene, kerosene or electric light.

ECONOMY GAS MACHINE

automatically generates gas as consumed. None stored, so no danger. Self operating. Lighted the same as electric light, but without batteries. Eleven years success proves its merit. Write for booklet "THE ECONOMY WAY."

ECONOMY GAS MACHINE COMPANY
Stationary Gas Engines for Every Purpose
437 EAST MAIN ST. ROCHESTER, N.Y.

"You do the designing—we'll make the rug."

Thread & Thrum Rugs

are different from all other rugs, as you can have the color scheme made to harmonize with your requirements. Wool or camel's hair weft, heavy and durable. If your dealer does not sell them, write for color card and price list to

Arnold, Constable & Co., Distributing Agents, New York
The Thread & Thrum Workshop, Auburn, N. Y.

We will send
A **AMERICAN HOMES & GARDENS**
and Scientific American
for one year to one address for
FIVE DOLLARS

Regular Price
Six Dollars

St. Louis, Mo. Baltimore, Md.
F. Weber & Co.
1125 Chestnut St., Philadelphia, Pa.
Architects' and Engineers' Supplies



"FABRIANO" Hand-Made Drawing Papers
Superior to any other hand-made paper
F. Weber & Co.'s Illustration Boards, Air Brushes
and Materials

Build with Concrete Blocks



Make them yourself and save half the cost. Experience unnecessary. A

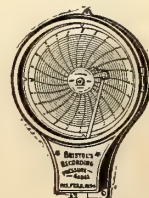
Pettyjohn Machine

and equipment for only

\$33.25

Every machine guaranteed. Sent on trial. Sand, water and cement only materials required. Buildings handsome and durable. Big money making blocks to sell. Beautiful booklet FREE.

THE PETTYJOHN CO., 617 N. Sixth St., Terre Haute, Ind.



BRISTOL'S RECORDING THERMOMETERS

make continuous records of atmospheric temperatures, and are designed for both indoor and outdoor temperatures. Send for new catalogues.

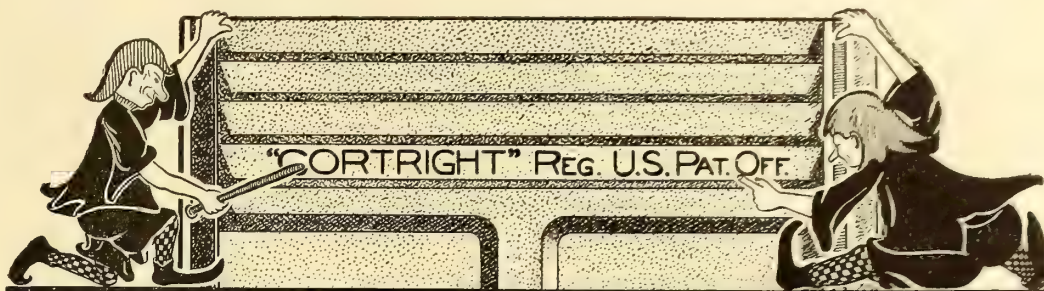
THE BRISTOL COMPANY, WATERBURY, CONN.
NEW YORK Branches CHICAGO

of the most difficult to deal with, because we can not get at them. The leaves are curled up at once, so that spray will not hit a very large number of the enemy. A curious result of the invasion was that ten times as many blossoms set fruit as would do so under normal conditions, resulting in bunches of crabbed apples, of no use to human beings. There was not enough growing force to select the more promising, and push off the poorest. Those who thinned their fruit succeeded in getting a marketable stock. This matter of thinning is always necessary, but in 1907 it was imperative.

Another feature of the year was the enormous development of the latest and worst apple enemy—the trypteta fly. This fly is infinitely worse than the codlin moth, because it works the whole summer through, laying its eggs at any time. The eggs are placed just under the surface of the apple, to hatch out into very minute larvæ, which gutter the apple, while on the surface it looks fairly sound. In some varieties these larvæ do not hatch out until winter, and in the cellar. In some other varieties they hatch very early, requiring a degree of heat. So we have a pest that has to be guarded against at every season of the year, while at the same time we are unable to fight it with spray. The particular reason for noticing this pest is the fact that it works most readily and rapidly in cloudy days, and in shady places. Keep your orchard well aerated and trimmed. Let the sun in as much as possible, and keep bushes out from under the trees. Constant cultivating is of service, and be sure that dropped apples are picked up and destroyed. This picking up must begin with the very earliest fruit, for there are no apples worse infected than the Early Bough and Golden Sweet. On sunny knolls apples are clean and bright, while in hollows, near by, the whole stock is ruined.

Another lesson of 1907 was the value of mulch for old trees as well as young. I am ashamed when I look back and note the treatment I have given to my old servants—the fifty-year-old trees. Having occasion to build a compost pile near my orchard, I placed it around a Northern Spy tree—of course, not allowing it to pile up about the bark. This tree began to increase its crops, and to bear annually. In the course of five years I have netted from it over one hundred dollars—counting in the cider apples it is much more than one hundred dollars. The fruit is high flavored and high colored. It means simply this, that an old apple tree needs feeding to do its best work, and it will continue to do this annually if the stimulant is sufficient. The “off year” in an orchard means generally the year when nature undertakes to recuperate the exhausted strength of the tree. Mulching can hardly be carried to an injurious extreme. Keep the exhausting suckers out of the tree, and feed it liberally, and see what returns you will get. The best material for mulch is any waste stuff you have—including coal ashes, spoiled hay or straw, autumn leaves, with an admixture of barnyard manure and house waste. This should be spread so as not to heat with any rapidity, while it retains the normal temperature below, around the roots.

I have been learning that there is something like immunity from insect pests on the part of some kinds of apples. I think an orchard could be made up of varieties that are almost safe from codlin moth, as well as free from fungoid diseases. I should begin with Red Astrachan, and follow it with Wealthy. The trees in both these cases are clean, and the apples come out so perfect that the waste is at a minimum. Of our winter sorts I find the old-fashioned Westfield Seekno further is about as clean as the orchard holds. This is a beautiful apple, and as it ripens in open



CORTRIGHT



BEWARE OF THE SUBSTITUTE

If you specify *Cortright Metal Shingles*, see that they are put on. We sound this note of warning because of the number of cheap imitations that are being sold as genuine *Cortright Shingles*. Every GENUINE *Cortright Shingle* is guaranteed to last as long as the building, and never need repairs—never need attention of any kind except an occasional coat of paint. And for your protection every shingle is

embossed “CORTRIGHT” Reg. U. S. Pat. Off. None genuine without it.

CORTRIGHT METAL ROOFING CO.

Philadelphia and Chicago



A GREENHOUSE SUGGESTION

Just for example, let us assume that you want a house for cut flowers, one for general plants and another with high enough sides for palms or fern trees; then this subject shown meets the conditions. It is ornamental, economically arranged to heat and work, and built of our iron-frame construction, insuring you a freedom from repairs. Let us talk it over with you.

HITCHINGS & COMPANY

1170 BROADWAY, NEW YORK

Complete Outfit

HAND AND FOOT-POWER MACHINERY

OUR No. 7 SCROLL SAW is warranted to be well made, of good material and workmanship, and to saw pine three inches thick at the rate of one foot a minute

SEND FOR CATALOGUE

W. F. & JOHN BARNES CO.

567 Ruby Street

Rockford, Ill.

Price
\$15.00



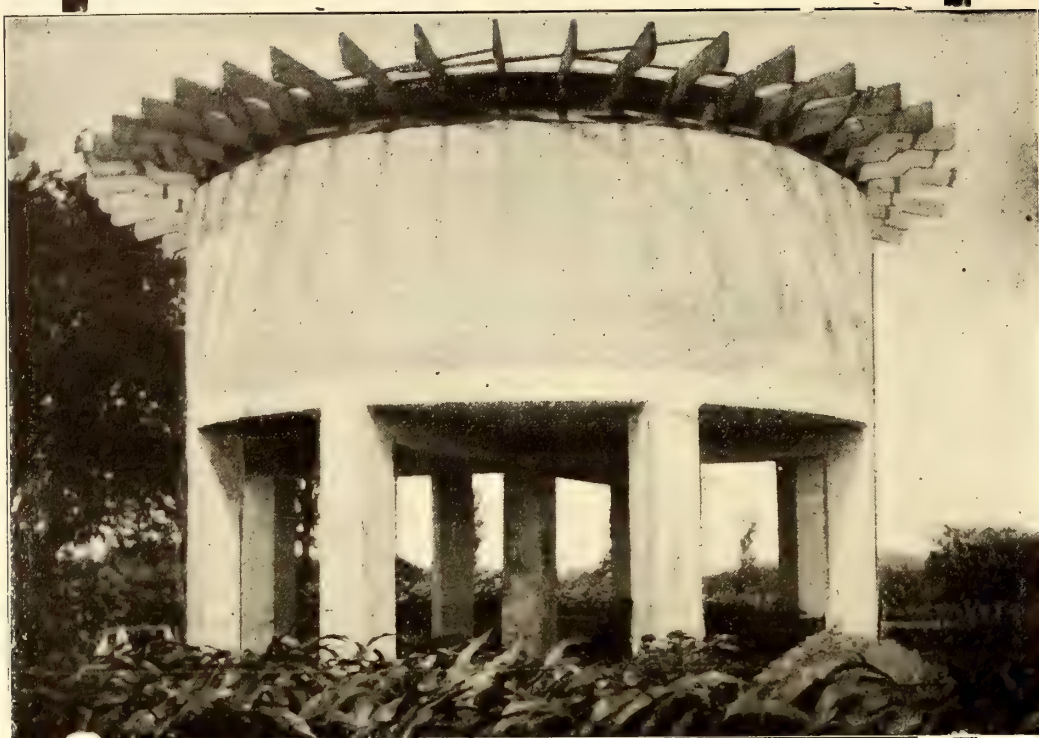
FLOORS

NOTE

CONTINUOUS

BOND

ROOFS



**A concrete tank erected on estate of Edmund Tatham,
Katonah, New York**

Frederick J. Sterner, Architect - - New York
De Lancey A. Cameron, Builder - - New York

Tank designed for storage supply of 15,000 gallons, built entirely of concrete reinforced with Clinton welded wire. Before roof was placed over tank, and during winter months, ice 10 inches thick formed on water stored therein. No cracks or leakage have developed.

Clinton Wire Cloth Company
CLINTON, MASS.

Cellings

FIREPROOFING DEPARTMENT
ALBERT OLIVER
1 MADISON AVE., NEW YORK

WASHINGTON: ROSSLYN SUPPLY CO., COLORADO BUILDING
SYRACUSE, N. Y.: PARAGON PLASTER CO.
ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
SAN FRANCISCO: L. A. MORRIS, 835 MONADNOCK BUILDING
SEATTLE: L. A. MORRIS, 909 ALASKA BUILDING

Partitions

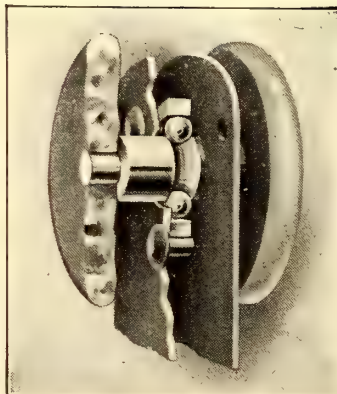
Lane's Trolley Parlor Door Hangers and Track

THE particularly distinguishing features of the Lane Trolley Door Hanger equipment are the excellence of the bearings and the lateral as well as vertical adjustment of the track.

Lane Trolley Hangers are made in both the rigid and adjustable pendant styles and with both single and double trucks. All are fitted with machined and hardened bearings as shown and in all the various details the quality of Lane products is maintained, thus virtually placing them in a class by themselves.

Send for Complete Catalog.

LANE BROTHERS COMPANY, (The Door Hanger)
Manufacturers
434-466 Prospect Street, Poughkeepsie, N. Y.



SECTION BALL BEARING IN LANE
TROLLEY HANGERS

tree is of fine quality. Hubbardston Nosuch gives a very good percentage of clean apples, and Baldwins in the open lot give me also a very fine percentage of marketable apples. The Spitzenburg is wonderfully loved by all sorts of insect pests; the Jonathan is another; and the Spy is very far from being immune. This matter should be studied carefully by those who intend to plant orchards.

A list of varieties for all sections of the country is impossible. A fairly good list for the apple belt, reaching from Georgia to the Lakes, would be, for summer, Yellow Transparent, Sherwood's Favorite (or Summer Strawberry), Red Astrachan—adding for table use Summer Rose. A good list for autumn would be Gravenstein, Duchess of Oldenburg, Strawberry, Jefferies, and Fameuse or Snow—adding for cooking and market the Shiawassie Beauty. For winter varieties you can hardly omit Baldwin, Spitzenburg, McIntosh Red, Northern Spy, Rhode Island Greening, Jonathan, and Wagener for a filler. The King apple should be added in sections favorable to its growth, and in the Hudson River Valley, and some other sections, the Newtown or Albemarle Pippin should have prominent place. This list for a very small place could be reduced to Red Astrachan and Sherwood's Favorite; Gravenstein and Dutchess; Baldwin, McIntosh and Northern Spy. I should like to add a list of indispensables for those who have become apple experts. This list should surely include Stuart's Golden, Scott's Red Winter, Wismer's Dessert, Walter Pease, Princess Louise, Delicious and McIntosh. For sweet apples the old Pound Sweet is growing in favor, and for late winter nothing is better than Danchy Sweet and Sconondo (if you can get it. Lady's Sweet is superb in some sections—not everywhere. The Mother apple should rank absolutely first for eating, if you get a good stock. Grimes' Golden and Jonathan stand foremost on light soils and in Colorado. I recently received a box from Stark Brothers, Missouri, containing samples of Delicious, Black Ben, and Stayman's Winesap. They were simply superb as to quality and beauty. Unfortunately we can not grow Stayman's Winesap, neither Jonathan, in the Eastern States, equal to such samples.

The rapid increase of suburbanism should lead to a rapid increase of small home orchards. A country home of five or ten acres will do well to give at least one acre to apples and pears. After berries no other crop will more surely reduce the annual outgoes and ultimately increase the income. From a sanitary standpoint and from an esthetic the argument is equally strong. You will find that you can not purchase as good fruit as you can raise. It is bad enough in the cities to sustain a diet without fruit, but in the country it is intolerable. If you have agreeable neighbors you can establish a sort of exchange system. One can grow all the choicer vegetables; another the berries; a third the plums and cherries; while a fourth supplies the apples and pears. However, a home of five acres ought, inside five years, to have a surplus for market. The orchard should bring in a nice income besides feeding the family and putting poetry into common work. Plant a dozen varieties for succession of apples, and a half dozen of pears, with enough plums, cherries and berry fruits, and you may snap your finger at the butcher.



Cattle Manure
in Bags Shredded or
Pulverized

Best and safest manure for florists and greenhouse use, absolutely pure, no waste, no danger. Write for circular and prices.

The Pulverized Manure Co.

21 Union Stock Yards, Chicago.



AMERICAN HOMES AND GARDENS



Price, 25 Cents. \$3.00 a Year

CONTENTS FOR SEPTEMBER, 1908

	PAGE
THE HOUSE OF A. C. BARTLETT, ESQ.: THE STUDIO END OF THE COURTYARD.....	336
MONTHLY COMMENT.....	338
NOTABLE AMERICAN HOMES—The House of A. C. Bartlett, Esq., Lake Geneva, Wisconsin	By Barr Ferree 339
RAFFIA IN THE NORMAL SCHOOL.....	By Mary H. Northend 346
THE ENDICOTT GARDEN AT DANVERS, MASSACHUSETTS.....	By Sarah May Londer 349
A FRENCH RHEA AND CASSOWARY FARM.....	By Jacques Boyer 352
A FLOCK OF HIGHLAND SHEEP HOMEWARD BOUND	354
A RESIDENTIAL PARK NEAR PHILADELPHIA—"Stoke Pogis," at Villanova, Pennsylvania.	By Ralph de Martin 356
THE BARK CABIN—Durable, Attractive and Inexpensive Summer Homes.	By Dorothy Sythe 367
"THE TERRACES"—The Summer Residence of Edward Vassallo Hartford, at Deal, New Jersey	By Francis Durando Nichols 369
CORRESPONDENCE:	
PROBLEMS IN HOME FURNISHING	By Alice M. Kellogg 374
GARDEN WORK ABOUT THE HOME	By Charles Downing Lay 374

A Home Orchard.
The Garden's Afterglow of Fall Flowers.
New Books.

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada, \$3.50 a year

Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



The House of A. C. Bartlett, Esq.: The Studio End of the Courtyard

AMERICAN HOMES AND GARDENS



The House of A. C. Bartlett, Esq.: "The Dog Trot," or Entrance to the House and Courtyard

Monthly Comment



THE prevailing quiet of the country is one of the permanent fictions of imaginary literature. It is a conception evolved in the city; it is an idea supported by city writers; it is maintained, in the present day, by the popular city cartoonist; in its origin it doubtless originated with a person who had never been in the country, or perhaps knew it alone as viewed from his car window. No one who has ever visited the country will, after a single day or night, venture to set forth any belief in its quietude. Dull it may be, but there is no such thing as silence in the country, nor is the quiet that one reads of in books to be found in any rural region whatsoever.

THE noises of the country are penetrating and far-reaching in their loudnesses. They extend through all hours of the day and night. If they begin at all, in the sense of starting afresh, it is at an early hour when every civilized man and woman would prefer to be sound asleep instead of being aroused to listen to a concert performed by a multitude of living creatures, each playing his own instrument in his own way, each intent on the particular sound he is making, and all with the utmost disregard of harmony and unified beauty. Barbaric music, which seems to be not music at all, but just sound, is doubtless a human survival of nature's unhuman music. And once started, the uproar continues without intermission so long as human ears are awake to hear it. Like the modern vaudeville, the performers vary with the hour. The sounds that strike the air at four A. M. are quite different from those that fill the ether at four P. M. Night brings no relief.

YET if the books are to be believed, there are people who like these things, who dote on every single sound uttered by animal life, who catalogue them and name them, who write books about them and even spring into fame with them because their account is the longest, most accurate and most convincing! There is, of course, no accounting for tastes; those who like strange sounds are entirely welcome to them. Those who do not mind noise are surely at liberty to seek it where they can find it. It is perhaps pleasant to know that the great world of nature is not voiceless, but is filled with so great a category of voices that the mere listing of them has as yet been too great for the span of a single human life. Yet the scientific aspects of country noises appeal to only a comparatively few. To most people the country is an exceedingly noisy place, full of noises that can not be suppressed and which have the uncomfortable quality of being always disturbing.

COUNTRY noises are, of course, quite different from city noises. They are so exceedingly different that the first person to describe country quiet failed to recognize the scientific truth that the distinguishing difference between city and country was not noise in the former and its absence in the latter, but that the country noises were so very much of the country that the ear trained to city uproars could not distinguish them as noise, but mistook them for agreeable sound. The observation, in its primitive form, was probably made by a visitor from the city who wrote it down immediately on his arrival in the country, telling of the delicious quiet and repose he had wandered into. Had he waited until the next day this pseudo-observation would never have been made, for there is little sleep in the country after the introductory

chorus begins at four A. M. or thereabouts. In fact, it need not be a chorus, for a single robin, performing on the lawn beneath your window, is much more effective in abolishing sleep than a dozen trolley cars.

FOR the lover of quiet the city is, of course, an atrociously noisy place. It abounds in noise of the most awful kind. Its noises are varied and ugly; they are painful and penetrating; they are lasting and obnoxious; and in most instances they are completely unnecessary and avoidable. This is what really hurts, for it is a frightful thing to have to listen to a noise that is not needed and which does not even do the person who is making it any good. The anti-noise societies that have sprung up in several large cities have not, as yet, touched the popular mind, but they are a very sure index of a better city life to come, a life in which there will be less noise and in which every unneeded sound will be suppressed.

MEANWHILE the country is defenseless. No crusade against country noises that seems now possible promises to bring relief to this real home of noise and uproar. Legislative enactments and local ordinances will not suppress rural noise save at the cost of the complete extinction of animal life. The price seems high, especially if the animal happens to be yours. Yet what is to be done? You live, it may be imagined, in a rural town. If the mosquitoes are not too friendly you are sitting on your porch enjoying the cool of the early evening. The hens have gone to sleep and the birds have stopped their singing. Occasionally a stray sweet note sounds in the far distance. But on the whole there is a quiet hush. The air is serene, the moon is shining brightly, peace seems at last to have settled on a noisy world. Then presently, and for no apparent reason, a dog begins to bark. Then other dogs begin to bark. They bark all around you. They bark close at hand and far away. If you are a statistician you presently calculate there must be a million dogs barking away as though their lives depended on it. Perhaps they do, but you really do not care so much now for dog life.

If the going to sleep is perilous with sound, the awakening is an agony. It begins long before you are ready to get up and hours before anything can be had to eat. Every possible sort of bird seems to have camped beneath your window. Charming and delicious as most of the sounds are, you are not then ready to enjoy them, and you simply don't. The family hens are a-cackling down in the barn yard; the roosters seem to have taken on a fresh lease of life and are yelling their heads off. Some of the larger live stock seems to be uncomfortable, and are giving vent to strange and uncouth sounds. You think of Noah, and wonder what he did with his ears during his famous forty days. And then a strange and frightful noise rises high above everything else. It is a shriek and a squeak; it is high, loud, sharp and clear. It is not one noise, but several. It is a perfect cyclone of sound, and effectively banishes any thought of sleep. You arise to ascertain what strange and terrible creature can make so hideous an uproar. Surely some frightful beast has strayed into your yard. Yet all is peace without. There is no need for a gun. There is nothing to frighten you, although you have been mightily disturbed. Up the lane come a stately row of guinea fowl, lifting their heads to the newly risen sun, and crying aloud in very joy of life! Vowing their immediate destruction for the table, you prepare yourself for the quiet of town.

Notable American Homes

By Barr Ferree

The House of A. C. Bartlett, Esq., Lake Geneva, Wisconsin



IT IS easily within the memory of many men now living when a journey into the lands now comprising the State of Wisconsin was a grievous march into the untraveled wilderness. To-day—but the census reports will give the details, and the contemporary achievements of this great northwestern State need not here be rehearsed. Of this much we may be certain, that the liveliest of census documents would give no details of the splendid house built for Mr. A. C. Bartlett by Mr. Howard Van Doren Shaw, architect, of Chicago, who was fortunate to have associated with him Mr. Frederic Clay Bartlett, a mural painter of note, and himself an occupant of this extraordinarily interesting and beautiful dwelling.

The adjectives that one usually employs in describing houses of genuine interest fall to the commonplace before this poetic and charming residence. It is a house notable in every way; large in size, finely placed, beautifully gardenized, charmingly decorated in color, and withal so completely studied in its architecture as to make it one of the most beautiful and

most remarkable of recent American dwellings. Almost audaciously original in its architectural conception, it contains no incongruous elements, no one feature that is simply a "feature"; no one thing, in short, but has its own proper place in the whole decorative scheme.

All the arts that go to the making of a splendid home are here developed and combined in a thoroughly harmonious and delightful manner. The architectural parts, should they be divorced from their accessories, would be found ample and adequate in every way. The color treatment in the walls and trim, in the painted fountain of the court, in the wall paintings of the interior and in the furniture, all bear impress of the most delightful study and successful adaptation of ends to means. If sculpture in a modern sense is somewhat absent, there are sculptured ornaments at the entrance and in the court and upon the walls, so that this great sister art of architecture has its own special part to take in the final effect. As for the garden, never was a garden so intimately associated with the house, a garden to live in and which is lived in, and so closely identified with the house as to be an integral part of it. Here, then, are the great decorative arts developed in



The Spacious Courtyard Is the Heart and Soul of the House, a True Garden Room

completest harmony in the production of a single dwelling, a fact of itself of sufficient moment to lift this house out of the record of ordinary dwellings, and place it among the most successful and delightful of all American dwelling houses. One may, indeed, go a step further, and express the doubt whether, in any part of our broad land, there be a house which equals this in the ampleness of its artistic resources in construction and decoration.

Some of the essential conditions and requirements of the house should be set down by way of introduction. One need hardly be told that a large house was desired, and a house moreover adapted to the needs and requirements of a family of great artistic interests. Mr. Frederic Bartlett desired a studio separate from the main dwelling, but closely allied with it. These were the personal conditions the architect had to consider as the basis of his problem. The condition of

ponderous detail, that this is an Italian house, freely designed with much modification, mixed in with not a little German feeling and variety. This may all be true, but it is quite inconsequential beside the larger, more splendid fact, that here is a house designed for itself, and designed in every part as an individual work of architecture. This is a really wonderful thing in this group of buildings, that the architect has discarded the stock-in-trade of his art, cast out the colonnade and portico, banished the pergola save in strictly natural utilization as a feature of one of the buildings, thrown away the balustrade and window frame, ignored, in fine, the very things architects seem most to love or which they perhaps find the easiest to use; and then attacking his problem as an original one—as in truth it actually was—proceeded in his undertaking in a natural and orderly manner, using such ideas as his own study and experience with the historical styles had



The Lake Front Contains the Loggia and Two Great Bow Windows

environment entailed no difficulties. There was ample land at his disposal, quite densely wooded with deciduous trees, in which an opening toward the south afforded the most desirable outlook, and toward which the open side of the house was forthwith faced. The surrounding woodland forms an essential feature in the environment.

In designing the house the conventional was set to one side, although with a family of marked artistic interests the Italian, even as sometimes blatantly interpreted in the East, might seem to supply every necessary motif. The designer took the bolder and much more logical course, of studying his problem afresh from the ground up, producing a highly original resultant that met every existing requirement, and which was thoroughly successful and beautiful.

Stylists, whose first view of a building is apt to be accompanied with a rush to their dictionaries that its style and origin may be duly classified and labeled, as if nothing was so satisfactory as a catalogue, will doubtless tell us, with much

given him, and as his own indisputable genius permitted. And so, with much loving care for all that counts most in house designing, the building grew and grew, until to-day there stands beneath the Wisconsin woods as fair a house as America can show, beautiful to look upon, convenient to occupy, a veritable model of all the excellencies that help to make a house desirable.

It is a stucco house, gray in color, presenting the general external form of a vast rectangular structure. This without only, for the plan discloses the fact that it consists, in reality, of two main buildings connected with a gallery and loggia, while beyond, and at some distance from the main building, is the studio, an essential part of the house design, as we shall presently see, although completely separated from it. The house is approached from the north, and is entered by an archway on the east wing, to which the picturesque name of the "Dog Trot" has been given. There is enough without before passing beneath the arch to hold the attention for

quite some time, but this entrance is itself a keynote to the originality of the whole design. It is neither on a front nor in a center; it leads to no monumental room or stately apartment; it is a mere opening in the house wall, large, it is true, but a mere cutting, and marked and emphasized without by a curved hood supported on two massive beams. An iron gate has been placed within the arch since the photograph which accompanies this article was taken, a gate decorated with mimic deer, roses and other quaint devices. Call it German if you must, it is more important that it adds a real note of interest to this most interesting of entrances.

From the archway one may enter the house by a door on the left; but the visitor intent on sight seeing will more naturally pass beneath the inner arch, and thus on into the great inner court, the very heart and soul of the house. It is a spacious and splendid place, completely surrounded on the

formal garden of the usual type. The paths are bricked, and the borders everywhere set around with plants in pots and grotesque little beasts and images that seem very much at home in these delightful surroundings.

At the end opposite the house is the studio. The ground is higher here, and is retained within a plain wall, forming a terrace by two flights of steps, one on either side of a central mass of foliage and flowers. Straight up rises the studio wall, partly screening the skylight behind it. Three large round arches are cut in its main face, of which the mid-most is alone a window, while the end ones are deep niches, each with a pyramidal baytree within it. The wings are recessed at each side, with an overhanging pergola. Such are the essential parts of this art temple, which broods serenely above its floral base, with thick growing woods enshrining it on the three inner sides.



The Studio Is Built Above a Terrace, Banked with Plants and Shadowed by Forest Trees

three sides by the walls of the main building. These are themselves so ample as to form a very complete inclosure at the south end. The house ended, the court inclosure is continued with a wall on one side surmounted with a trellis and the other with an open trellis between massive square piers. The north end is inclosed with the studio, which completely fills it from side to side, and which is designed in a somewhat more formal and symmetrical manner than the other buildings of the group.

There is so much of interest here that one's attention is not readily held by any one part. The prevailing impression, however, is that of a flower garden, for such it truly is, with a central pool incurved at one end for the better placing of a rounded well-curb. In the four corners are flower beds, quite large enough to afford an ample beauty of bloom; indeed so spacious are the various parts that, were it not for the inclosing structures, the court would be ample enough for a

Not all of this will be apparent in a first glance, nor in many a succeeding one. There is much to see in this court, for every aspect has its own point of interest. Immediately before you, as you come into it, is the painted fountain on the opposite wall. It is done in color and gesso by Mr. Frederic Bartlett, and represents an Italian garden scene of, perhaps, the fifteenth century. It is sheltered beneath a copper roof, and below it is a stone bench with a potted bay tree on either side. What has such a painting to do with an American house of the twentieth century? Nothing at all; but it gives interest to this bit of wall, it is interesting in itself, agreeable in design and color, and immensely distinctive and interesting.

The painted fountain is the one really distinctive note of color in the court, yet there is much abundant color, much architectural color here. That the stucco of the house is gray has already been stated; and it should be added that the window frames are white, and the shutters blue-green. And



The Loggia Has Gray Plaster Walls and Floor of Red Tiles

on the blinds—to color them in time, with added beauty to the walls; bay trees and other handsome foliage plants are real notes of nature's own green, helpful, restful and essential in the general coloring. Nor should the gaily blooming window boxes in the second story be ignored; and, indeed, how could they, with their green leaves and bright flowers against the cool background of the house?

I need not stop to analyze each wall of the house as seen from the court; but one or two general characteristics may be mentioned, and some reference made to the south wall, which connects the two wings. Everywhere there is ample wall, wall unadorned and structural only. The windows are comparatively small, as small as windows in this latitude may be without keeping out the abundant sunlight needed in northern homes. In both these matters Mr. Shaw has undoubtedly followed Italian precedence, but it is the spirit he has borrowed, not the forms which we usually associate with Italian building. In the center of the south wall are three flat-topped window-doors; each beneath a horizontal lattice supported on brick piers, capped with stone; a tubbed bay tree on each side completes the floral and color schemes. The connecting wall is trellised, with frames rising to a fes-

everywhere there is foliage and flowers; vines upstarting against the blue trellises—for a bluer note is used here than

toonied circle, in which is a deer skull. There is a broad stretch of plain wall above this decorated base; then a flat



Painted Panels, White Walls and Walnut Trim Are the Material Features of the Dining-room

shelf, gaily decked with flowers, and a row of small windows, closely set against each other, side by side, without shutters. None of the windows in this wall have shutters, that feature being reserved for some of those on the lateral walls. A pleasant arrangement this, of deep individuality and agreeable variety, having no relation to anything else in the court, but a truly harmonious note in an absolutely harmonious interior.

Well may one pause in this beautiful and delightful place, so full of serenity, so richly dowered with beautiful ideas, so splendidly furnished with plants and shrubs, so restful and so charming! It is a true garden room, a veritable part of the house itself, yet with all the outdoor sense and beauty that belongs without. Inclosed, as it is, very largely with buildings, they do not shut it in and restrain it, but serve rather as a frame to the beautiful picture spread upon its center, and of which the sides are themselves so notable a part. One could linger here indefinitely, but the house within calls for viewing.

The fine note of simplicity which distinguishes all of the exterior structural parts forms the predominating keynote of the interior. The entrance hall, which is approached through a door opening on to the "Dog Trot," is white, white walls, white furniture, with bits of color decorations in blue-green tones. These



The Corridor in the Studio

are painted by Mr. Bartlett on the bare wall; a basket in one place, a festoon over a doorway; simple but effective, and



The Smaller Studio Is Chiefly Used for Small Work



A Beautiful and Delightful Place, Charmingly Planted and Decorated

the more so from the prevailing quietness of the whole, and the simplicity with which it is furnished.

You turn a corner, and presently you are in a long corridor which appropriately bears the name of the gallery. It opens on to the inner court, and is lighted by the three window-doors that forms the chief feature of the latter's south wall. On the opposite side similar windows open into the loggia. Reaching from wing to wing the gallery is a lengthy apartment and is treated, as it really is, as a connecting corridor between the two chief rooms of the house. At the far end is a fountain standing in the base of an arched niche, which has been painted by Mr. Bartlett with quaint birds and flowers in a delightfully archaic style that recalls the colorings and designs of the old-time samplers. The room is vaulted with a gentle curve, and at its base, and in narrow bands carried across it, are painted borders of vases, with garlands of fruits and flowers. The woodwork throughout is painted white, and in the deep "displays" of the windows, with borders of gray and red, are other quaint designs in harmony with the type chosen for the decorations.

It is but a step from the gallery to the loggia. Here is a broad, spacious apartment, brilliantly lighted by the three great round arched windows of the south front. The walls retain the natural gray color of the plaster, and great square red tiles form the floor. The ceiling is supported on beams of heavy dark oak, and the furniture is white oak and wicker.

Still another step and one stands on the terrace which forms the great feature of the house on this side. The front here calls for some description, as it is the only regular portion of the exterior, and is, in a sense, the real front or facade of the house. The plan is freely expressed in bringing forward the two wings in slight projection, leaving the central feature as a true connecting member. In the center of each end is a great rounded window, large enough to contain five separate windows of ample size. Architecturally devoid of ornamental features, these fine strong windows are among the most notable elements of the exterior.

The loggia itself is formed by three great archways, screened and arched without with trellis work; at the summit the trellises have basket form, painted blue-green, with a molded contents of fruit toned with old gold. The wall between, in its lower part, is covered with squared trellises, which are continued on the end walls, save for the rounded bay windows, and are finished at each corner on the side walls of the house. As for the second story, it offers a succession of regularly disposed windows, paired in the connecting wall, single in the end walls. Their shutters give a needed keynote of color, while the flatly sloping roof is without the occasional dormer that appears on the court side. The space below the house is filled with a spacious terrace

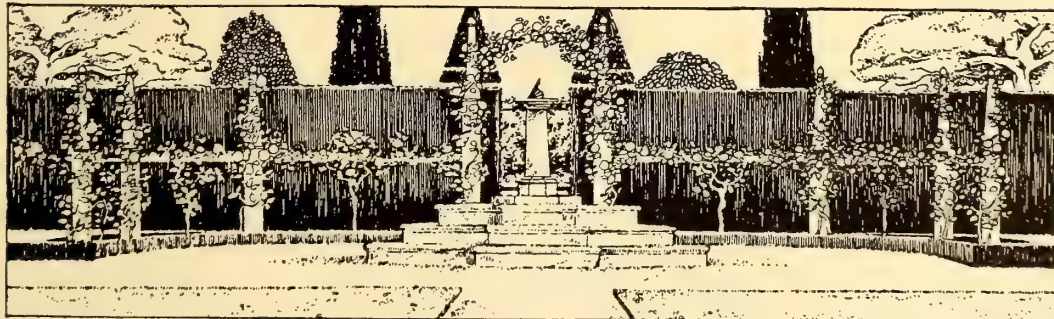
covered with grass. It is supported by a cemented wall that serves in a measure as the basement of the front. Then below the lower lawns and shrubbery are the waters of the lake, lying blue in its summer's circlet of green.

The dining-room is at the further end of the gallery as the house is entered. Both in this room, and in the library, which occupies a similar position on the right of the front, the commanding architectural feature is the great rounded window overlooking the lake. Its walls are white and its woodwork is walnut. Between the doors are panels, painted by Mr. Bartlett, with peacocks and motifs from the formal gardens of Italy; trellises, too, and a great central basket of flowers. The wood consoles below each panel are painted blue, and it is contemplated that all the furniture shall, in time, be of the same color. The ceiling is beamed, and from it depend tassel-like fixtures for the electric light. Catalogue the contents of this apartment as minutely as one may, the chief content of all must remain undescribed; for how can one describe sheer charm and beauty, or point out the innate quality that a room may have by reason of its proportions or its decorations and its overlook? Of this there is a-plenty, for it is a room to be seen, not viewed through mere words, or even understood from a photograph.

And the same is true of the library. The color here is brown, brown of soft and delicate shades and of quite some variety. The woodwork is brown oak, except in the bay, which, as in the dining-room, is completely white. The walls are of the color of champagne, the rug is tan, and the chintz of the curtains is ivory white with flowers and leaves in color. Here alone, of the chief rooms of the house, are some small pictures on the walls.

Opposite the door that leads to the entrance in the "Dog Trot" is another that admits one to the billiard room. Like all billiard rooms its furnishings are limited to the billiard table and a few chairs. Its walls are lined with stained wood to the ceiling. A great fireplace occupies almost all of one side. It is faced with "raindrop" brick, baked in the sun and exposed to rain and sunshine. The "raindrop" side is turned in exposing the very dark red of the inner surface that delightfully harmonizes with the dark tone of the wood.

A word or two on the studio. It consists of four parts—a loggia or corridor on the front, behind which is the main studio, flanked on one side by a bedroom and bath and on the other by a smaller studio, which is used for small work or when the artist desires a subdued light. A painted lunette over the door is the chief bit of color in the corridor. The floor is laid in brick in herring-bone panels, and there are a number of decorative and artistic objects in the room. And here, on the threshold of the real art chambers of the house, we may well pause before seeking admittance within.



Raffia in the Normal School

By Mary H. Northend

Photographs by the Author



FIRST of the many arts and crafts societies which have of late sprung into evidence was the Deerfield Society of the quaint old Massachusetts town of that name. From generation to generation there had been handed down in Deerfield homes the blue and white hand-woven counterpanes, table

covers and the many pieces of handiwork which the mothers of the settlement delighted in, and leading women of the quaint old place who were well read and traveled, and who understood the value of really good work along this line, resolved to found the pioneer society in arts and crafts. Other societies have since taken up their ideas and worked them out, spreading the movement from town to town, and adding fresh accomplishments to the list of arts which originally occupied the members.

As it was the first to take up the work of reviving the old arts and crafts, the Deerfield Society also was the first to seriously consider adding basket making. Mexican women had already gained well deserved success in this line, which made it seem impossible to compete with them successfully, but the ladies of the Deerfield Society invented new shapes and uses for the raffia which gradually won them recognition. The greatest step gained in their work was when the Salem and the Hyannis Normal Schools took up the work, instructing the children in the use of the raffia and teaching them all the patterns which the childish minds could master. From that moment the success of raffia as one of the arts and crafts likely to stand the test of years was assured. The variety of articles which the children make vary from table mats and inkstands, to dolls' hats, ladies' shade hats, mats

and rugs, baskets, cushions, and many other articles both useful and ornamental.

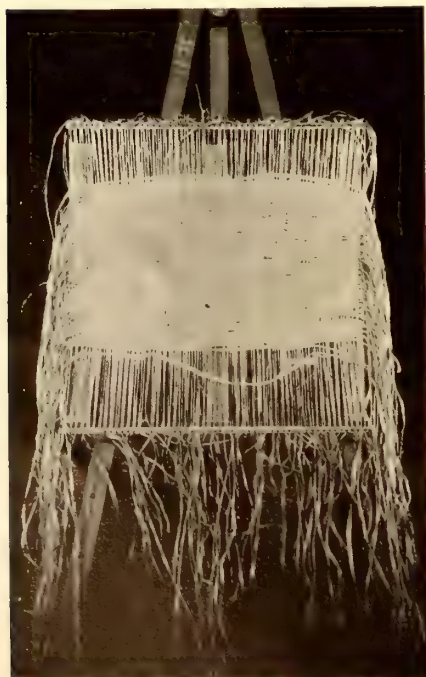
The raffia is not a reed, but a palm which, as stated, grows in the swamps of Madagascar. It is torn into strips, braided and sent to the United States uncolored, many of the dealers dying it themselves, although others sell it to their customers in its natural state, who may dye it in shades of their own selection. For this work either vegetable or aniline dyes are

used, the former giving softer and more artistic shades, and are most frequently used. This part of the work is by no means the least fascinating, for one learns to gather the flowers and roots which will produce the desirable shades and to prepare them for use. It is a difficult thing to do, as the dye must never be brought to a boil, although it must be kept at a boiling temperature for a certain length of time, else the material will either burn or rot. The beautiful purple iris will yield a lovely purple coloring; the bark of the white birch, gray; the Highland alder, brown; sumach, red; dried leaves of the appletree, yellow; and logwood and fustic, one part of the latter to five times of the amount of the former gives a good black if the raw material is kept in the kettle from fifteen to twenty minutes.

There are many kinds of weaves used for the raffia work, the easiest of which is no doubt the kind known as the Lazy Squaw. The raffia for this style is wrapped several times around the reed before the longer and harder stitch is taken. Then there is the bird cage weave, which may be either fine or coarse in structure with open mesh or with rows close together. Diagonal weaving, which is pretty, consists of passing over two or more bands of reeds at each half turn and weaving the next round those not in-



Kindergartners Making Sofa Pillows



Weaving a Sofa Pillow on Frame



A Raffia Bag



A Collection of Raffia

cluded in the half-turn. The work is commenced by making a little coil in the center, and if reeds are to be used, three feet are left uncoiled.

Reeds, though much used by basket makers, are harder to work with, and stiff to weave, besides requiring at least ten minutes' soaking before using in order to render them sufficiently pliable to handle. Raffia is far superior, making a firmer basket, and possessing few drawbacks, one of the most serious being the need of constant joining which the length of the strips of raffia renders imperative. To the raffia weaver who is well used to the task there is nothing more simple, and the work seems to require no skill; but to the learner who knows nothing about it, the case is altered, and there are many things to which she must give earnest heed if she wishes to become an expert weaver.

One of the hardest things to be constantly watched is to get pieces of exact width, and yet it is one of the most necessary to really good results. Then when a pattern is to be woven into the basket or mat it must be kept in mind, and the pieces which are needed to carry it out remembered, lest the pattern fail to materialize as desired. The shaping of the basket or piece of work is a thing which experience and a keen eye alone can teach. If beads are to be included in the pattern they are strung upon a strong cord, gray carpet thread being now in common use. One is securely fastened into the weave, while the other is wrapped several times around the back to hinder

tangling, the beads slipped up to it, and the last stitch taken so they may intersect the stitches. Generally they are placed upon contrasting or dark colors so that they will show to more effect.

Raffia work has never been confined to baskets alone, and more than other materials which may be used in such work it lends itself to a wide variety of articles and uses which are impossible with reeds or splits. Some of the ladies in various localities which are interested in the work have woven hats which are fine enough to be worn upon ordinary occasions, while others have made table mats, belts, chains, and in some cases necklaces or chains of raffia combined with beads. Feathers, shells and other primitive decorations which lend themselves admirably to such decoration are used with the raffia, and the former were never colored by the Indians, who took them from birds of brilliant plumage.

Truly the savage mother who crooned strange lullabys to her babe as he swung in his linden cradle among the

bows, rocked by the wind, would have been filled with astonishment could she have foreseen the articles which the modern mother of to-day is making from the basket weaves which have come down to her from the squaws, and she would have been more than puzzled at their various uses.

In the normal schools raffia is useful not alone for its real value as an accomplishment, but for the artistic training which it gives the children and its practical utility.



Baskets in Various Stages



A Class in Raffia



The Finished Sofa Pillow



A Raffia Fan



Avenue of Trees Planted in the Early Nineteenth Century. Estate of Mrs. W. C. Endicott, Danvers, Massachusetts



Governor Endicott

The Endicott Garden

Danvers, Massachusetts



By Sarah May Londer

Photographs by Mary H. Northend



Capt. Joseph Peabody



HIDDEN from the road by intervening trees, and approached through an avenue bordered by stately elms, is the summer residence of Mrs. William C. Endicott, widow of the late William C. Endicott, who served as Secretary of War during President Cleveland's administration. The lawns, with their stately trees and shrubs, and the gardens are the notable features of the estate, which has its share of historical interest.

The estate was purchased by Captain Joseph Peabody, grandfather of Mrs. Endicott, when war was declared with England in 1812. Salem's harbor and the wealth of her citizens made it not unlikely that the British would attempt to capture the town from the sea, and Captain Peabody intended the old place to serve as a place of refuge for himself and his family in case of an attack. Although it was never required for this purpose, its barns were made the storing place of rich cargoes brought by his ships from all parts of the world, for he was one of the wealthiest and most influential of Salem's merchant princes. Captain Peabody spent much time in improving the estate and in caring for the garden, to which many acres have been added from time to time.

On either side of the avenue the grounds slope away, the right side being reserved for the gardens and velvety lawns, while fields of grass, interspersed with trees, lie on the left.

In front of the house, which is painted white, with green blinds, and is typically Colonial, are handsome lawns broken here and there by groups of ornamental shrubs and geometrically designed flower beds. The elm-bordered avenue ends in a circular drive before the house, which has a lofty porch supported by Doric columns, between which stand bay trees.

At the rear is a wide veranda with low, wide steps, down which one must pass to cross the stretch of sward separating the house and gardens. The first of the latter is

the old-fashioned garden designed by Captain Peabody, and which remains practically as he left it. It is box bordered, with primly laid out beds, and through its center is a gravel path ending in a unique little summer house, whose pretty lattice work, graceful arches, and domed roof make it an inviting resting place. Mrs. Endicott has been very careful not to disturb any of the old-fashioned flowers, and the place breathes with the Colonial atmosphere.

There are lawns on either side of the prim flower beds, defined by marble fragments, of which the "Dancing Girl" of Canova, carved by Ferdinand Demetz, may be mentioned. In the center of the garden stands a majestic tulip tree some eighty or ninety feet in height, which is said to be the largest and most perfect specimen in Massachusetts.

At the rear of the old-fashioned garden is a yew path, at the end of which stands a wooden figure, a replica of one which stands on the estate of the present Marquis of Waterford, in Curraghmore County, Ireland. This, too, was the work of the talented Demetz.

A well clipped hedge separates this garden from the Italian garden, which was designed by Right Hon. Joseph Chamberlain, husband of Mrs. Endicott's daughter, Mary, during one of his infrequent visits at Danvers. The entrance is through a rustic archway, over which clammers wistaria. Wide paths of gravel, grass bordered, intersect the garden at intervals.

In the center of the garden is a fountain, which continually sends up a silvery spray tinted now in rainbow hues by the flowers around it, now by the golden sunshine, and then with the white moonlight, as day fades into night, to merge again in morning. The end of the garden is beautifully defined by rows of slender rustic supports, over which grow rambler roses. In the season of their blooming the garden is outlined in vivid crimson, contrasting with the turf below and the deep green of the meadows which stretch away beyond it. The garden itself is laid out in formal flower beds and larger flowering plants are grouped about the outer edge.



The Fountain



The House Is Typically Colonial in Design, Painted White, with Green Blinds



Old Colonial Tea House Built by Samuel McIntire

In the Italian garden, not far from the fountain in the center, is a sun-dial, a reproduction of one which stood on the estate of Gov. John Endicott, and bearing the date 1630. The original has long been the property of the Essex Institute at Salem. At the end of the path leading through the garden is an archway, through which one must pass to enter the herbaceous garden, also designed by Mr. Chamberlain, and containing groups of shrubs and hardy plants. Dividing the two gardens is a path which leads to a unique summer house, for many years a familiar landmark on the road between Salem and Danvers. It stood originally upon the estate of Elias Haskett Derby,

whose name was interlinked with the history of Salem's commercial prosperity.

When the opportunity to purchase the summer house presented itself, Mrs. Endicott availed herself of it, and had the



The Old Garden Laid Out by Captain Peabody



The Shrub Borders of the Lawn

building moved to her estate, a distance of about two miles. It speaks well for the staunch building of those early Colonial days that the house was moved without even a crack in the plaster.

It stands two stories and a half high, and is twenty feet square, its exterior painted white with green blinds. It is the work of Salem's noted architect, Samuel McIntire, and is decorated with the pilasters and festoons which characterize his work. On the top of the little building is the figure of a farmer whetting his scythe, and originally a companion figure stood on the opposite

side, representing a maid with her milk bucket. It has long been missing however.

Entering through the latticed door one finds a small hallway, which in turn gives entrance to the staircase by which one gains the little room above. This is about eighteen feet square, and is lighted by eight windows. It is hung with Japanese lanterns, and the cabinets contain beautiful pieces of Japanese porcelain. The room is a favorite place of resort, and afternoon tea is frequently served in it during the summer.

The beauty of Mrs. Endicott's place is at once the extent and variety of the gardens. They consist, indeed, of a series of gardens, each having its own special development, each its own beauty, each its own character, and yet they have a certain relationship. This, no doubt, is partly due to their immediate juxtaposition, but more especially, no doubt, by their common ownership and overseership which, in a quite intangible way, yields a unity of interest which can be felt rather than described.

At no time, however, has there been an effort made here to produce a series of gardens each of which would, in a measure, be representative or typical of a given style. Each particular garden is, indeed, complete and beautiful in itself, but its interest lies in the fact that it is beautiful, rather than in being a fine development of a particular form of the gardeners' craft.

The old and the new in the garden art is well represented here, and one may wander from path to path, from beauty to beauty, from point of interest to point of interest, and one's eyes will be continually greeted by fresh matters of interest, fresh notes of beauty, a new arrangement of

flowers and shrubs, an agreeable grouping of paths, a careful treatment of grass and lawn, a fine utilization of structural ornaments, old and new, that are naturally and rightfully placed at precisely the right spot, and exactly where they will yield the utmost value.

Many a garden lesson can be gained from the shrubbery of this fine old place, which is yet so new and so modern. For the old garden fades or is overgrown unless it is daily tended and, as it were, brought up to date. This latter work is admirably given by Mrs. Endicott's corps of gardeners, who have zealously labored in developing a place that is equally a source of satisfaction to its owner and to the larger public that may be admitted to it.

And as the chief purpose of a garden is to give pleasure and delight, to decorate the earth and make it beautiful, Mrs. Endicott's garden amply fulfils every garden requirement.



The Italian Garden Was Designed by Mr. Chamberlain



Summer House in Captain Peabody's Garden



A Hedge-inclosed Avenue

A French Rhea and Cassowary Farm

By Jacques Boyer



A Male Rhea
Brooding



A Cassowary's
Nest



A Rhea Pen at Melun

MORE than half a century ago Geoffroy Saint-Hilaire advised the introduction into Europe of the cassowary of New Zealand and the rhea, or "American ostrich," of South America, asserting that these birds could probably be acclimated without difficulty, as their natural habitats differ little in climate from Europe. The opinion

of the great naturalist has been fully confirmed by the results of experiments made in recent years. Rheas are now domesticated and bred not only in the zoological gardens of Germany, England, France, Belgium and Holland, but also in private establishments. They are raised extensively and very successfully in nine departments of France. Both rheas and cassowaries pass the winter without injury in the open air or in primitive shelters, like those shown in the accompanying photographs.

The South American rhea (*Rhea Americana*), the only species regularly bred in France, is distinguished from its near relative, the ostrich, by a shorter beak, a more slender foot with three toes, instead of the two of the ostrich, a head and neck less denuded of plumage, and wings of less rudimentary character, though still useless for flight. The plumage of the adult rhea, also, is less striking in coloring than that of the ostrich, tan, brown and gray shades replacing pure white and black. The general appearance is similar to that of the emu.

On the farm at Melun, where the accompanying photographs were taken, the rheas are kept in inclosures about twenty yards square surrounded by wire netting about four feet in height. It would be better, however, to put them in large meadows, where they could run, if necessary, with sheep, cows or horses, to which they soon become accustomed. In this way they could be kept more cheaply and advantageously, for they do not, like geese, pull up grass by the roots, and they feed largely on weeds disdained by the animals, and also destroy many noxious insects. A daily meal of bran and chopped potatoes, beets or carrots is given in addition to green fodder.

The rhea attains its maturity at the age of three years. It

then measures about fifty-two inches from the tip of the bill to the ends of the downy rump feathers which take the place of a tail. The head is dark brown. The color of the neck is ash gray, becoming darker at the base and almost black between the shoulders, and the face and ears are flesh colored. The back and

wings are slate colored, and the breast shades from dirty white at the throat to a blackish hue in the lower part. The legs are bare and covered with large gray scales in front. The nearly white abdomen of the male is conspicuously marked with two black crescents.

In France the rhea begins to lay in March or April. The male bird digs a shallow pit in the earth, under a tree if possible, and lines it roughly with twigs, moss, leaves and a few feathers. The rhea is polygamous, and one male will suffice for from three to seven females. As soon as three or four eggs have been laid the male begins to sit, and as additional eggs are laid beside him by the female he gathers them under him with his bill, head and neck. He will cover as many as twenty eggs at once if he is permitted to do so, but in order to avoid irregularity in hatching, the first dozen eggs are marked and the others removed as soon as they are found in the nest. When a dozen eggs have thus been removed they are marked differently from the first dozen and put in place of the latter under the male, and again the newly laid eggs are removed every few days. In this way the eggs are hatched in batches of a dozen. Each female lays from twenty-five to fifty eggs a year, half in March and April, and half in July and August. The male alone broods, fasting and remaining on the nest during the period of incubation, which extends from thirty-four to forty days. Artificial incubation has been attempted at the Melun establishment, but great care is required in order to raise the young birds hatched in this way.

The young rheas grow rapidly, and are little affected by the variable French climate. Their favorite food consists of hard boiled eggs, bread, bran and chopped green fodder. The male bird is an admirable nurse unless his attention is



Plucking Young Rheas

also made by sewing together the small feathers of the abdomen. The long black and white feathers are tied in small bunches and used as ornaments under the name of "Indian sheaves" (*gerbes indiennes*). The small soft and downy feathers, white and russet in color, are used in trimming cloaks and in the manufacture of boas and muffs which command high prices. The price of rhea feathers has risen very greatly of late. A few years ago they were worth only from fifteen to twenty-two francs a kilogramme (\$1.32 to \$1.93 per pound), but they now sell as high as one hundred and twenty francs a kilogramme (\$10.50 per pound). These prices are for mixed feathers of all sorts, as plucked.

Cassowary breeding is still experimental at Melun.

distracted by the female, which robs the chicks of their food and sometimes even kills them. She should, therefore, be removed when she has finished laying.

The flesh of the rhea when one year old, though certainly less delicate in flavor than that of a Mans pullet or a Rouen duck, is yet worthy of admission to the French larder, and it can doubtless be greatly improved by appropriate diet. The eggs, on the other hand, are excellent, and they would prove a valuable acquisition to the farmer's table. A single egg weighs from one and a half to two pounds—as much as twelve or fifteen hens' eggs.

At the Melun farm, however, the rheas are raised chiefly for their feathers. The birds are tame and easily plucked, although they are not stripped completely. From ten to fourteen ounces of feathers are obtained from each bird. The plucking is done in August. The feathers are known by the trade name of "vulture feathers," and are employed chiefly in the manufacture of feather dusters. Beautiful soft fabrics are



Taking Eggs from Under a Brooding Male Rhea



A Flock of Highland Sheep



Homeward Bound



A Flock of Highland Sheep Homeward Bound



The Superb Roads Are Hedged and Grass Bordered Throughout

A Residential Park near Philadelphia

"Stoke Pogis," at Villanova, Pennsylvania

By Ralph de Martin



FEW areas of rural scenery have been brought to the high grade of park-like effect that has been so successfully realized in the fertile territory bordering the "Main Line" of the Pennsylvania Railroad in the region adjacent to Philadelphia. The line passes through what is, in an almost literal sense, a great park, richly endowed with trees and spacious fields of grass, and thronged with handsome houses and fine private estates, each one of which seems to vie with the other in the copiousness of its natural development, in the splendor of its planting, in the richness of its natural growth. Yet beautiful as this country is the park effect of the whole has been obtained only through sporadic development; that is to say, what beauty cultivation has added to it has been done without regard to general effect, but simply with the idea of improving separate parts or sections. That the result, for many miles, is one of a very high grade of development is eloquent testimony to the popularity of the region, for without

very general improvement by many individual owners there must have been many blank spaces, so to speak, which could not but contrast unfavorably with the more marked characteristics of the cultivated spaces.

No finer general setting for the deliberate development and improvement of a great tract of land could be found than in this extraordinarily beautiful region. The whole country is, as it were, a gigantic stage on which a special development is displayed to the best advantage. The very beauty of the surrounding territory was itself an incentive to the utmost in

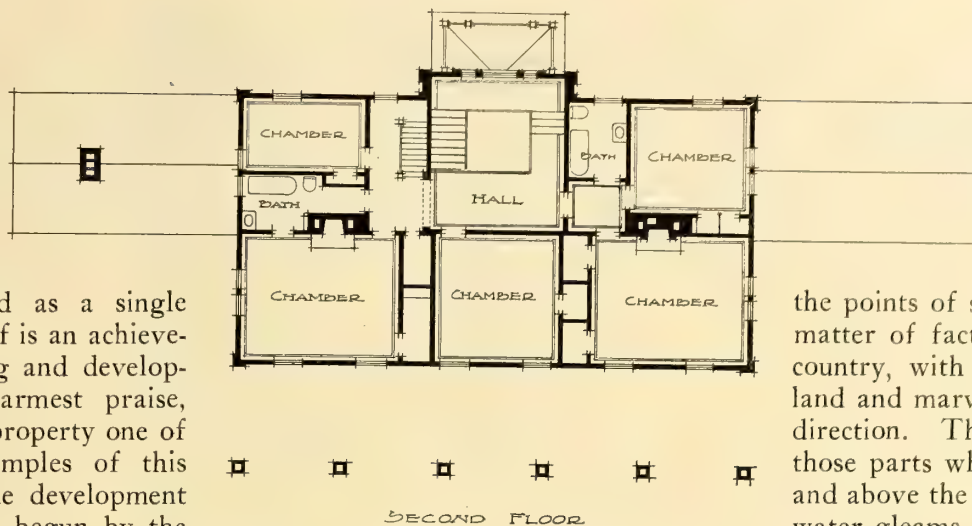
estate planning and development, since the general outside standard being so great, only a development of the very highest class could properly compete with what private interests had accomplished on a smaller scale and in a smaller way.

The great tract of land, amounting to about seven hundred acres, known as "Stoke Pogis," is completely qualified in the entirety to stand competition with the very finest of the smallest estates in its vicinity. And not only does it do this, but it is admirably qualified to serve as an example of high grade estate



Entrance Porch of "Mount Vernon"

development on the largest possible scale, a development that the whole of the "Main Line" territory might have had if it had been under single ownership and the entire region been developed as a single property. This in itself is an achievement in estate planning and development meriting the warmest praise, and which makes this property one of the most notable examples of this kind in America. The development of "Stoke Pogis" was begun by the late Frederick Phillips, Esq., its original owner. His initial conception was to develop a large tract of land as a single community with a certain amount of general supervision that



as are to be found within it are, at their lowest points, still above the average height of the general level of the surrounding country, and serve chiefly to emphasize the points of special elevation. As a matter of fact, it is beautiful rolling country, with broad sweeps of open land and marvelous outlooks in every direction. This is especially true of those parts which afford a view over and above the Schuylkill River. The water gleams distantly and far below one; on either side and beyond the country stretches off to a horizon so distant the eye yearns for no more. There is enchantment in this view that one looks over into as from



Historic "Mount Vernon" Has Been Frankly Used in this Design

would always maintain the whole property at a high grade of cultivation.

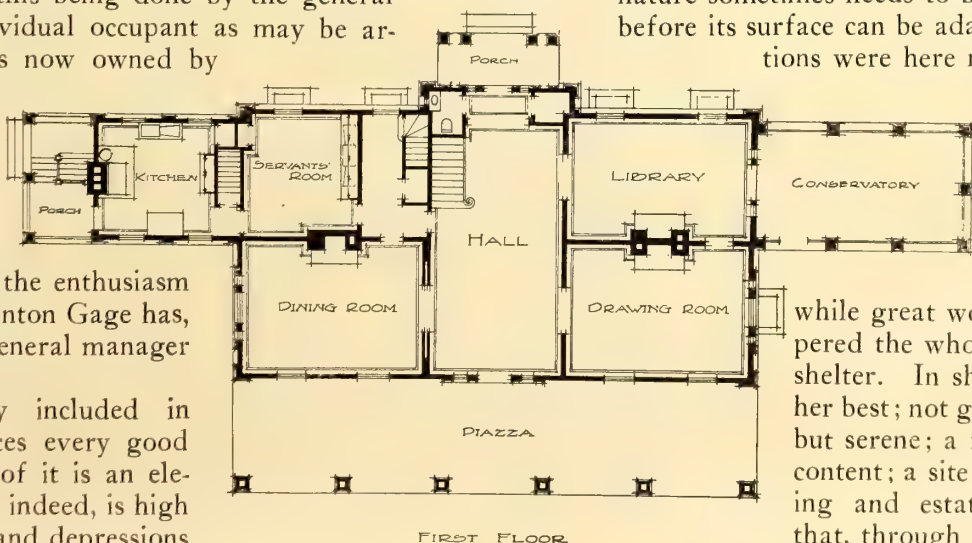
Land and houses are rented or sold as the various clients prefer, and the same option is available in the care of the individual places, this being done by the general owners or by the individual occupant as may be arranged. The estate is now owned by his family, and is being developed by his son, Mr. Frederick Phillips, who unites the skill of the architect and landscape gardener to the enthusiasm of the owner. Mr. Clinton Gage has, for some years, been general manager for the company.

The vast property included in "Stoke Pogis" embraces every good kind of land. Much of it is an elevated plateau; all of it, indeed, is high land, for such valleys and depressions

another world, so far off it seems, so peaceful and so still. No conquest with nature was needed here at the outset of the work. There was no reclaiming of waste land, no cutting down of hills, none of the costly processes by which nature sometimes needs to be changed and modified before its surface can be adapted for human habitations were here needed. Even the trees

grew abundantly, not, of course, always where they were wanted, but certainly where they could be utilized in the general scheme;

while great woods of many acres tempered the whole tract with shade and shelter. In short, nature here was at her best; not grand, not overpowering, but serene; a nature ever smiling and content; a site of sites for home building and estate development, a site that, through centuries of varied utili-





The Hall of "Mount Vernon"

zation, in our own day, comes into its own as the truly ideal spot on which all that is best in the modern home could have its best environment and yield the utmost pleasure from its lovely surface.

Land so copiously equipped for agreeable living places needed no artificial stimulation for its development. Actually but one thing was needed, and that was an ample sufficiency of good roads. Much costly work of this description was done in the lifetime of the elder Mr. Phillips, and that fine work has been abundantly supplemented and increased by the present management. Quite wonderful these roads are too, for they vie in width with the State highways, they have been made in a thoroughly sound and workmanlike manner, they are kept in a state of perfect repair, and they cover so much land and are so related to each other in bringing every part of the estate into close intercommunication that they seem to have no end. Certain it is that one may drive for miles on these magnificent thoroughfares.

The making of the roadbed, however, was but the beginning. Every road is hedged with privet on both sides, so that, seen from any point of elevation, the property seems interlaced with rich wreaths of green that line every field and bind whole areas around about with pleasant garlands. It is a happy conceit, a notable feature in Mr. Phillips' plan, to reproduce, so far as may be, the salient features of English rural life and English park effects in his great property.

Very properly indeed may we look to England for models in precisely the kind of estate development that is being worked out of "Stoke Pogis." No more notable landscape work has been done anywhere than by the English, and English private parks and gardens are to-day the model and

feature of natural adornment arranged that will add to the total of natural beauty characteristic of this place.

I have dealt at some length on what may be termed the basis principles of "Stoke Pogis," because they are at once the most elemental and the most important. It is quite as necessary to begin right in estate development as in any other

the admiration of the world. The work at "Stoke Pogis" is being done in a thoroughly consistent way. Elaborate gardening, as it is generally understood, is omitted altogether or restricted to the flower gardens of the various houses. With seven hundred acres at command one must, indeed, exercise a certain sort of moderation with what one attempts. Costly formal gardening has no place in work of this description. The park is a larger undertaking than the garden. It covers more area, it needs broader effects, it is simpler in every way. It is the English park lands that have served as the model for "Stoke Pogis"; but you may be sure that on its beautifully graded soil many a fine garden has and can be planted, and many a special



Chimneys and Porch of "Gulphmont"



"Gulphmont" Is a Handsome House Built of Stone and Shingles



The Hall and Stairway of "Gulphmont"



"Peargrove House" Is Genuine Old Colonial



A Cottage



A Formal Garden



New Roads and New Planting as an Aid to the Old House



The Dining-room at "Westfield"



"Westfield" Is an Old House



on a Terrace



"Arrowmink" Is a Name of Historic Origin



Flowers, Shrubs, Trees and Vines Abound Everywhere



Terrace at "Westfield"



Recently Made Over



The Drawing-room at "Westfield"



"Peachgrove House" Is Genuine Old Colonial



A Cottage on a Terrace



"Arrowmink" Is a Name of Historic Origin



A Formal Garden



New Roads and New Planting as an Aid to the Old House



Flowers, Shrubs, Trees and Vines Abound Everywhere



Terrace at "Westfield"



The Dining-room at "Westfield"



"Westfield" Is an Old Home Newly Made Over

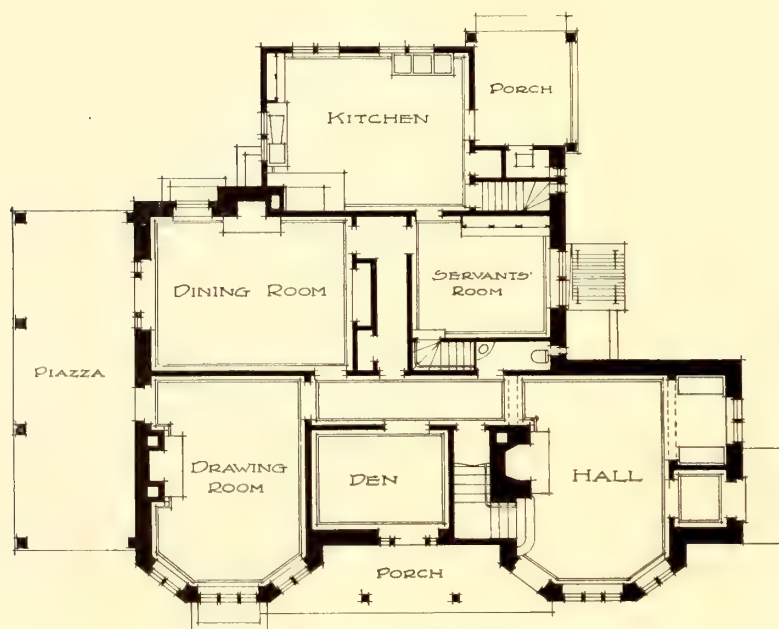


The Drawing-room at "Westfield"

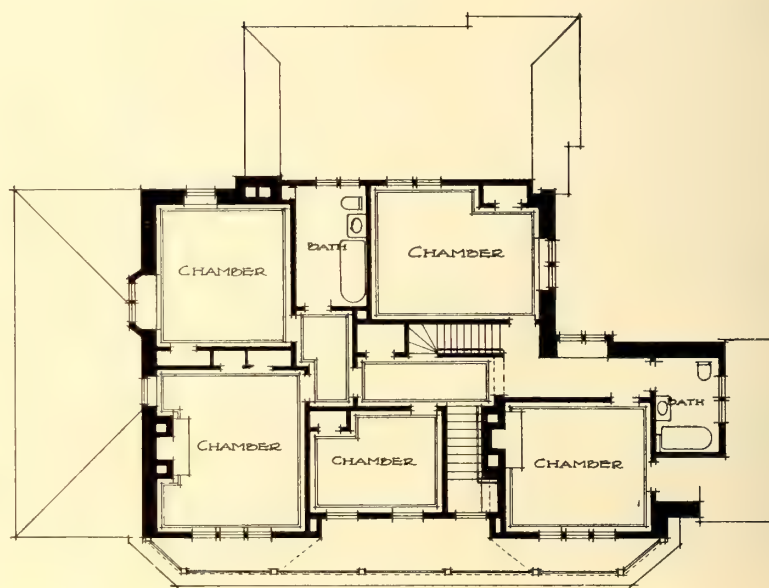


A Picturesque Grouping of Gables and Roofs

Chronology here can well be counted by the centuries, for the original surveys were made by the direction of William Penn. Some four or five old homesteads, dating from perhaps the seventeen sixties or seventies still survive, and, having been repaired and adapted to the needs of modern life are the jolliest houses possible. They are interesting types of the genuine old Colonial, houses with small rooms and low ceilings but with an abundance of interesting old woodwork that is their greatest charm. Utterly unpretentious in their exteriors as these old houses are, they are full of interior



FIRST FLOOR



SECOND FLOOR

human occupation or calling; and not only to begin, but to continue in the same path of rectitude; and the initiatory idea, as has been the case here, is invariably the most important. "Stoke Pogis," therefore, makes its appeal to the home builder on two obvious grounds: its own inherent natural beauty and advantages, and the very admirable way in which the elementary scheme, the basic plan, has been worked out and developed.

It was no new thing to build here, for the tract was, for many years, covered by the farms and farm houses of early settlers.



"Orchard Lea" Is a Stucco House with Half-timber Gables

quaintnesses and delights. Such restoration as has been called for has been done with scrupulous care and every pains taken to retain the primitive characteristics; and if the dooryards and house gardens have required re-creation it can be believed that in their new form and growth the genuine old character has not been lost. These houses are, of course, quite in the minority and need scarcely to be considered in the architectural embellishment of this place other than that they afford fine old notes of interest. The modern houses have been built within the last few years, and represent the highest grade of American country houses. The ample area of "Stoke Pogis" has permitted a very considerable latitude of distribution in these dwellings, and they have very wisely been spaced apart in such a way as to insure individual distinctiveness to each present structure, and an equal freedom from immediate competition and juxtaposition when the denser settlement of the future shall have arrived.

Everything here is, in fact, conducted on the most liberal scale and in a very broad manner. The individual plots comprise five, ten and fifteen or more acres, so that, if one chooses, one may create a personal park within the general park. The idea is a fine one, for it prohibits the over-

crowding of building areas, and permits the future development of the park in a very natural manner. The area of the place is so large that many more houses than have yet been built could be erected almost without the knowledge of the present occupants.

Individuality in house design is quite as essential to the success of an estate of this sort as uniformity in park development. The illustrations which accompany this article show how varied and how interesting these dwellings are. That most of them—before Mr. Frederick Phillips undertook the work of designing himself—were designed by Messrs. Baily and Bassetts, architects, of Philadelphia, is an important and interesting fact, but perhaps, after all, secondary to the real individuality of these houses, their difference in scale, in style, in situation, in fine in all matters that help to individuality and distinctiveness in design. Building operations carried on under one ownership are apt to suffer through duplication and repetition of designs; this grave danger has been avoided here in an extremely fortunate and happy manner.

Here, then, is a series of houses that represent the best in modern domestic architecture. They do not constitute a group, for they are utterly unrelated, and the mere fact that they had, in the beginning of their



"Orchard Lea": The Hall Fireplace and Stairs



"Orchard Lea": The Drawing-room



"Orchard Lea": The Dining-room



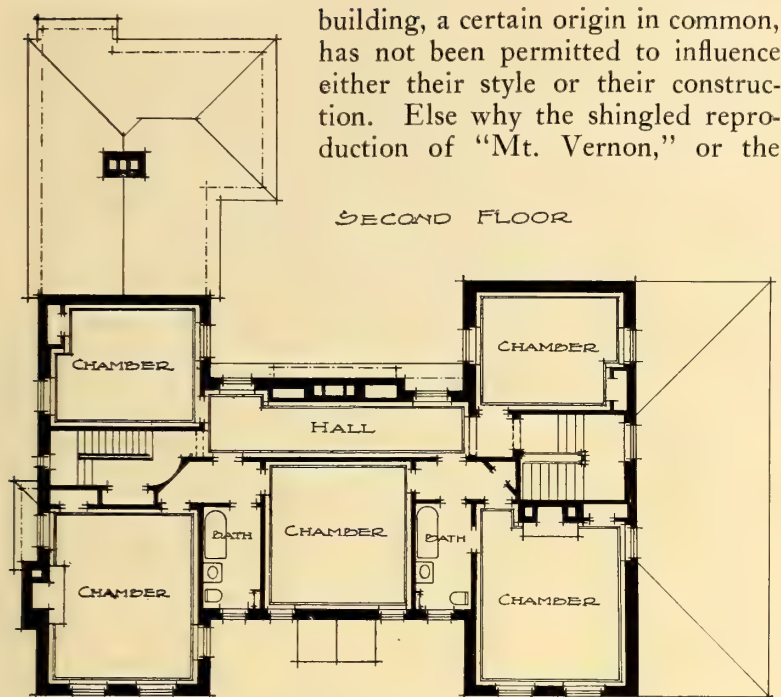
Stucco and Half Timber Are Always Interesting



The Spacious Fields of "Stoke Pogis"



The Stables of "Orchard Lea"



building, a certain origin in common, has not been permitted to influence either their style or their construction. Else why the shingled reproduction of "Mt. Vernon," or the

property at once strikes one as a complete establishment. The houses themselves having nothing to be wished for, one passes on by lawns and flowers to some old time rose garden and sees nestling among the trees a quaint and well appointed stable and garage with the kitchen garden lying where the morning sun can help the fertile soil to produce her best. Hence there is perfect freedom and perfect latitude. The estate is inclosed by no walls, and the roadways within open freely to those without, of which, indeed, they seem but a continuation. There are no restrictions other than those that should obtain in every sensibly developed rural region, while the advantages of living here are numerous and unusual. There is individuality in houses and grounds, together with many natural streams winding here and there; there are all the comforts and conveniences of luxurious living; there is complete sanitation; and there are the completing attractiveness of beautiful scenery, exquisite outer surroundings, and a very perfection of general out of the ordinary in rural life.

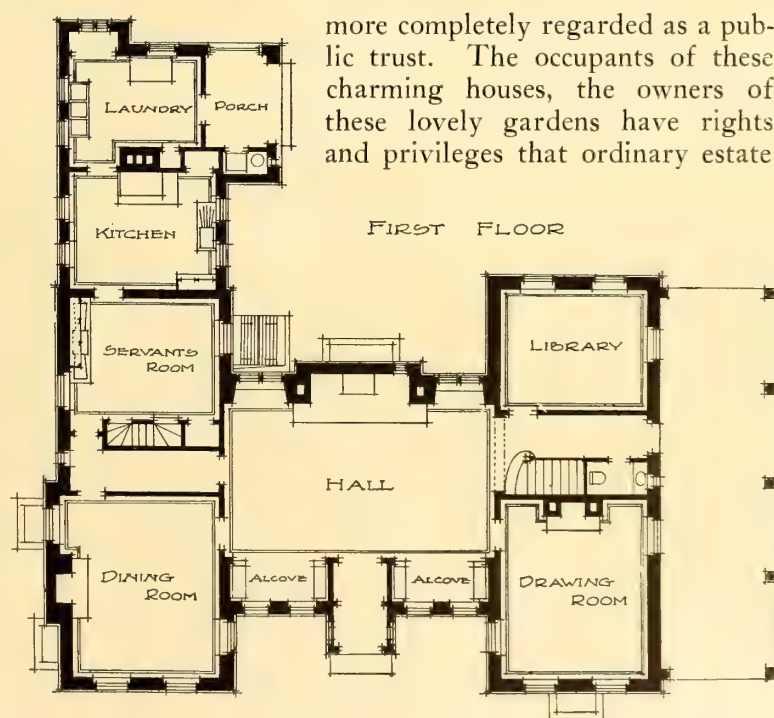
Can one want more? It certainly would be hard to ask it, and quite as difficult to supply it. Surely it would be hard to find a place where the utilization of the land had been



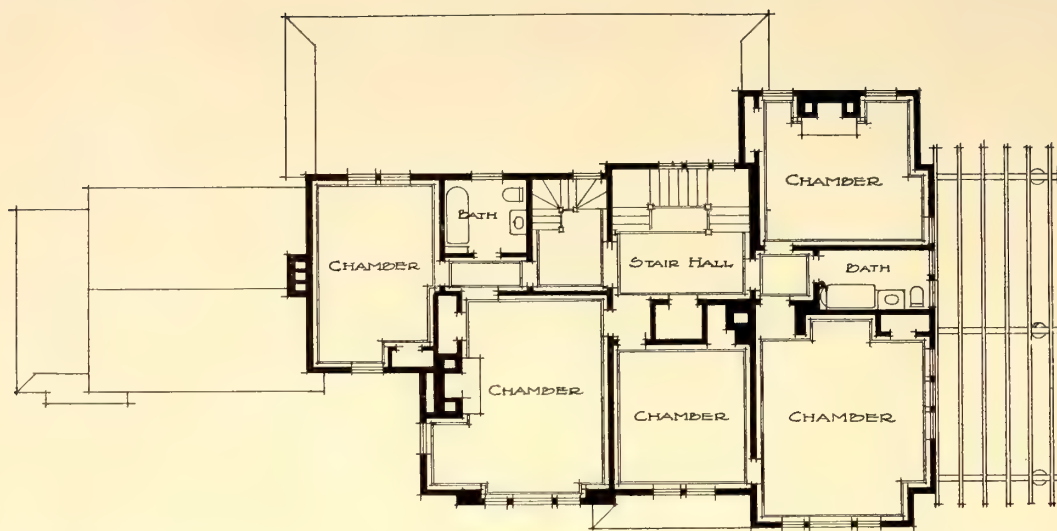
"Pennacre" Is an Imposing Mansion Built of Harvard Brick

stone and shingled "Gulphmont," or the quaint half-timbered "Orchard Lea," or the stately brick of "Pennacre," or the picturesque gables of stuccoed "Eastdene"? A wide variety to study and to look upon, each an interesting type of house in itself, and each placed in the most interesting manner, exactly, so it seems, where it belongs, precisely on the spot that seems best fitted to this particular design.

After all the care that has been lavished on the ornamental and architectural aspects of "Stoke Pogis," one may be sure that the practical side has not been neglected. On the contrary, this has been developed in a very complete and ample manner. The estate is about a mile and a half from the nearest railroad station, Villanova, and the fine roads without are well matched by those within. There is an ample supply of "Springfield" water, the famous house water of suburban Philadelphia, and artificial lighting is provided by electricity. One may rent a house and land, or may purchase it outright, as may be determined. Some restrictions are necessarily laid in the matter of building, but these are rules in the common interest, and are chiefly directed to the prohibition of unsightly and unnecessary structures. No comfort seems to have escaped the designers' eyes. Every



more completely regarded as a public trust. The occupants of these charming houses, the owners of these lovely gardens have rights and privileges that ordinary estate



SECOND FLOOR PLAN

park and of it, but the whole of it is theirs in a way that is quite literally true. This circumstance is at once unusual and desirable, for it insures the permanent attractiveness of the adjoining property for all time. One may, indeed, list many advantages for living here, and this one is by no means the least.

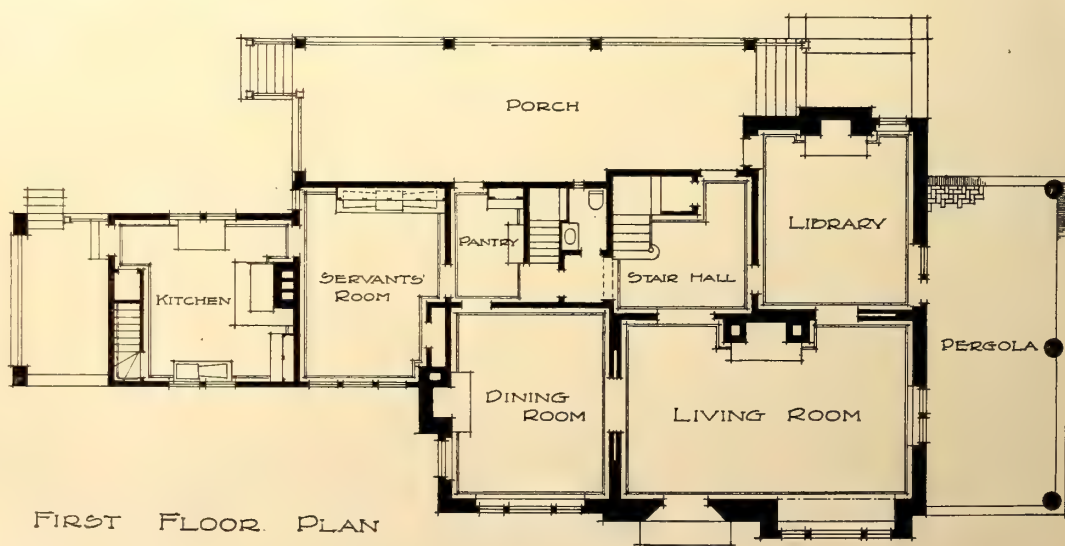
It may be a matter of some interest to add that in this fine Pennsylvania property the name has been taken from the old Penn estate in England, and the English quality its present owners have so delightfully given it has a historical association and significance of no slight merit.



"Eastdene" Presents an Effective Grouping of Gables

owners do not possess, for they are part and parcel of a very great estate, to which they both belong and to which they both contribute.

The importance of knowing not only who your neighbors may be, but what will be done with the adjoining lots and plots, is a very essential part of rural ownership. In most instances, unless one can afford extensive ownership, one is utterly helpless before the solution of this problem. This difficulty, however, does not confront the fortunate owners of property in "Stoke Pogis." They are not only in the



FIRST FLOOR PLAN



A Form of Slab Building Which Is Common but Which Should Be Avoided



An Unusual and Artistic Manner of Applying the Slab

The Bark Cabin

Durable, Attractive and Inexpensive Summer Homes

By Dorothy Sythe



NESTLED on the wooded slope of Mount Minsi, in one of the most charming sections of the Blue Mountains—noted for ideal summer cabins—stands a surprisingly attractive and inexpensive mountain home that is said to have served as an inspiration for the numerous “vacation cabins” that now surround it. While it is just such a cabin home as will appeal most strongly to lovers of the picturesque in site and construction, it possesses the still greater advantage of being within the means of any hard-working business man of the city who longs for retirement to nature’s restful and nerve-healing charms during his vacation; and one that he can readily build with his own hands—from the material found in the rocky soil and the rough-barked trees of the few acres of his mountain site.

It is unnecessary to give a list in detail of the various expenses in construction; as prices vary according to the amount of material at hand, and the amount of work that is

done by the owner. To be really helpful to the prospective builders it is of more importance to state how the roughly constructed but attractive summer home was put together, how the interior was quaintly and appropriately furnished, how the broad stone portion of the outside chimney formed a unique fireplace within at little cost, and how the curious walls of rough bark were made durable as well as artistic.

Where the old log cabins in ancient types have been impractical and stone for cabin construction expensive and difficult to obtain, city residents who desire suburban cottages or tiny summer homes in the mountains have looked about for some picturesque and inexpensive exterior finish. One ingenious builder hit upon a novel plan that could not well be patented, and the result has been a widespread interest in the building of “bark cabins.”

The thought originated in eastern Pennsylvania, in the Delaware Water Gap section, and soon the bark cabins of Mount Minsi became widely noted. Then other owners of building sites in mountainous and wooded sections became



Another Unusual Way in Which Slabs Are Used



A Correct Form of Using Slabs for a Cabin

interested in the cheap and charming building material. In the high slopes about Reading the idea then became prominent, and now in various sections of the country summer homes display picturesque bark surfaces.

The effect from a distance is that of a building constructed of heavy logs with the bark left on. Nearer inspection discloses the fact that the supposed "logs" are merely thin strips, similar to "clapboards," sliced down from the bark-covered portion of the trees. A counselor in bark cabin construction says that it is wise to choose a building site the summer previous to the building, where the material is to be selected from the trees and stones of the new possession, as this will give an opportunity for the timbers to become properly seasoned after cutting. This plan offers another advantage that seems equally important to the prospective builder who is seeking counsel, as it allows for one year's meager savings from the city salary to pay for the tiny tract of stony, tree-covered land on the mountain slope (this to serve as an inspiration throughout the following year in the office) and the necessary accumulation



The Staircase Is Built of Sticks In a Rustic Manner

of funds for the next summer's building.

The smallness of the funds necessary for constructing this most satisfactory, comfortable and beautiful cabin home was convincingly demonstrated in each consultation with the friend who had built the original.

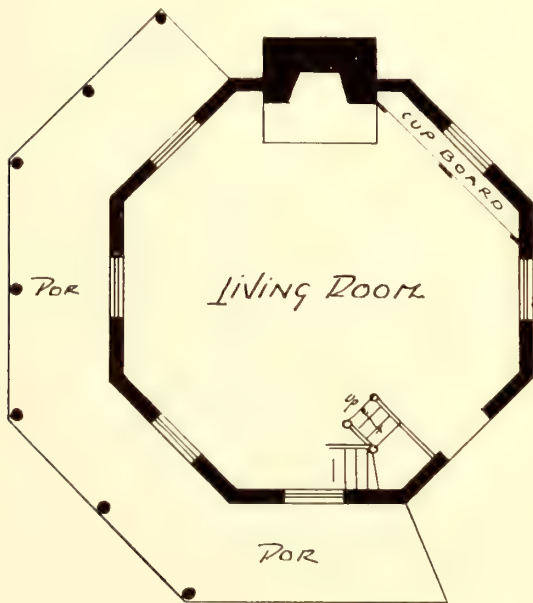
This wise counselor advised first of all that the prospective builder, after securing his site, should lay out the plan of his building

"The old method," he said, "where large timbers were not constructively put together, and no precaution taken against settling, seems mostly to have gone out of date, and to have been supplanted by a lighter and more simple method. One of the points to be guarded against in timber construction is that of shrinkage. The old system of placing the sill on edge with the beams resting on independent girders, each liable to shrink from a quarter to half an inch, necessarily caused the house to settle. Being unequal in its bearings, the floor not only became unlevel, but the resulting strain had a serious effect

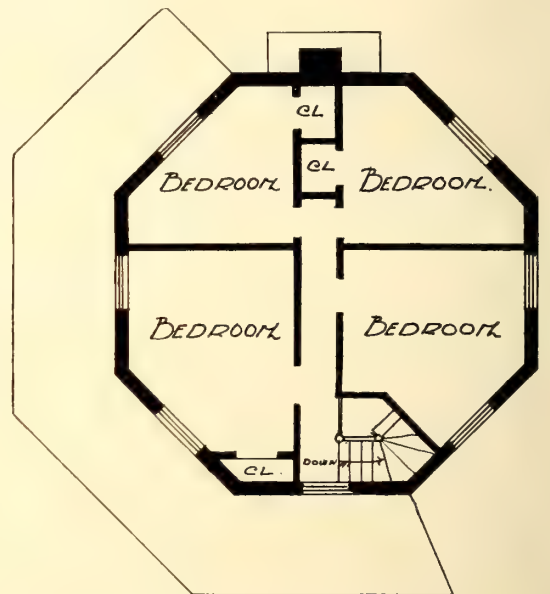
upon the grounds—this to be done by himself, or under his own supervision, in order to secure the best grades, views, drainage, etc. This will prove quite as desirable for the summer cabin as for the permanent home. Then the prospector is to select the timbers that offer the best bark surfaces for the outside walls, as well as the best building material in general.

Then, when ready to build, for the sake of cheapness as well as for admitting light and air beneath the floor of the cool, airy cabin, substantial foundation piers should be used, rather than solid foundation walls, as no cellar beneath the house is necessary in the summer retreat. As the sample house is built in octagon form, substantial piers at each of the eight corners, connected by heavy girders, provide ample support for the two-story structure at small cost.

The foundation being complete, the counselor again gave most practical advice in construction to avoid shrinkage.



FIRST FLOOR



SECOND FLOOR

(Concluded on page 373)



The Octagon Cabin Is Built in an Odd Manner with an Outlook on Top



The Temple of Venus

"The Terraces"

The Summer Residence of
Edward Vassallo Hartford
at Deal, New Jersey



By Francis Durando Nichols



MR. HARTFORD'S summer residence at Deal is one of the latest additions to that attractive seashore resort, and is particularly distinctive from the houses usually to be found in that vicinity. It shows a careful conformity to Italian models, and at the same time illustrates many modern tendencies. The site chosen was, fortunately, an elevated corner lot, and taking the situation as the keynote the architect,

Mr. F. H. Dodge, of Allenhurst, N. J., has given his composition an effect of massive elegance which makes it one of the most distinctive houses to be found along the coast.

The house is approached by a broad gateway, with cross bars and lantern above, from which steps rise to the level of the first terrace; a second flight of steps lead to the second terrace in front of the house. The other approach is from the street to the porte-cochere at the side of the house; this roadway leads on to the garage at the rear of the estate.



The Entrance Steps and Doorway



The Arcade and Terrace

and white enamel furniture. The nursery is finished with pea-green striped paper and a green and yellow rug.

The extension over the kitchen contains two bedrooms and bathroom for the servants. The main bathrooms are provided with tiled floor and wainscoting, and porcelain fixtures and exposed nickel-plated plumbing.

The exterior and interior of the house is fitted with all the modern conveniences represented in the luxurious tendencies of the times, and the house as a whole is a type of modern comfort and beauty framed upon a background of Italian classicisms. The garden at the side of the house helps to carry out these characteristics. It is formal in its shape, with a sun-dial in the center, from which walks leading in either direction terminate at the altar of Venus.

There are many obvious advantages as well as much attractiveness in this house. Its merits are general, and are as well marked in the conveniences of the plan as in the beauty and novelty of the elevations. The plan shows an admirable distribution of the internal area as well as an excellent adaptation to the site. This, as has been pointed out, is a corner one. The whole of the front of the main street has, therefore, been given up to the two principal rooms. Two only were needed in a house of this style, and adapted, as this one is, to summer use. These are the dining-room and the living-room. Practically the entire main front is divided equally between these two rooms, a separating corridor being deemed unnecessary, and the space that would have been re-

quired for it being thus available for equal distribution between the two great rooms.

The front of the house being thus given up to the ornamental apartments, the back or rear quite as naturally became available for the service and secondary apartments. Here, in the center, is the hall, with the stairway to the second floor. Here also, to one side, is the den, and here, likewise, is the inevitable pantry that serves as the connection between the dining-room and the service apartments. The latter are contained in an extension on one side, an arrangement that gives the house its outward appearance of a solid square, while it only gives a free space within, behind the hall and den, which has been transformed into a garden. The plan



The Dining-room Is Treated with White Enamel with Painted Scenes Above the Wainscot



The Screen Between the Living-room and the Dining-room



The Staircase Hall



Bedroom in the Louis XVI Style

is thus a very admirable one, giving fine space for the principal rooms and presenting two free facades for architectural treatment.

And the plan is quite as successful in the second story as in the first. Above is a series of bedrooms, arranged in regular order on the main front, with an additional room at each end on the side, and two more in the extension over the kitchen. There are two bathrooms, one at each end of the hall, and conveniently located for use from all the main bedrooms.

The regularity and order of this plan is given fine expression in the architectural design. A stately row of arches forms a loggia that extends completely around three sides of the house. They are, in fact, within the main building line, for the upper walls rise immediately above them, and are continuous with their outer surfaces. The arches, however, do not exhaust the porch space of the house, for the terrace without them constitutes an integral portion of the house.

There is a stateliness and charm in the quiet architecture of this house that affords a fine foil to the statuary with which it is decorated and to the ornamental treatment of the

outer grounds. Here is distinct novelty of great interest and of intense individuality. Fine sculpture of the classic period is much too unfamiliar for any examples to be spared in this present day and generation, and the exceedingly novel idea of utilizing some of the most important works of the classic masters as decorative elements for a modern American home has here been carried out with great force and originality.

Obviously this is a dwelling that commands and demands the consideration of the passer-by, as well as one that meets the taste and needs of its owner. Almost every house may be supposed to do that, but it is not every one that so deliberately excites interest as this one does. And it accomplishes this end in a very direct and deliberate manner, not by a rich architectural display, not by

overloading with ornament, but by the calm utilization of some of the world's masterpieces in sculpture. There is a noble lesson of beauty taught here, a lesson enforced by competent reproductions of great masterpieces of sculpture, works of inspiration and of beauty, the mere contemplation of which is both helpful and elevating.



The Boudoir Is Finished in Coral-pink and Gray



"The Terraces" Is a Stucco House, Treated with a Pure Whitewash

The Bark Cabin

Durable, Attractive and Inexpensive Summer Homes

(Concluded from page 368)

upon its parts, causing the external joints to open and the roof to leak.

"There was a mode of framing invented by our pioneers with a view to obviating this difficulty, in which the green timber was so manipulated as to avoid shrinkage; and by a nice calculation of its bearings all the strength of the heavier method was attained with a small amount of timber. Advocates of the unscientific mode ironically styled it the balloon system. Yet, notwithstanding all the ridicule to which it was subjected, it has steadily grown in favor, and is now, in a modified form, accepted by many builders of mountain cabins. The system upon which it is based is simply to avoid, as far as is possible, resting the frame on girders. The sill, instead of being set on edge, is laid flat, reducing its shrinking properties to three inches instead of ten. This method has also the effect of distributing the weight over a greater surface of the foundation and supplying a sort of cap or binder to the wall." The construction, therefore, is as simple as it is inexpensive; no part offers any difficulties.

With these practical suggestions for the timber construction there is no possibility of "frailty" being suggested in the cabin building, even if the outer bark should be inclined to peel from the clapboards with age; and the entire exterior is now finished with the novel bark effect, with the exception of the shingle roof. The porch posts are usually the simple rough-barked logs of the tree branches that are too thin

for clapboards. Frequently several of the more slender logs will be bound together for a novel rustic post. The porch railings are also constructed of rough-bark rustic branches. Window shelters and porch ornamentation invariably present the same rough material, and even the house foundations are walled up with the bark-covered clapboards set vertically in short lengths.

When the bark begins to peel with age, as it sometimes does in exposed positions on wind-blown mountain slopes, there is still the knotted and rough surface of the clapboard beneath, that quickly becomes weather-stained, until it resembles the surrounding surface, and makes "patching" unnecessary.

The picturesque bark cabins that are found on stony hill slopes of Pennsylvania are made still more charming by massive chimneys of the rough stone, in appearance carelessly thrown together, yet in reality firmly set in cement and built to last.

Travelers who have noted this fad for bark cabin building in different sections of Pennsylvania's mountain slopes have predicted a very short life for the quaint and frail-looking structures, but the initiated know that the structures are built for good long life, and ideal usefulness in calling city residents to inexpensive summer sojourning in the mountains, and to arouse enthusiasm in country living, and the much-desired "home of one's own."



CORRESPONDENCE



The Editor of *American Homes and Gardens* desires to extend an invitation to all its readers to send to the Correspondence Department inquiries on any matter pertaining to the decorating and furnishing of the home and to the developing of the home grounds.

All letters accompanied by return postage will be answered promptly by mail. Replies that are of general benefit will be published in this Department.

Problems in Home Furnishing

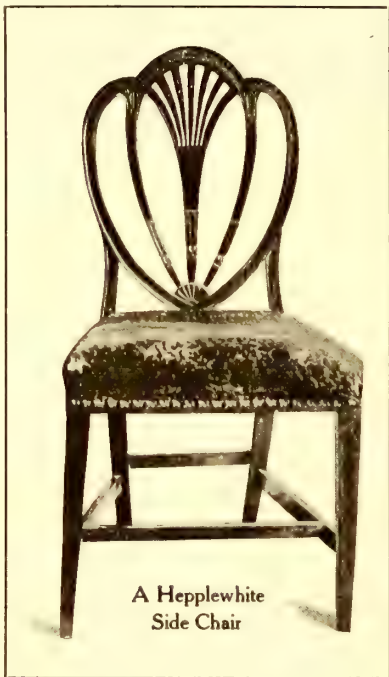
By Alice M. Kellogg

Author of "Home Furnishing: Practical and Artistic"

HEPPLEWHITE FURNITURE IN A MODERN HOME

FROM a correspondent in the South comes a letter with the following inquiry: "Can you give me some information about Heppelwhite furniture? Is it suitable for my parlor? In looking for some chairs and a sofa I find a set that I like very much and which is called Heppelwhite. Please let me know something on this subject as soon as possible."

The set of furniture is probably copied from or suggested by the designs of the English cabinetmaker Heppelwhite, who, with Chipendale, Sheraton and others, made the latter part of the eighteenth century famous in the history of interior decoration. There is a certain formal grace and delicacy of outline about the Heppelwhite chairs that render them especially attractive in a parlor that is not of the living-room type. The original, or "pure" designs, show an oval, heart-shaped or shield back, ornamented with inlay, paint or carving. The decorations are derived from the lotus flower, bell flower, rosette and feather. Naturally, there are not many of the chairs that were turned out in Heppelwhite's time in existence at this time, but some museums show some valued examples. The illustration is made from an original piece. Further information may be found in standard reference books on furniture, Singleton's "Furniture of Our Forefathers," vol. ii; Hayden's "Chats on Old Furniture," Morse's "Furniture of the Olden Time."



A Heppelwhite
Side Chair

HOW TO RENDER AN UGLY ROOM ATTRACTIVE

"I have read with interest," writes S. E. K., of Illinois, "the ideas that your correspondence department gives to readers who are desirous of making the interior of their homes attractive. My own room seems too hopeless to bring to your consideration, but I would be grateful for any suggestions that would not entail an expenditure of more than three hundred dollars to make this room satisfactory. The furniture is supremely ugly, of heavy carved black walnut; the carpet is a large-flowered Brussels, unpleasantly faded; the curtains are expensive, bad looking Irish point; the walls are painted a varnishy green. Where to begin I do not know."

As the ugly furniture is aggressively prominent in this room, it would be well to change it for something more simple and tasteful. As the limitations of expense make this impossible, the two largest pieces, bedstead and bureau, may be retained, substituting for the others a white enameled washstand, a dressing table hung with cretonne, an arm chair and rocker of stained willow and odd tables for sewing and writing materials. If the floor is in proper condition for rugs, some Wiltons in sizes to lay beside the bed, bureau and washstand may be chosen. Or, if a carpet must be adhered to, an oak-colored ingrain filling or a plain tan velvet may be the selection.

(Continued on Page x)

Garden Work About the Home

By Charles Downing Lay

SPRING BULBS

IN ORDER to anticipate questions about planting bulbs, which I know will come too late for the answers to be of any use this season, I shall devote part of our space this month to the subject.

It is my particular desire to urge everyone to plant the less common spring bulbs even to the neglect of early tulips and hyacinths, which in spite of their showy beauty are unsatisfactory, because they must be replanted every year. There are other bulbs, however, which will usually increase in number, and many of them will persist for years.

It is always interesting to order bulbs direct from Holland, and the variety to be had there is much greater than in this country, and one is likely to get a better quality. The price, though, will not be much different after freight and duty have been paid.

C. G. Van Tubergen, of Haarlem, is a famous grower of fine bulbs, and there are many others probably as well known.

The earlier the orders are given the better it will be, in Holland or here, because the stocks of many things are exhausted before the end of the season.

Early planting, too, is an advantage, as a good root growth can be made. After October the ground may be soon frozen up.

Cultural directions for bulbs are given at length in all catalogues—but they say little of the greatest danger to bulbs in the first winter, which is heaving by the frost. This can be avoided by planting deep and mulching the bed *after the ground is frozen*. It is not freezing which kills bulbs, but alternate freezing and thawing. This is prevented by the mulch. When planting a newly prepared bed, remember that it will settle a great deal through the winter and plant much deeper than you would on settled ground.

The color of tulips varies so greatly that one can do anything with them. They may be planted in great masses so that the whole garden will be a single color. Or one may have contrasts and harmonies endlessly varied as one kind passes and another comes on.

On a small place it will be better to plant them in little groups among the shrubbery or in the wild garden, and to have a great many different kinds. Five bulbs of some of the larger kinds will make a very good group, and it is certainly better to have five bulbs each of five varieties than twenty-five of one kind, if one cares for the flower itself and not simply for its color and effect in the garden scene.

Parrot tulips have curious feathery petals and are larger than the early tulips. They bloom in May with the Darwin and single late or cottage tulips and last a long time.

Darwin tulips are good in color. Some of the dark browns, violets, blue blacks and brown blacks are very interesting and unusual. There are a hundred varieties, and one should choose them according to color and price.

The single late cottage tulips are the finest of all. The flowers are larger, on long stems (three feet and a half sometimes), and they seem to increase and do well.

"Bouton d'or" is a good yellow, though rather too much of a button, since it does not open wide.

Tulipi gesneriana spatulata is a stunning red with a black spot at the base of each petal. "Innocence" is large and very late, and, of course, white.

"Picotee," white, with rosy margins deepening in color as the flowers age, has a wonderfully delicate beauty.

T. retroflexa with recurved petals, yellow, is star-like in shape.

T. vitellina is my favorite. It is tall, pale yellow, with a large flower and a certain opulent and regal air very hard to describe.

There are a hundred varieties of these tulips also, and all would be interesting to have.

(Continued on Page xiii)



A CONCRETE RESIDENCE AT CLIFTON, MASS.

Houses of Concrete are recognized as the most inexpensive, durable, fireproof and sanitary houses known. They need no paint or repairs, are cool in summer, warm in winter, and combine the qualities of stability, utility and beauty. The second edition of our book,

Concrete Country Residences

contains photographs and floor plans of over 160 *Concrete Houses* that have been constructed in various parts of the United States. It illustrates numerous styles of architecture, besides showing several types of **concrete construction**, and is invaluable to those who contemplate building.

A copy of this book (10x12 inches) will be sent, express prepaid, upon receipt of \$1.00

The Atlas Portland Cement Company, Dept. 10, 30 Broad St., New York City

Q Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

Q The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

Q If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING
COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.

Denver

CHICAGO

Trenton

PROBLEMS IN HOME FURNISHING

(Continued from page 374)

As the wall decoration and curtains will contribute so large a share to the general effect they must receive careful consideration. Here are two combinations, either one of which will harmonize with the plan already outlined. To keep the walls plain, a tan-colored texture paper may be used, with cretonne printed in chintz colors for the curtains and bedspread. If a figured wall is preferred, an English chintz paper may be applied, with hangings of *jaspe* in the sun-fast dyes. With the first treatment some pretty pictures will be needed—tinted photographs, reproductions of water color paintings or Japanese wood prints.

In making the dressing table, the mirror may be framed with the cretonne that is used for the drapery. A pretty lamp and dainty shade will be another means for making over the interior of this room attractively.

COLOR SCHEME FOR A FIRST FLOOR

From New Jersey E. L. R. writes as follows: "I am building a new home and would like some help in planning the color scheme for the first floor. I have not yet decided on the stains for the woodwork, as there is a great difference of opinion in the family. Would it be better to have each room a different stain, or all alike? The house fronts the north, with the hall having the north and west exposure, the parlor the northeast, the dining-room the southeast and the living-room the southwest. Would all plain walls be more satisfactory than all figured?"

In a small house of this kind the more simple the effects the more enjoyable the result, although some variation is necessary, of course, to give interest to the interior. In the matter of stains for the woodwork, the hall, parlor and dining-room may have a medium dark oak color, making the living-room individual with a weathered gray. The same general idea may be applied to the walls, giving a tan-colored paper in two tones to the hall, a wide-striped paper in the same tones to the parlor, and a combination of tans and greens in small figures to the dining-room, with an English picture border for the frieze. In the living-room a two-toned green paper will contrast well with the gray woodwork. In choosing the rugs it will be advisable to keep to blues, greens and browns, with the smallest possible introduction of reds.

COVERING FOR A DIVAN

F. S., of Pennsylvania, asks: "What material is suitable for covering a divan in my living-room? On the floor is a two-toned green (olive) Wilton rug. A green striped paper is on the walls. The curtains are of ecru net." If the divan is to have the covering tufted a plain color will look better than a figured material; but with the plain tones already in the room a mixed coloring would really be the better choice. A tapestry in good quality often has fine combinations of green, yellow and blue that would look well in this room. Then there are small, set patterns in two and three colors that would suit the conditions. In plain velours there are some new effects in which a gold thread is woven with the solid color in a pleasing way.

A CURTAIN PROBLEM

A "Country Correspondent" writes: "I have a problem to submit to you, and I would be very much pleased to have your helpful advice. I am using some cream-white madras curtains at my parlor windows, and they are hung straight to the floor. They are disappointing, as we can not see through them. I would transfer these curtains to a bedroom



THE "GLOBE"
is built on honor
and sold on merit

The "Globe" Ventilator

In Galvanized Iron, Brass and Copper
Also with Glass Tops for Skylight

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. *Smoky Chimneys Cured.*

"GLOBE VENTILATED RIDGING"

Manufactured by

Globe Ventilator Company :: Troy, N. Y.

Art Beds Make Artistic Bedrooms



Your home is judged by the furnishing of the bedrooms. One glance at these rooms, if they are not dainty and artistic will destroy the good impression made by your living and reception rooms.

The bed is the key-note in bedroom furnishing.

"Art Brass Beds"

are artistic and pleasing. They are made in period patterns, Colonial, Louis XVI., etc., to match other furniture.

The finish will never tarnish or need attention. Parts cannot loosen; casters easy rolling, ball bearing.

Our catalog "Masterpieces in Brass," Free.

Send us your name and your dealer's name for a copy.

Choose from our book, and we will see that your dealer is supplied with the style you select.

Art Bedstead Co., 3705 Rockwell St., Chicago.

Metal Beds for homes and institutions.



if you could tell me what to put in their place."

A more dainty looking curtain for the parlor can be made of white filet lace, which costs ninety cents a yard in the wide width. This may be edged with linen lace and hung only below the sill, with white cotton loops to hold it back at the sides. At greater expense a white grenadine curtain may be bought by the pair; or, the filet lace may be had in the regular curtains at ten dollars a pair in the wide width, and five dollars in the twenty-eight inch width. The distinguishing feature of this lace is the square mesh, which is now more in demand than the old-fashioned round, or bobbinet.

THE USEFUL TRAY

M. E., of Delaware, has a unique problem in her first home fitting. She writes: "Among my wedding presents was a check for fifty dollars with a letter saying this was to provide me with trays when I set up housekeeping. I did not appreciate this gift at the time, but now that I am keeping house I want to expend the money to the best advantage. I would like to have some idea of the cost of the trays that I shall need, and whether to buy silver or the plated article."

The number and kinds of trays that are used in equipping an up-to-date house depend upon the manner of living and the income which keeps the establishment in running order. Sterling silver is an unnecessary luxury for articles of this kind. A first-class plated ware will last, even with hard usage, for a number of years. Of course, the entire wedding present may be expended in buying one silver tea tray, but it would seem to be more sensible to distribute the amount over the several trays that are required for real use. In the following list a choice could be made of the ones that suit this especial home:

Silver-plated serving tray, 12 inches in diameter	\$12.00
Silver-plated crumb tray and scraper	8.00
Silver-plated tray for visitors' cards, 6 inches	5.00
Mahogany tray for serving tea, oblong, with brass handles	20.00
Breakfast tray in Japanese lacquer (oblong), bedroom tray in same material for drinking water (round), china tray for brush, comb and hairpins for the dressing table and a smokers' tray in copper or brass....	5.00

\$50.00

FLOOR COVERING FOR A LIBRARY

C. A. L. in a letter of inquiry writes: "I remember reading in one of the spring numbers of your magazine about some kind of an Indian rug. Would this be a good selection for my library? The room is fifteen feet wide and eighteen feet long, with a large recessed window. I must consider also a small rug for this space. If you should advise this kind of rug kindly give the price and also some suggestion for the walls, which are still in the hard white plaster."

The India drugget mentioned in this department in March is an eastern production that has not been over-used as yet in this country, and is therefore not common. The ground work is the natural color of the hemp, with the pattern worked in with mahogany-red, yellow and black. Both sides are alike. The correct size for the library would cost seventy-eight dollars, and a small size for the recess about eight dollars. The ground color of the rug could be repeated on the walls, preferably with buckram at fifty cents a square yard. Crash, burlap or fiber paper, however, could be substituted. Tapestry in foliage patterns and colors could be introduced on the furniture coverings.

The Material for Your New House is

BRICK

Artistic Fireproof Repair-proof

You should read

"Fashions in Face Brick"

Gladly sent for your benefit and ours

FISKE & CO., INC. Established 1864
175 FIFTH AVENUE NEW YORK CITY



STEEL CEILINGS

For Effectively
Decorating All
Kinds of Rooms

YOU CAN GET THEM IN



Appropriate Designs for Residences, Business Rooms, Auditoriums, Etc.

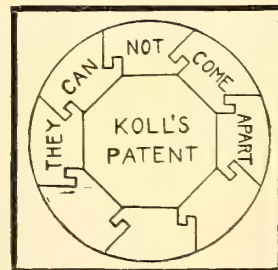
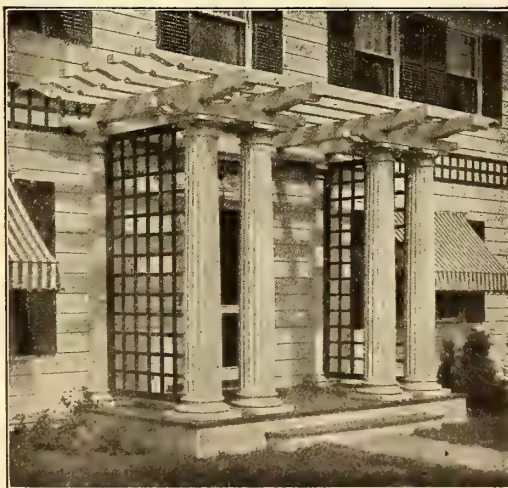
☐ Largest and most complete line of artistic STEEL Ceilings in existence. Covers the field so completely you can get just what is required, whether bold or elaborate designs or something comparatively simple.

☐ Before buying a Steel Ceiling of any description, get full details of Berger's "Classik."

ASK FOR CATALOG D-64

The Berger Mfg. Co., Canton, Ohio

New York Philadelphia Boston Chicago
St. Louis Minneapolis San Francisco Atlanta



KOLL'S PATENT Lock-Joint Columns

Suitable for Pergolas, Porches
or Interior Use
are made exclusively by

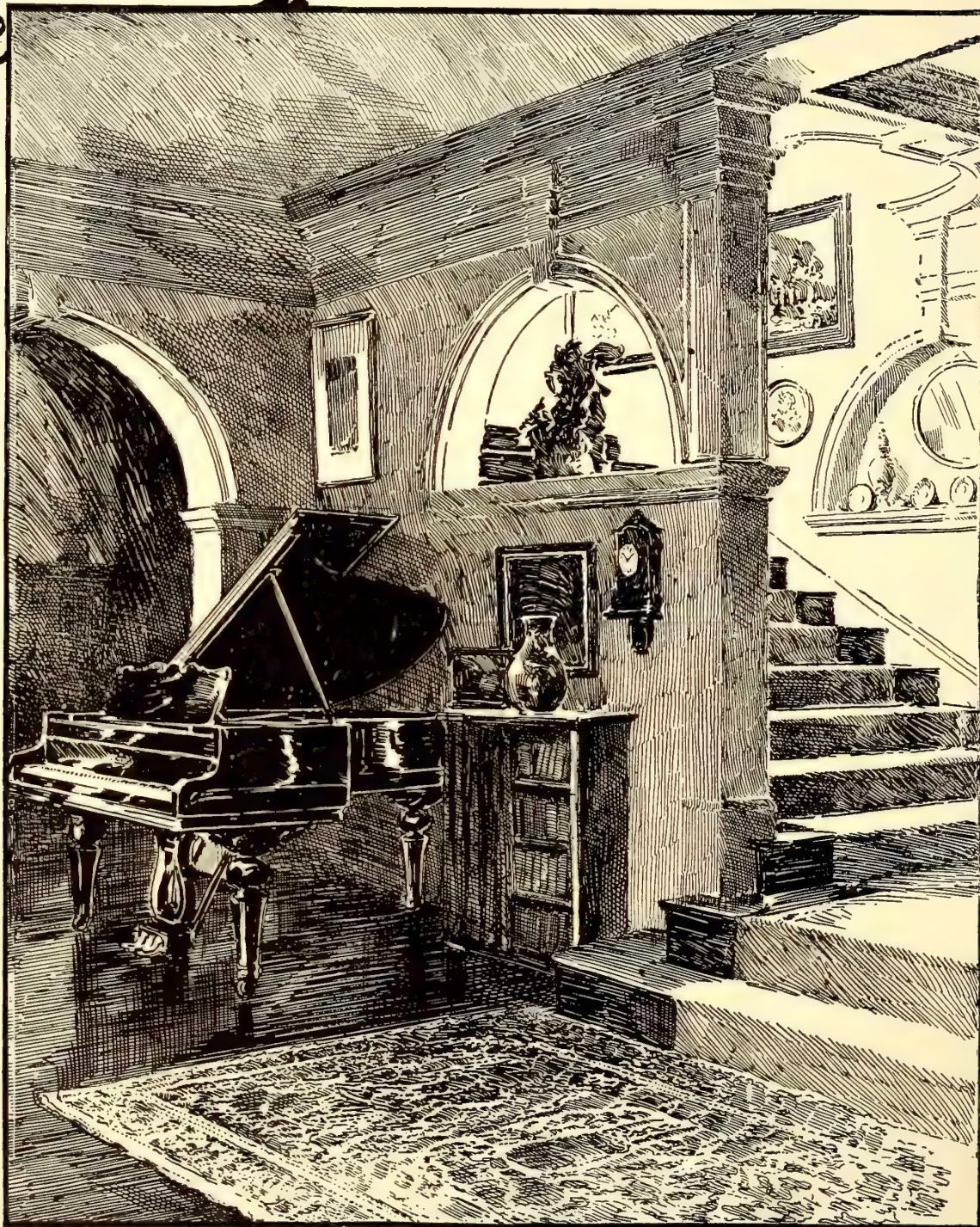
HARTMANN-SANDERS COMPANY

Elston and Webster Avenues, CHICAGO, ILL.

Eastern Office, 1123 Broadway, NEW YORK

Send for Catalogue A-19 of Columns, or A-29 of Sun-dials, Pedestals, etc.

Chickering pianos



THE RESULT OF SKILL, inspired by a keen appreciation of the artistic and a desire to live up to an enviable reputation, directed by the latest scientific knowledge, and practical experience gained by eighty-five years of piano building. ¶ The resulting excellence, both as to tone, touch and general staying power, is the reason and the only reason for the uniformly high favor in which it is held in exclusive musical circles. ¶ It is conceded to be a standard of comparison for all other makes.

Made Solely by **CHICKERING & SONS**

826 Tremont Street

PIANOFORTE MAKERS

Boston, Mass.

Established 1823

Take off your Hat to the
Write for Circulars and Prices to
F. E. Myers & Bro.
Ashland, Ohio

THE PUMP THAT **PUMPS** **HAY** **TOOLS** **BARN DOOR HANGERS** **MAY RACK CLAMPS**

WIZARD BRAND
4 BARREL EQUALS
4 WAGON LOADS
STABLE
MANURE

Sheep Manure
 Kiln dried and pulverized. No weeds or bad odors. Helps nature hustle. For garden, lawn, trees, shrubs, fruits and house plants.
\$4.00 LARGE BARREL. Cash with Order. Delivered to your Freight Station.
 Apply now.
 The Pulverized Manure Co., 21 Union Stock Yards, Chicago.

Bound Volumes of Volume for 1905 \$3.50
American Homes Volume for 1906 \$5.00
and Gardens Volume for 1907 \$5.00
 MUNN & CO., Publishers 361 Broadway, New York

GARDEN WORK ABOUT THE HOME
 (Continued from page 374)

Of the tulip species we seem to know little in this country. They are fascinating to the amateur, who is sure to want all of them, and must have *T. greigi*, *T. fosteriana*, *T. kaufmanniana*, *T. oculis-solis* and *T. sprengeri*.

It would be, I think, impossible to plant too many chionodoxas, scillas, crocuses, snowdrops and muscari. The lawns should be streaked with them like the sky with clouds! Under every tree there should be hundreds!

Colchicum agrippinum, with a spotted flower blooming in the spring, is worth having. *C. autumnale* is white and purple, and is usually in bloom when it comes from the grower in September.

The autumn blooming crocuses are uncertain in this climate; further south they would probably be very satisfactory, and the autumn galanthus are similarly disappointing here.

The dog-tooth violets are white and pink besides the common yellow, and are very good for shady banks.

Eranthis hyemalis is the earliest flower next to snow-drops, and its yellow blossom borne at the center of the palmate leaf is bright and pretty. It is very cheap and lasting.

The English and Spanish iris (*Iris anglica* and *I. hispanica*) are beautiful flowers, too seldom planted, but so cheap that they can be used by the thousand. They are orchid like in shape and color, looking very different from the German irises, and the leaves are round like an onion. There are forty or fifty named varieties of each. The English are mostly blue, purple and white, and the Spanish yellow, blue and white.

Of the other species of bulbous iris it is impossible to speak calmly, they are so beautiful and so different!

I. histrioides and *I. reticulata* bloom very early; sometimes in February. *I. susiana* is not as difficult to grow as people suppose. For amateurs who care to do stunts there are many other charming irises to be tried besides such difficult bulbs as the *Calochortus*, *Ixia* and *Freesia*, which can be grown out doors if one will take pains.

Narcissi are endless in variety. They range in price, in Holland, from two for a cent to six dollars each for varieties like King Alfred and Maggie May.

One should plant several varieties of each class. The following are good:

TRUMPET DAFFODILS—*N. bicolor*, "Empress," "Horsfield" and "Victoria"; Emperor, Henry Irving, *N. Barri* conspicuous, *N. incomparabilis*, "Cynosure"; *N. incomparabilis*, "Sir Watkin"; *N. incomparabilis*, "Stella"; *N.*



A No. 22 IDEAL Boiler and 240 ft. of 38-in. AMERICAN Radiators, costing the owner \$112, were used to Hot-Water heat this cottage, at which price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which installation is extra and varies according to climatic and other conditions.



A No. 3-22 IDEAL Boiler and 600 ft. of 38-in. AMERICAN Radiators costing the owner \$280, were used to Hot-Water heat this cottage, at which price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which installation is extra and varies according to climatic and other conditions.



A No. C-243 IDEAL Boiler and 750 ft. of 38-in. AMERICAN Radiators, costing the owner \$350, were used to Hot-Water heat this cottage, at which price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which installation is extra and varies according to climatic and other conditions.

Inexpensive heating

Last Winter's lesson was a long and expensive one to those who relied on old-fashioned heating. Must it be learned all over again or will you now take advantage of this good buying time to put in

AMERICAN & IDEAL RADIATORS & BOILERS

They are no longer called *luxuries*, because proven an economy in all classes of buildings, and from the largest to the very smallest.

IDEAL Boilers and AMERICAN Radiators have raised the standard of home comfort. They provide uniform warmth in all rooms, far and near, and under perfect control. They bring no ash-dust or coal-gases into the living-rooms, greatly reducing house-cleaning and saving much wear on carpets and furnishings. The fuel savings, health protection, and cleanliness soon repay their cost.

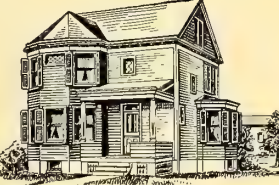
The question most often put to us is: "What will it cost to heat my cottage, consisting of—rooms?" Failure to answer this question promptly and exactly brings criticism. The owner forgets that, for instance, all five-room cottages are not built exactly alike as to size of rooms, height of ceiling, amount of window or glass surface; nor are they all constructed of equal quality of material, or weather tightness, or so located with respect to adjoining buildings as to be equally protected from the elements. This is likewise true of six-, seven-, eight-, and nine-room or larger cottages, and these factors decide the character and size of the heating outfit for each particular building, and the cost thereof. *The only fair and correct way for your interest and ours is to permit a representative to call and examine into your exact heating needs. Such definite information and prices will put you under no obligation whatsoever to buy.*

No tearing up necessary—put into OLD buildings—FARM or town. Write today and let us put you in immediate communication with nearest dealers. Ask for free valuable book. Let us prove to you that Steam and Hot-Water is inexpensive heating. Sales Offices and Warehouses in all large cities.

DEPT. 6

AMERICAN RADIATOR COMPANY

CHICAGO



A No. 020 IDEAL Boiler and 262 ft. of 38-in. AMERICAN Radiators, costing the owner \$177, were used to Steam-Heat this cottage, at which price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which installation is extra and varies according to climatic and other conditions.



A No. 3-22 IDEAL Boiler and 400 ft. of 38-in. AMERICAN Radiators, costing the owner \$234, were used to Hot-Water heat this cottage, at which price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which installation is extra and varies according to climatic and other conditions.



A No. 015 IDEAL Boiler and 175 ft. of 38-in. AMERICAN Radiators, costing the owner \$116, were used to Steam-Heat this cottage, at which price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which installation is extra and varies according to climatic and other conditions.



SEND FOR OUR CATALOG, "HOME HEATING"

HOT-WATER HEATED \$198

by ANDREWS SYSTEM EACH



14 ANDREWS HEATERS IN ONE BLOCK AVERAGE PRICE \$198

IT IS WELL WORTH READING

Paper Patterns for Heating Plants
 About 40 years ago a man named Butterick made a business of cutting patterns for men's shirts. His wife suggested that patterns be made in similar manner for women's and children's clothes. He did this, and the result is the present tissue-paper pattern used in every home. By using these patterns any woman who can sew can save half the cost and make clothes fully as attractive and serviceable as she can get from a professional dressmaker.
 We make patterns for Heating Plants. Send plan or sketch of your house for exact estimate free. Our price will include best radiators, pipes cut to fit, fittings, valves, gold bronze, and the now famous Andrews Steel Boiler. Everything complete, ready for erection, with diagram and directions, so any man handy with tools can erect. Andrews Steel Boiler has double heating surface, requires less fuel, is simple, durable, easily cleaned, and needs no repairs. We furnish the hottest radiators (100 square feet

with the Andrews System will do the work of 150 feet with the others); perfect control secured by our Regulating Safety Valve and Group System of piping. We design, manufacture, guarantee and sell each plant direct from factory to user, giving you the lowest price for the value. Don't buy a heating plant, either water or steam, until you have sent for our catalog, "Home Heating," which explains fully how you can erect your own plant and save plumbers' charges. Send for list of our customers in your vicinity and examine their plants. We do it right in 44 States, Canada and Alaska. Plants guaranteed and sold on 360 days' trial free. (Remember we manufacture the most economical boiler, furnish the quickest circulation, hottest radiators and lowest price for the value.) Freight Rates Equalized. Cut out this ad. to-day, send names of other people going to buy and get full particulars. Old houses easily fitted.

ANDREWS HEATING COMPANY, 825 Heating Building, MINNEAPOLIS, 783 LaSalle Building, CHICAGO

MANUFACTURERS CONTRACTORS CONSULTING ENGINEERS

Those Needed Home Improvements Are So Easily Made

IT doesn't really pay to be too skeptical.

Even if your experience with varnish stains has not been happy. You have been using the wrong material.

You wouldn't starve the baby because the first infant's food you tried did not agree with him?

Now would you?

Maybe the principle of that first food was wrong. The principle of varnish stains is wrong.

Because the thick consistency of varnish not only holds the color particles in solution but holds them out of the wood pores. And varnish varies with the temperature. You might have pretty good luck with it today—and tomorrow find yourself in despair.

JOHNSON'S
ARTISTIC WOOD FINISHES
JOHNSON'S

Now Johnson's Wood Dyes are dyes—not mere stains. Johnson's Wood Dyes do not coat over the wood—they color it (to any desired shade) because they are so prepared that they penetrate the pores—thus they develop and accentuate the beautiful grain of the wood.

That is why they give an unequaled richness and depth of permanent tone and a perfectly even texture which will not rub off.

Any one can secure the best results with Johnson's Wood Dyes and you can easily keep all your woodwork, furniture and floors in perfect condition by applying Johnson's Prepared Wax with a cloth right over the Dye or any other finish.

Johnson's Prepared Wax gives a rich, subdued, lustrous and enduring surface which cannot be produced by any other finish, and, unlike shellac, hard oil or varnish, it does not show heel marks or scratches—"it is made to be walked on"—and sat on—rubbing only gives it a finer polish.

Johnson's Wood Finishes are not new preparations.

We studied them out years ago in order to be able to preserve and bring out the natural beauty of the fine hardwood flooring which we make and ship all over the world.

You see we had an object in seeking out the very best finish for our wood that could possibly be made.

Now you can profit by our self-interest.

For your name and address on a postal we will send you, with our compliments, a very handsome and interesting 48-page illustrated book, "The Proper Treatment for Floors, Woodwork and Furniture."

This book tells you in detail the easiest and most economical way to have a handsome home. You can do all the work yourself and the expense is trifling.

Just send us your name and address on a postal now.

S. C. JOHNSON & SON

"The Wood Finishing Authorities"

Station AH-9, Racine, Wis.

Johnson's Wood Dyes for the artistic coloring of woods (14 shades), half-pint cans 30 cents, pint cans 50 cents. Johnson's Prepared Wax, 10 and 25-cent packages and large size cans. Sold by all dealers in paint.

leeds, "Duchess of Brabant"; *N. leeds*, "Mrs. Langtry"; *N. poeticus*, *N. poeticus grandiflorus*, *N. poeticus ornatus*, *N. incomparabilis*, "Orange Phoenix"; *N. incomparabilis*, "Sulphur Phoenix."

PLANTING A PRIVET HEDGE

F. D. N., Bridgeport.—For the privet hedge which you wish to plant in front of your house, get the best plants you can, say three years old. These plants will be three to four feet high, but rather thinly furnished—as they say in nurseries, "leggy."

They would in time make a fair hedge if left at their present height, but it will be much better to take each plant to a block and chop off the top about a foot above the lowest branch. When planting, put them in deeper than they were in the nursery, so that only six inches of the stubs you have left are above ground. The lower ends of these branches, where they join the main stem, will be under ground and will throw out roots, so that each branch will become, to all intents, a separate plant.

Plant in a single row fifteen inches apart. We often see hedges made of two or four rows, but they are never so good as the single row, and it is a great waste of material.

You may think it a pity to cut off so much and to start with a hedge only six inches high when it might have been three feet, but rest assured that in the third season the hedge will be better and higher than it could have been made with the tall plants.

In the first year the hedge should be trimmed three or four times in order to thicken it up at the bottom.

It is well to know that the *Ibota* privet is harder than the California privet, and that it will make almost as good a hedge.

THE GARDEN'S AFTERGLOW OF FALL FLOWERS

By Elizabeth Dandridge

THE all-summer garden appeals little to those who go away at the beginning of warm weather for a three months' vacation at sea shore or mountain, few of us being of the self-denying, altruistic temperament which makes labor for an unknown quantity an attractive proposition. Even were we all possessed of the generous spirit which makes the fact that if we are not there to enjoy, some one else will be, sufficient recompense, the counter thought that neglect must follow our departure holds our hand from generous sowing or planting of mid-summer flowers. There is, however, no reason why we should not plan for the homecoming and insure a welcome from those flowers which make gay the dying months of the year—the summer's after-glow which flings defiance to the frost of September with so brave a spirit.

Flowers which bloom late in the summer and until cut down by frost are plentiful, and include much of the garden's repertoire. The cosmos is at its best just when the first nipping frosts are in the air. The dahlia has only reached its best estate in time to succumb to its withering blight, the salvia flaunts its scarlet plumes abroad and the cobaea hangs its mauve and purple bells aloft more luxuriantly than ever. A few hard frosts, and even the glory of these have departed, and only blackened stems and withered foliage remains to tell the story of the season's wealth.

Then comes the triumph of the frost flowers—the hardy chrysanthemum and the anemones. Planted in sunny situations, on the south side of a building or hedge, they bid defiance to the frost king and may be often

ARE YOU LOOKING FOR A MACHINE THAT WILL

plane out of wind, surface straight or tapering, rabbet door frames, rabbet and face inside blinds, joint, bevel, gain, chamfer, plow, make

glue joints, square up bed posts, table legs, newels, raise panels, either square, bevel or ogee, stick beads, work circular mouldings, etc., rip, cross cut, tenon, bore, rout, rabbet, joint and bead window blinds, work edge mouldings, etc.? If so, drop us a postal card, and we will send you a descriptive circular showing two views of our No. 62 Universal Wood Worker.

Write

209-229 WEST FRONT STREET

J. A. FAY & EGAN CO.

CINCINNATI, OHIO

No. 62. UNIVERSAL WOOD WORKER

seen covered with snow, bearing aloft their wealth of crimson, of silver and of gold.

Unlike the florists chrysanthemums they show no great size of bloom, but depend upon the quantity of blooms in a spray for effect, and in this way are most lavish. The flowers vary in size from the inch in diameter of the smallest pompon varieties to two and three inches of the larger sorts. Almost every shade of crimson, rosy-pink and of yellow are shown, and a generous amount of white is always possible, so that while but one flower the color scheme may be so varied and extended as to make a whole garden of chrysanthemums by no means monotonous, and where they are to be a feature of the fall garden they should be planted by the dozens, or, if possible, by the hundreds, massing the colors as much as possible. The culture is simplicity itself, it only being necessary to give a good, rich soil—good garden loam enriched with old, well-rotted manure—and liberal cultivation to reap a rich harvest of bloom year after year, for they are perfectly hardy, requiring only slight protection during winter. In the spring they send up numerous shoots from the roots and a portion of these may be removed to start other plants, or the plants may be increased by root division, or cuttings may be taken from the new growth and rooted in wet sand or moist earth, or any preferred way.

They should not be allowed to suffer for water, especially when setting their buds, and at this time an occasional drink of liquid manure will be helpful.

Then there are the hardy asters or Michaelmas daisies, which are almost as late blooming as the chrysanthemums, and add their blue and mauve and heliotrope to the chrysanthemums' crimson and gold. Some of these extend the blooming period well into November, as the Trinervusa, rich violet-purple, and Datschi, a pure white, and Grandiflorus, said to be the latest flowering of all.

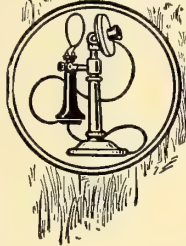
To this already fine list may be added the moonpenny daisies which bloom late in October. Among these may be noted the so popular Shasta daisy and its improved form, Alaska, with bloom four and a half and five inches across.

The hardy sunflowers add their glow to the late fall garden, and give a wealth of bloom in October, Maximiliana perfecting its double flowers during this month, and Miss Mellish gives quantities of single golden flowers on stems six or seven feet high, and furnishes a superb background for the lower growing chrysanthemums.

But the tale of the late fall garden does not end with the chrysanthemum family by any means, there is still that finest of all plants, the hardy anemone, or windflowers. It is doubtful if the whole garden's calendar produces anything finer than these plants; for beauty of form and color they are unique. Pure white, rose-pink and shades of crimson in single, semi-double and double forms are produced, and all with lovely centers of golden stamens, like a wichuraiana rose, the flowers borne well above the foliage on stiff stems admirable for cutting. These, like the chrysanthemums, are of the simplest culture, and may be grown in almost any soil, but has a preference for leaf mold and deep, well-worked soil well drained. It is increased by root division, and as the root forms rhizomes which spread rapidly, throwing up new plants at every joint, the stock of plants grows rapidly, and once planted a considerable colony is an assured fact in the near future.

The finest of the various white varieties is undoubtedly the Whirlwind—a large,

Twenty Million Voices



A PERFECT understanding by the public of the management and full scope of the Bell Telephone System can have but one effect, and that a most desirable one—a marked betterment of the service.

Do you know what makes the telephone worth while to you—just about the most indispensable thing in modern life?

It isn't the circuit of wire that connects your instrument with the exchange.

It's the Twenty Million Voices at the other end of the wire on every Bell Telephone!

We have to keep them there, on hair trigger, ready for you to call them up, day or night—downtown, up in Maine, or out in Denver.

And to make the telephone system useful to those Twenty Million other people, we have to keep you alert and ready at this end of the wire.

Then we have to keep the line in order—8,000,000 miles of wire—and the central girls properly drilled and accommodating to the last degree, and the apparatus up to the highest pitch of efficiency.

Quite a job, all told.

Every telephone user is an important link in the system—just as important as the operator. With a little well meant suggestion on our part, we believe we can improve the service—perhaps save a second on each call.

There are about six billion connections a year over these lines.

Saving a second each would mean a tremendous time saving to you and a tremendous saving of operating expenses, which can be applied to the betterment of the service.

The object of this and several succeeding magazine advertisements is *not to get more subscribers*. It is to make each one of you a better link in the chain.

First, give "Central" the number clearly and be sure she hears it. Give her full and clear information in cases of doubt. She is there to do her utmost to accommodate you.

Next, don't grow fretful because you think she represents a monopoly. The postmaster does, too, for the same reason.

The usefulness of the telephone is its *universality, as one system*. Where there are two systems you must have two telephones—and confusion.

Remember, the value of the service lies in the number of people you can reach *without* confusion—the promptness with which you get your response.

So respond quickly when others call you, bearing in mind the extensive scope of the service.

The constant endeavor of the associated Bell companies, harmonized by one policy and acting as one system, is to give you the best and most economical management human ingenuity can devise. The end is efficient service and your attitude and that of every other subscriber may hasten or hinder its accomplishment.

Agitation against legitimate telephone business—the kind that has become almost as national in its scope as the mail service—must disappear with a realization of the necessity of universal service.

American Telephone & Telegraph Company

And Its Associated
Bell Companies



One Policy—One System
Universal Service

UNITING OVER 4,000,000 TELEPHONES

Effectiveness of Hardware

Complete the *effectiveness* of the finish in your new house by using hardware trimmings that tastefully conform to the chosen style of architecture. From the severely plain to the highly elaborate designs, one may be equally certain of true artistic excellence, uniform quality and durability, by relying on

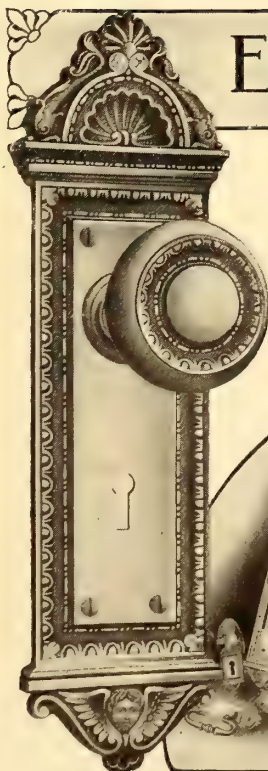
Sargent's ARTISTIC HARDWARE

Whatever the style or finish may be, there is a full line of hardware to harmonize perfectly with it and carry out the desired effect. Over seventy attractive designs are shown in

Sargent's Book of Designs—Free

together with helpful suggestions to home builders. Explains the Easy-Spring Principle of Sargent's Locks. The *Colonial Book*—also yours on request—is indispensable to lovers of this style. Write for both books.

SARGENT & CO., 156 Leonard St., New York



Have a Good Water Supply

YOU can have a good water supply. You can have all the conveniences, comforts and protection of the best city water works system. You can have an abundant supply of water delivered to any point desired—the bathroom, kitchen, laundry, lawn, garden, barn—anywhere.

This service will be yours if you install the

Kewanee System of Water Supply



Kewanee Water Supply Company Kewanee, Illinois.

1566 Hudson-Terminal Building, 50 Church Street,
New York City.

710 Diamond Bank Building, Pittsburg.

820 Marquette Building, Chicago.

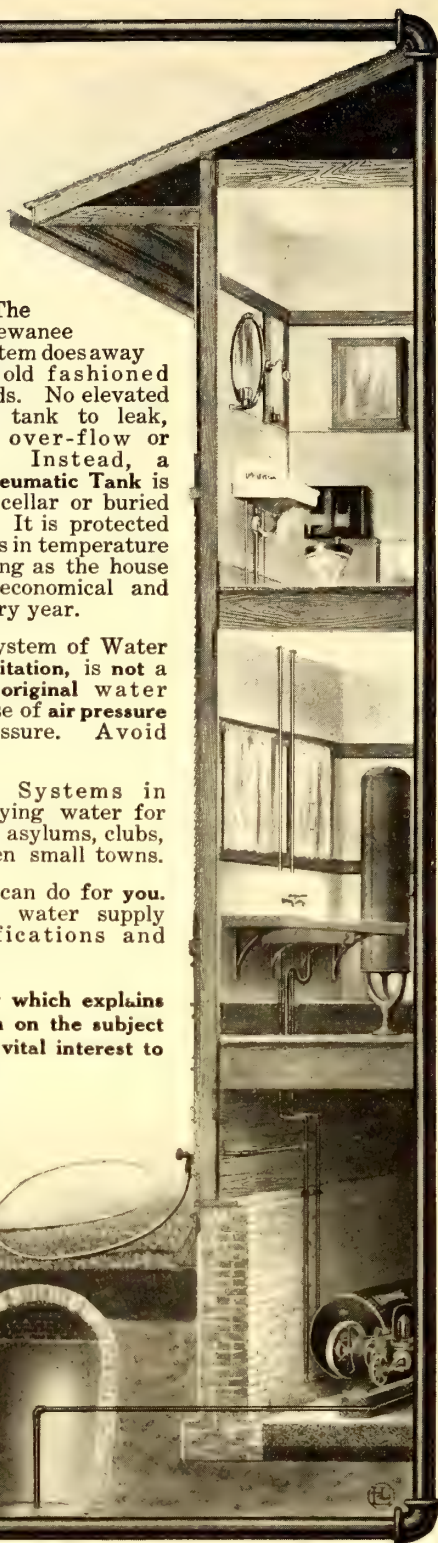
The Kewanee System does away with old fashioned methods. No elevated or attic tank to leak, freeze, over-flow or collapse. Instead, a **Kewanee Pneumatic Tank** is placed in the cellar or buried in the ground. It is protected from all extremes in temperature and will last as long as the house stands and give economical and efficient service every year.

The Kewanee System of Water Supply is **not an imitation**, is **not a substitute**—it is the **original water system**, involving the use of **air pressure** instead of gravity pressure. Avoid cheap imitations.

Over 8,000 Kewanee Systems in successful operation, supplying water for residences, schools, hospitals, asylums, clubs, apartment buildings and even small towns.

Let us show you what we can do for you. Let our engineers solve your water supply problem—no charge for specifications and estimates.

Write for our illustrated catalog which explains everything. If you want information on the subject of water supply, this catalog will be of vital interest to you. Ask for catalog No. 36.



Young Corn Always in Season

What an appetizing aroma! Such deliciously flavored soup! And no end to the number of ways in which it can be prepared! Green corn always in season, and free from husks and hulls, is

Kornlet

(The Heart of the Kernel)

Don't class it with canned corn, for it's *different*. You can prepare Kornlet in an endless variety of ways.

Look for recipes on every wrapper. Valuable book of recipes sent free on request.

If your grocer hasn't Kornlet, write us.

The
Haserot
Canneries
Company,

Cleveland, Ohio, U. S. A.

Van Dorn Iron Works Co.

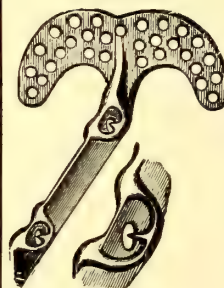


PRISON, HOUSE &
STABLE WORK

JOIST HANGERS
LAWN FURNITURE
FENCING, ETC.

CLEVELAND, OHIO

STANDING SEAM ROOF IRONS



PATENTED

CLINCH right through the standing seam of metal roofs. No rails are needed unless desired. We make a similar one for slate roofs.

Send for Circular

Berger Bros. Co.
PHILADELPHIA

MY BIG \$5.00 OFFER



Includes a year's subscription to that splendid monthly magazine, the

Journal of
Modern Construction

Two sets of complete
Blue Print Plans

(meaning full size working drawings and specifications) selected from my new book of 76 Attractive Houses, costing \$1,000 to \$4,000, and a full, itemized Bill of Material.

Send \$1.00 NOW for book of 76 plans, and three months' trial subscription. The \$1.00 can be applied later on the \$5.00 offer.

MAX L. KEITH,

403 LUMBER EXCHANGE

MINNEAPOLIS, MINN.



American
Homes and Gardens
and
Scientific American

To one address **\$5** per year
Regularly \$6



The expense and annoyance of painting will not recur every year or two if you use

DIXON'S SILICA-GRAPHITE PAINT

the "Proven Shield for Steel Work." Durability records in all climates; write for a few.

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.



semi-double variety with pure white flowers. Queen Charlotte is a beautiful pink much after the color of a La France rose, and is especially fine when grown with the white varieties. Prince Henry is another fine pink flower, but quite double. A paler rose is found in the double variety Rose d'Autumne, while by some Lord Ardilaun is considered finer than that old favorite, Whirlwind, it is certainly more double. All are so thoroughly admirable that it will well repay one to purchase all the various varieties by the dozen, and make their planting a notable one. It will thus be seen how fine a thing the autumn garden may become by a little judicious planting, and if equal care be given the spring garden, and the list of spring blooming plants and bulbs is infinite, the summer absentee will have little to complain of in her garden during the time of home staying.

Colonial Houses FOR MODERN HOMES

A COLLECTION of designs of houses with Colonial (Georgian) details, but arranged with modern comforts and the completeness of the twentieth century.

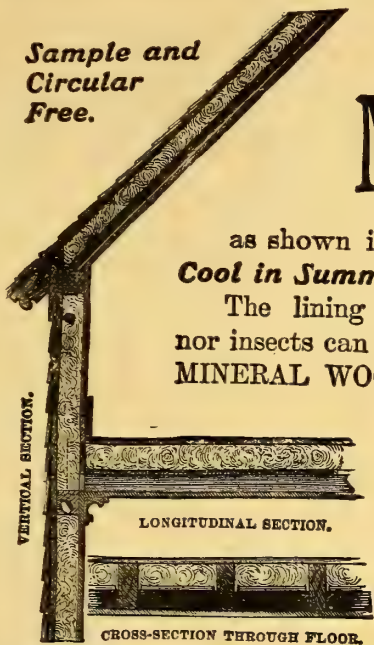
Written & Illustrated by E. S. CHILD, Architect

They show large, correctly drawn perspectives, full floor plans, and complete descriptions, with estimates of cost. The designs are new, original, unique, consistent, but not stiff nor constrained. Made, not by an artist, but by an architect. They combine beauty of exterior with complete and convenient interiors, with kitchens, laundries, pantries and closets carefully and skilfully considered. If you are at all interested in the subject, you will enjoy this publication.

Price, postpaid, \$2.00

MUNN & CO., 361 Broadway, NEW YORK

Sample and
Circular
Free.



A House Lined with Mineral Wool

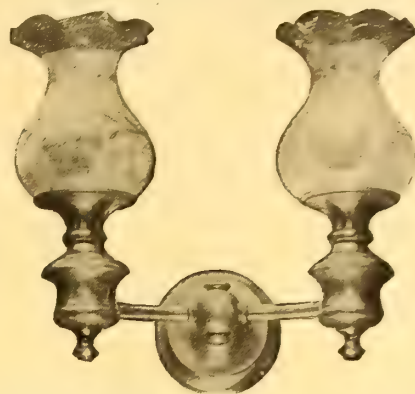
as shown in these sections, is *Warm in Winter,
Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice,
nor insects can make their way through or live in it.
MINERAL WOOL checks the spread of fire and keeps
out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.
140 Cedar St., NEW YORK CITY.

A FIXTURE constructed and finished to harmonize
with the decorations and furnishings of a room
not only affords satisfaction, but lends dignity.
The services of our designer are at an architect's disposal, or we
will manufacture from his own designs if preferred



For the protection of our clients, our trade-mark will
be found on each and every piece of work made by us.

The Enos Company

MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
San Francisco, 1748 California Street
Toronto, 94 King Street, West
Pittsburg, G. P. Norton, Penn at 4th St.
Chicago, W. K. Cowan & Co., 201 Michigan Blvd.
NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & Co., BOSTON



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER, TILING

An Ideal Floor Covering for Court
Houses, Banking Institutions, Churches,
Hospitals, Libraries, Business Offices,
Restaurants, Vestibules, Elevators,
Kitchens, Laundries, Pantries, Bath-
rooms, Steamships and Floating Pro-
perty generally.

We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street

"I'd have sliding doors in my
house if I could only be sure they
wouldn't stick or get off the track."

How many times have you heard
that? The

**Allith Reliable
Parlor Door Hanger**

overcomes every possible objection
and makes sliding doors what they
should be—a great convenience. For

They cannot bind, stick or jump
the track, and the wheels are made
of paper pressed so hard they roll
as noiselessly as a billiard ball.

If you are building or remodeling
the house, you really ought to send
for our latest catalog and give us the
name of your architect. He knows
our door hangers are good and will
specify them if you say the word.

ALLITH MANUFACTURING CO.
2103 W. Taylor St. CHICAGO

?
**What
Do You Want
to Buy**
?

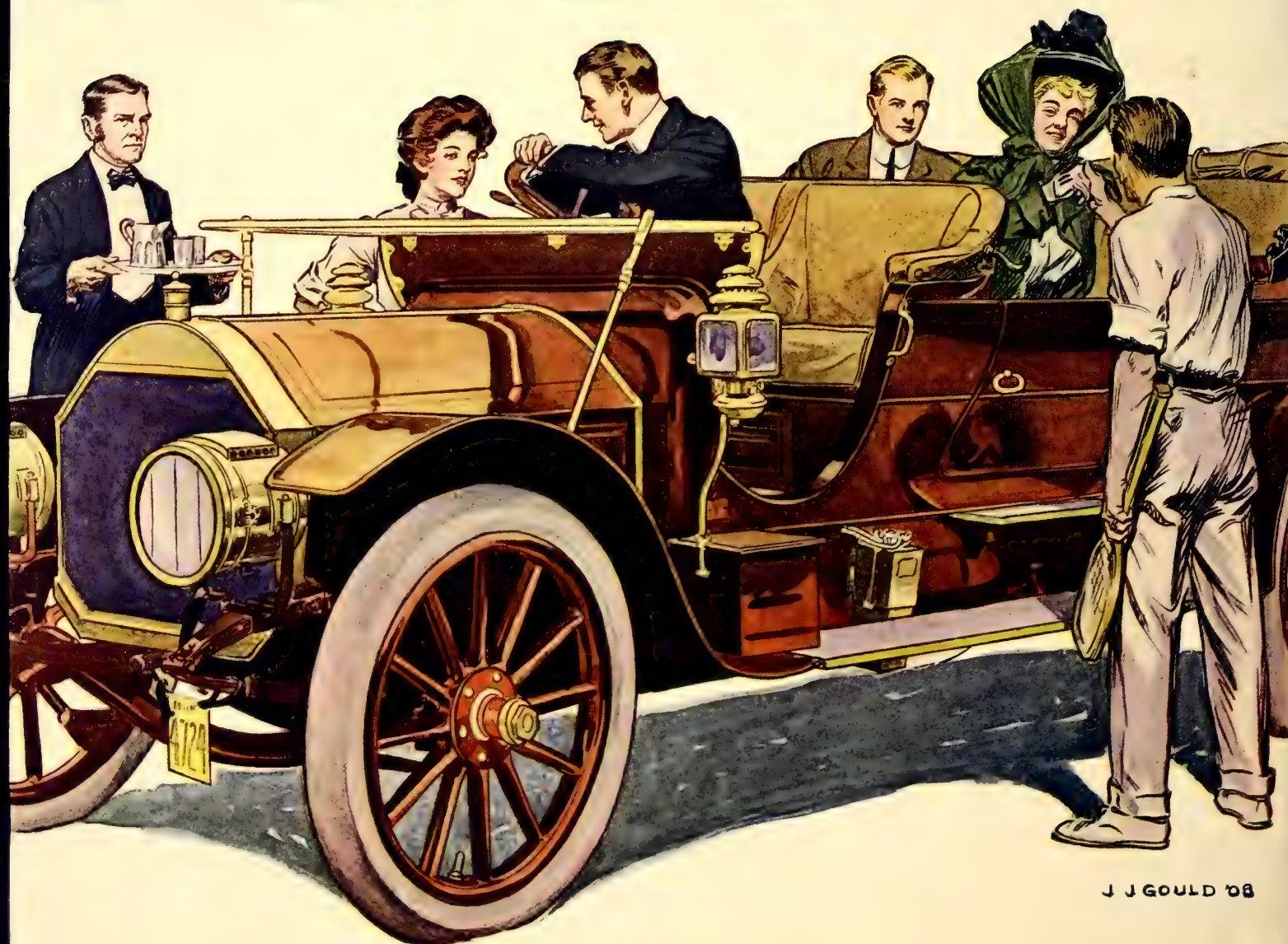
We can tell you where to buy anything you
want. Write us for the addresses of manu-
facturers in any line of business—Novelties,
Special Tools, Machinery, Equipments, new
patent *Labor-Saving Devices*.

MUNN & COMPANY

Publishers of Scientific American

361 BROADWAY, NEW YORK, U. S. A.

The Pierce Arrow



J. J. GOULD '08

The season of 1909 will see the mechanical excellence of the PIERCE cars produced in a greater variety of types.

The new models include	{	RUNABOUTS	BROUGHAMS	SUBURBANS
		(4 and 6 cylinder)		
		TOURING CARS	LANDAULETTES	LANDAUS
		(for 2, 3, 4, 5 or 7 passengers)		

They can be seen at and prices obtained of the PIERCE ARROW dealers in every large city.

THE GEORGE N. PIERCE CO. (Members Association Licensed Automobile Manufacturers), BUFFALO, N. Y.

FNA
7100
A572
Hort.

Vol. V

OCTOBER, 1908

No. 10

AMERICAN HOMES AND GARDENS

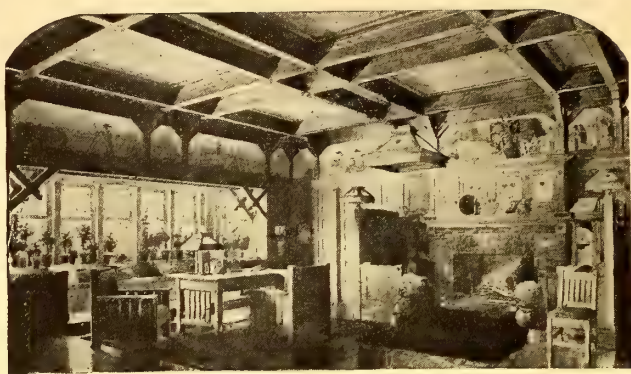


\$3.00 A YEAR

MUNN & COMPANY, Publishers

PRICE, 25 CENTS

FLINT'S FINE FURNITURE



DECORATIONS AND FURNISHINGS

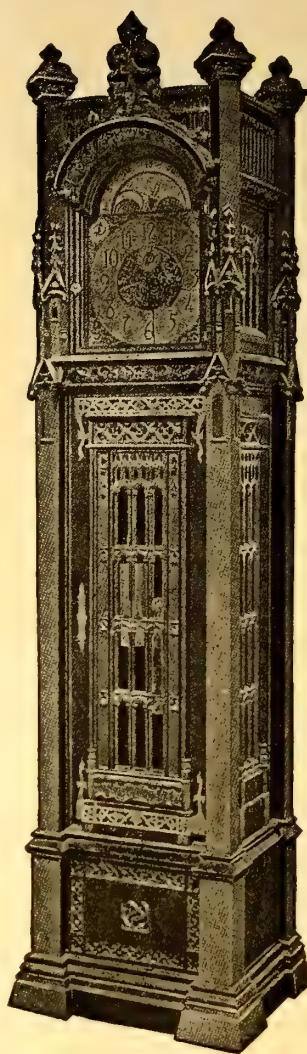
If planning to redecorate your home or apartment, a visit to our studios on the 7th floor will greatly aid you.

Here, at your leisure, you may examine colored sketches already prepared, or see the copies and photographs of what we have done for others, and perhaps find just the suggestions you need to complete your own ideas, and, at the same time, have the actual Textiles, Wall Coverings, Carpets and Rugs all assembled in a complete scheme.

Upon request, artists will be sent for consultation and colored drawings and estimates submitted.

GEO. C. FLINT Co.
43 WEST 23 ST.

HALL CLOCKS



The most useful and ornamental article you can have in your home is a fine HALL CLOCK. We make many styles and kinds, with or without chimes.

The "Banjo," which is so popular for dining-room and library, is a most satisfactory clock.

We also make a full line of Marble Clocks and Regulators.

If your local dealer does not sell our line, send direct for new illustrated catalogue.

Waltham Clock Company
Waltham, Mass.



*ENGLISH OAK PANEL.
REPRODUCTION OF
GRINLING GIBBONS
CARVING IN OAK*

The A. J. Crawford Co.

We are specialists in furnishing and interior decorating in the English Periods.

The largest collection of English furniture in America.

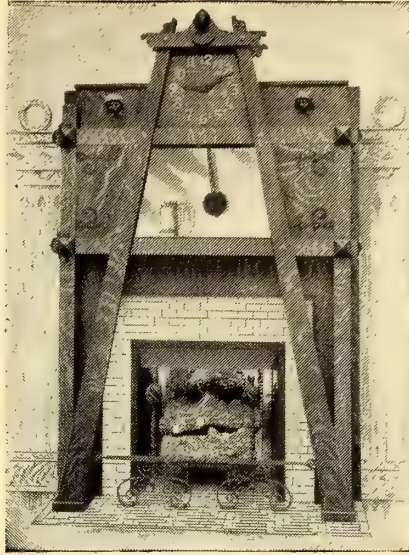
Reproductions of our exclusive models at moderate prices.

251-255 Fifth Avenue
New York



Serpentine Crepe

The cheapest and most effective fabric for Draperies, Curtains, Screens, etc.
Send for free samples.
PACIFIC MILLS, BOSTON, MASS.



Artistic Mantels

¶ Our Catalogues contain 130 designs, including Mission, Colonial, White, Mahogany and Oak. Everything, from the very cheapest to the best.

¶ Fireplace Hardware and Tiling of every description.

¶ Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.
Unity Building Chicago, Ill. Clark Building Jacksonville, Fla.
Factory, Knoxville, Tenn.

MENNEN'S
BORATED TALCUM
TOILET POWDER



"Baby's Best Friend"
and Mamma's greatest comfort. Mennen's relieves and prevents Chafing, Sunburn, Prickly Heat and Chapping. For your protection the genuine is put up in non-refillable boxes—the "Box that Lox," with Mennen's face on top. Sold everywhere or by mail 25 cents. Sample free.

Try Mennen's Violet (Borated) Talcum Toilet Powder—it has the scent of Fresh-cut Parma Violets. Sample Free.

GERHARD MENNEN CO., Newark, N. J.
Mennen's Sen Yang Toilet Powder, Oriental Odor (No Mennen's Borated Skin Soap (blue wrapper) Samples Specially prepared for the nursery. Sold only in stores.

Bound Volumes

For 1905	\$3.50
For 1906-1907, each	\$5.00

American Homes and Gardens



MUNN & COMPANY, Publishers
361 BROADWAY, NEW YORK

Cottage Designs

No. 1. Cottage Designs
Twenty-five designs, ranging in cost from \$600 to \$1,500

No. 2. Low Cost Houses
Upward of twenty-five designs, costing from \$750 to \$2,500

No. 3. Modern Dwellings
Twenty designs, at costs ranging from \$2,000 to \$5,000

No. 4. Suburban Homes
Twenty selected designs, costing from about \$3,000 upward

By far the most complete collection of plans ever brought out. Illustrated with full-page plates.

\$1 each * Sold separately

MUNN & COMPANY, PUBLISHERS
361 BROADWAY :: NEW YORK

Facts About Furniture
Charmingly Told in a Booklet



"Furniture of Character" is its title. It tells about the famous and favorably known

Berkey & Gay

Bed room, Dining room and Library Furniture of correct and pleasing design, honest and durable construction, elegant and lasting finish—an interesting story impossible to tell in any advertisement.

To partly defray the expense, it will be sent for 16 cents in United States stamps, which will be refunded on return of the booklet, if it does not satisfy.

Furniture described therein bears this shop mark, which is your safeguard and our guarantee. It can be obtained at modest prices from leading dealers.

BERKEY & GAY FURNITURE CO. Estab. 1859
Please address Dept. M. Grand Rapids, M. Jh.




KILHAM & HOPKINS, Architects, Boston

DEXTER BROTHERS'
English Shingle Stain

preserves your shingles, makes the artistic house perfect, makes the ugly house artistic. Soft, velvety colors. No disagreeable odors.

Send for Sample Colors

Dexter Bros. Co., 103 & 105 Broad St., Boston, Mass.

AGENTS: H. M. Hooker Co., 128 W. Washington St., Chicago; W. S. Hueston, 22 E. 22d St., New York; John D. S. Potts, 218 Race St., Philadelphia; W. W. Lawrence & Co., Pittsburg, Pa.; F. H. McDonald, 619 The Gilbert, Grand Rapids, Mich.; F. T. Crowe & Co., Seattle, Spokane, Tacoma, Wash. and Portland, Ore.; Klatt-Hirsch & Co., 113 Front St., San Francisco, Cal.

If your brick or concrete house leaks, ask about **ANTI-AQUATINE**

A FREE SAMPLE
of the New Building Felt

LINOFELT

(LINON FELT MADE FROM FLAX FIBRE IN THIS FACTORY)

SENT TO YOU, if you are about to build or interested in building a house of any kind. Also a neatly illustrated book, "THE HOUSE OF SILENCE" which tells how and why it

SAVES ITS COST IN ONE WINTER

38 TIMES AS EFFECTIVE AS STANDARD BUILDING PAPER

For Excluding Cold, Heat or Noises. Not Expensive—it adds less than 1 per cent. to the cost of any building, but adds fully 10 per cent. to its warmth and comfort.

Sold by Hardware and Building Trades

Write **UNION FIBRE CO.**
144 Fibre Ave., Winona, Minn.
THE PHILIP CAREY COMPANY
Distributors, Cincinnati

Branches and warehouses in all large cities in the U.S., Canada and Mexico



BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont

THE METROPOLITAN MAGAZINE

The Great Monthly for the American Home

OCTOBER

"THE FUTURE OF THE AEROPLANE," by Henri Farman

An illuminating article from the greatest of aviators

"OSTEOPATHY," by E. M. Downing

The second and last chapter on the theory and practice of this new school.

"BETWEEN THE LINES," by Sally Royce Weir

A thrilling chapter of personal reminiscences

"ST. LUKE'S SUMMER," by Mary Cholmondeley

The first instalment of a two-part story by the author of "Red Pottage"

Other articles and stories in this number are by Maarten Maartens, Will Adams, Jackson Cross, Edward Marshall, Frank W. Sweet, etc.

15 CENTS A COPY
\$1.50 A YEAR

Every direct purchase of five dollars' worth of R. H. Russell's books will entitle you to a year's subscription to this great magazine

THE BEST READING

THE TIGER AND THE INSECT

By John Habberton. \$1.20

Illustrated by Walter Russell. If you have read "Helen's Babies" you won't be in danger of missing this long-awaited sequel to that famous and laughable book.

MORE WOLFVILLE STORIES—THE BLACK LION INN

By Alfred Henry Lewis. \$1.50

Illustrated by Frederic Remington. Stirring stories of adventure on the frontier, told by Westerners snowbound in an old inn.

THE WIND IN THE TREE

By The Duchess of Sutherland. \$1.50

An introduction, through a series of charming love adventures, to people and manners of the widest interest.

HER MAJESTY THE KING

By James Jeffrey Roche. \$1.50

Illustrated by Oliver Herford. Full of wit, originality, and satire.

CHARLES DANA GIBSON

on his recent return to this country, reiterated his statement that he would not return to the pen-and-ink work which made him famous. Mr. Russell has collected these drawings and offers seven volumes:

The Social Ladder, Americans, A Widow and Her Friends, The Education of Mr. Pipp, Sketches and Cartoons, Pictures of People, People of Dickens.

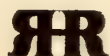
Printed on heavy plate paper and bound in Japan vellum. \$5.00 a volume.

He offers many other important art publications, including Frederic Remington's books and prints. Enriched editions of Rossetti, William Morris, Burne-Jones, and one of the wittiest satires ever penned, by James McNeill Whistler.

He will, upon request, send information about limited editions, signed personally by James McNeill Whistler, Charles Dana Gibson, Frederic Remington, and others.

Write for a list of other important publications.

R. H. RUSSELL, Publisher



Dept. A., 3 W. 29th St., New York

Just Published

Tenth Edition

MODERN PLUMBING STEAM AND HOT WATER HEATING

CONTAINING THE MOST MODERN METHODS OF PLUMBING AS CONSTRUCTED AT THE PRESENT DATE

Soil and Waste Pipe Ventilation, Back Venting, The House Trap, The Fresh Air Inlet and Their Advantages. Siphonage of Traps, The Cause and How to Remedy the Same. How to Test Soil and Waste Pipes. Probable Questions of Plumbing Examining Board, and Answers to Same. Hydraulics of Plumbing, with Original Illustrations. Practical Drawings and all Important Features in the Construction of Modern Plumbing Work.

STEAM AND HOT WATER HEATING

How to correctly figure on any size or shape of building with steam or hot water. How to find the heating capacity of any shape or make of boiler for steam or hot water heating. The most practical time-saving tables ever compiled and published. A new table of how to quickly find the correct measurement of 45-degree angles, a most useful thing in Steam and Hot Water construction. This has never before appeared in print.

More practical illustrations than ever published in any one volume, which show the various systems of construction in the heating and ventilating of buildings by the steam or hot water systems.

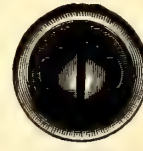
By JAMES J. LAWLER

Over three hundred diagrams and illustrations, showing the various systems of construction in the heating and ventilating by steam or hot water systems. Six folding inserts showing Waste Pipe System of Plumbing, One-pipe System of Both Steam and Hot Water Heating, Overhead System, Fan System of Heating and Ventilation, and Steam and Hot Water Circuits.

400 Pages, Large Octavo Size, 10x7½ inches. Bound in Extra Cloth. Price, Postpaid, \$5.00.

MUNN & CO., 361 Broadway, NEW YORK

PREVENTS DRAFTS, DUST AND WINDOW RATTLING.



IVES' PATENT Window Stop Adjuster.

HEAVY BED

PATENTED.

The only Stop Adjuster made from one piece of metal with solid ribs and heavy bed that will not cup, turn or bend in tightening the screw. Manufactured only by The H. B. IVES CO., New Haven, Conn., U. S. A. (Fifty-page Catalogue Mailed Free.)

For Five Dollars

American Homes and Gardens and Scientific American

SENT TO ONE ADDRESS FOR ONE YEAR

Regularly Six Dollars

Bound Volumes of American Homes and Gardens

Volume for 1905 \$3.50

Volume for 1906 \$5.00

Volume for 1907 \$5.00

MUNN & CO., Publishers 361 Broadway, New York



"To have your roof last—
Use Ruberoid Roofing first"

A Talk on Roofing

"I want to assure you as emphatically as possible that RUBEROID ROOFING is different from all others and possesses qualities found in no other roofing on earth.

"If anybody says this isn't so, ask him to show you any considerable number of roofs covered as long as 15 years ago with any roofing except RUBEROID, that are still in perfect condition, without having been repaired in the meantime. The result is sure—he can't do it.

"Why is this so? Simply because

RUBEROID ROOFING

(TRADE-MARK REG. U.S. PAT. OFF.)

contains neither tar, rubber nor any other element or ingredient that will rust, rot, crack or melt. It is weather-proof, water-proof, acid-proof and so strongly fire resistant that sparks or burning brands will not ignite it.

"It outlasts metal or shingles and costs less, although it isn't to be classed among 'cheap' roofings. There is a difference between cheapness and economy and RUBEROID ROOFING is the most economical roofing your money can buy. Furthermore, it is

**'The Only Permanent Roofing
with Permanent Colors'**—

colors that will last. It is made in RED, BROWN, GREEN AND SLATE COLOR. "Take your choice; they are all permanent. Anybody can lay RUBEROID ROOFING—all necessary materials come with each roll."

Write to-day for free descriptive booklet No. 15

THE STANDARD PAINT COMPANY

Manufacturers of Ruberoid Roofing,
Building and Sheathing Papers, etc.
100 William Street, New York

Chicago, St. Louis, Kansas City, Boston, Philad'a, New Orleans

THE STANDARD PAINT CO. OF CANADA, LTD.

Imperial Bank Bldg., Montreal

RUBEROID GESELLSCHAFT, m. b. H.

Hamburg and Berlin, Germany

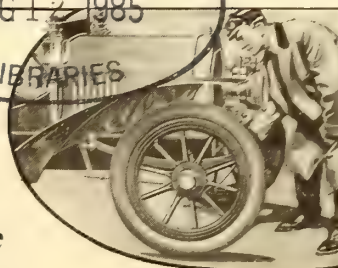
CIE. FRANCAISE DU RUBEROID

83 Boulevard Richard Lenoir, Paris, France

THE RUBEROID CO., LTD.

82-83 Knightrider St., London, England

The
Oil
You
Can
Feel
At the
Crank



The slightest "feel" of the crank proves the perfection of MOBILOIL. There is no possibility of anything but perfect lubrication in any gasoline engine, regardless of type. For different machines there are different grades of

VACUUM MOBILOIL

Our booklet tells you which is the proper grade for your automobile—and why. A copy will be sent free on request. It contains much of interest to motorists.

MOBILOIL in barrels, and in cans with patent pouring spout is sold by all dealers.

Manufactured by

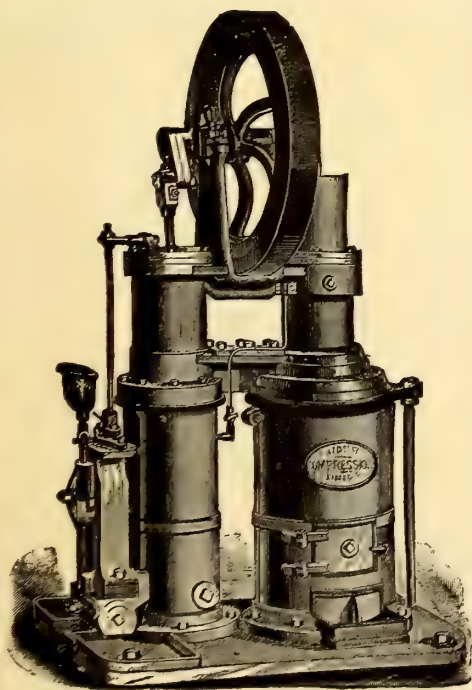
VACUUM OIL COMPANY, Rochester, N. Y.



Take a few minutes right now and get real facts on steel ceilings and side walls.

Call in your stenographer and simply say "Eller Manufacturing Company, Canton, Ohio. Send for catalogue." You will be more than repaid. We take such an interest—are glad to serve you, and for years everybody knows "Eller" has stood for the highest in quality.

ELLER MFG. CO.
CANTON, OHIO



Improved Rider Hot Air Pumping Engine

— AND —

Improved Ericsson Hot Air Pumping Engine

**PRICES GREATLY
REDUCED**

Send for Catalog "E" to nearest office

Rider-Ericsson Engine Co.

39 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



Our remarkable recent inventions enable us to offer the public an intensely brilliant

Smokeless Gas

at much less cost than city gas, better, safer and cheaper than electricity, and costing but one-fourth as much as acetylene.

**Most Durable and Least Expensive
Apparatus to Maintain**

in effective perpetual operation. Gives services of lighting, cooking and heating. Full satisfaction guaranteed, and easy terms.

**The Very Apparatus for Suburban
Homes, Institutions, Etc.**

WE construct special apparatus also for fuel gas for manufacturing, producing gas equivalent to city gas at 50 cents per 1000 cubic feet, and made to respond to very large demands; also for lighting towns, etc.

C. M. Kemp Mfg. Co., Baltimore, Md.

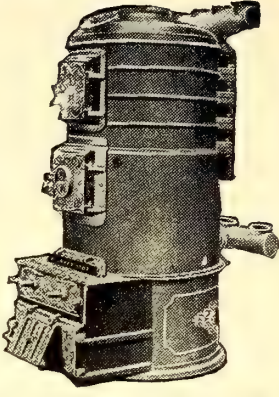
GURNEY HEATERS-GURNEY HEATERS-GURNEY HEATERS

GURNEY HEATERS

GURNEY HEATERS, measured by quality, economy and efficiency, are the standard of value.

- They are made of the best materials and by the highest grade of mechanical and engineering skill; constructed under these conditions, they are unequalled in durability.
- There is also complete combustion of fuel and no waste of heat units, thus insuring great economy.
- The **GURNEY HEATER**, made either for hot water or steam, distributes the heat evenly and with a certainty that gives complete satisfaction to the user.
- Easily installed in old or new buildings they appeal to those who want to eliminate extra care and waste, or who want greatest value for amount expended.
- Send for illustrated catalogue.

GURNEY HEATER MFG. CO.
188-200 Franklin St., Corner Pearl St., BOSTON, MASS.
NEW YORK BRANCH, 12 East 42d Street



GURNEY HEATERS-GURNEY HEATERS-GURNEY HEATERS



GARDENS OLD AND NEW. The Country House and Its Garden Environments. Third Volume. Edited by H. Avray Tipping, M.A. (London: Country Life Office. New York: Imported by Charles Scribner's Sons.) 1908. Folio; pp. 346. Price, \$12.00, net.

This is the third volume in this superb series which has come to the reviewer's desk. The beautiful "Country Life" is always a welcome visitor, and the present volume includes some of the most interesting illustrations which we have ever seen relating to the more pretentious English country houses and gardens. There is an indefinable charm and beauty about the really old, substantial English country halls and manors which it is impossible to duplicate. The present volume contains an extraordinary collection of castles, priories, manors, courts, parks, and other well known types of the aristocratic home. The book, which is beautifully printed on the finest coated paper, is most fascinating, and gives the American reader a longing for the stately balustrades, clipped yew trees and that greenest of the green sward of old England. The selections of houses and gardens in this third volume has been a most happy one, and we do not notice a single instance that has any mediocre features. Castle Howard, Yorkshire, and Lime Hall, Cheshire, are about the most pretentious edifices which are shown in the present volume. The writer has for years been studying "Stately Homes in England," and he feels justified in giving high praise to this truly admirably and extremely beautiful book.

SOUTHERN AGRICULTURE. By F. S. Earle. New York: The Macmillan Co. Pp. 8+297. Price, \$1.25.

This book deals exclusively with the conditions and crops of Southern agriculture. It seeks to do for Southern agriculture what many other books have done for Northern crop growing. If its scope to Northern readers appears somewhat restricted, it should be remembered that it treats of a very large region, and is concerned with some of the most important crops raised in the United States. It appeals, therefore, to a very large class of agriculturalists who have long needed a textbook adapted to their special requirements. The author treats his subject in a thoroughly able and competent manner and has written a book of great practical utility.

BULBS FOR FALL PLANTING

By Ida D. Bennett

FALL is the one time of the year in which successful plantings of bulbs may be made. Spring-planted bulbs rarely succeed, certainly they do not give any returns the first year. I am aware that nearly all floral catalogues offer more or less stock of lily bulbs, but these are bulbs which were left over from the previous fall, and having been out of the ground for six months or more are greatly depleted in vitality if not absolutely worthless. Occasionally one finds certain lily bulbs which will make immediate growth when planted at this season, and while not blooming the first summer, yet retain and conserve enough energy to make growth for another year. But the nearer one can come in the planting to the lifting of the bulbs from the ground the better.



WATER

For Your Country or Suburban Home

An Abundant Supply Delivered Under Strong Pressure To All Fixtures

YOUR country or suburban home can be provided with all the sanitary conveniences and comforts which are possible with the best city water works system. You can have an abundant supply of water, delivered under strong pressure to all fixtures and hydrants—to the bathroom, kitchen, laundry, lawn, garden, barn—anywhere.

This service will be yours, day after day for a lifetime, if you install

The Kewanee System of Water Supply

With the Kewanee System, there is no elevated or attic tank to freeze, over-flow, leak or collapse. Instead, a Kewanee Pneumatic Tank is located in the cellar or buried in the ground, and the water is delivered by **air pressure**.

Over eight thousand Kewanee Systems in successful operation, supplying water for country and suburban residences, clubs, farms, schools, public and private institutions, villages, etc.

The Kewanee System is **not an imita-**

tion—is not a substitute. It is the **original** water supply system involving the use of **air pressure** instead of gravity pressure. Avoid cheap imitations. Look for our trade mark and name plates on tanks and pumping machinery. Get the genuine and you will take no chances—we guarantee that.

Expert engineering service is free. Every Kewanee System thoroughly guaranteed—a guarantee which protects you. Write for our complete illustrated catalog No. 36.

Kewanee Water Supply Company, Kewanee, Ill.

820 Marquette Bldg., Chicago, Ill.

1566 Hudson-Terminal Fulton-Bldg., 50 Church St., New York City.

710 Diamond Bank Bldg., Pittsburg, Pa.

Tulips and hyacinths are lifted when dormant, which is as soon as the foliage has ripened and roots decayed, after this the bulbs remain in a semi-dormant condition, resting, and may be moved at any time before they begin growth in the fall. Hyacinths also require this period of rest, which may as well be in paper bags in a cool situation as in the ground.

Such lilies as *Candidums* are dormant for a short time only, starting into growth early in September and should be lifted, for best results, in August, but most of the Japanese lilies mature later and many of them do not reach this country until late in November, or even December. It is, therefore, well to have the beds all prepared beforehand that the planting may be done as soon as they arrive. They may be planted any time when the ground may be worked, or when it is not frozen more than a few inches below the surface.

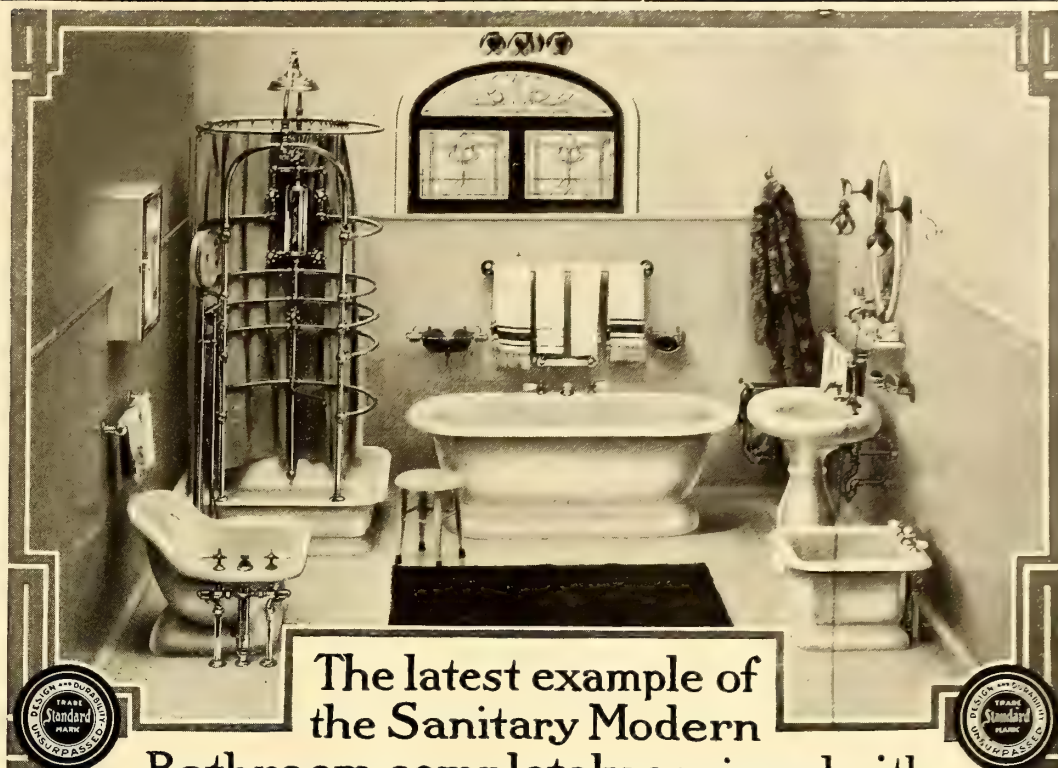
Tulips, crocus and hyacinths, which are planted much nearer the surface, should be planted as early in the fall as procurable, that they may make some root growth before cold weather sets in, as much of the beauty of the blooms depends upon this.

Any good garden soil will grow any sort of bulbs successfully, but a clay soil is not desirable, and for lilies a proportion of leaf mold is desirable.

Gardens infested with moles are not satisfactory places for the growing of bulbs, and unless they may be driven away or destroyed other plants less affected by this rodent should be grown. For several years I have tried the experiment of growing moles and tulips in the same garden, and so far must confess myself vanquished. Three years ago a bed on the lawn filled with several hundred choice named tulips was entirely destroyed—entirely, I say—but in digging up the bed for the cannas which occupied it during summer, I found three bulbs which had dropped to the bottom of the runs they had made, and were too deeply buried to come up. Last year some long borders of double tulips were nearly destroyed, only an occasional tulip appearing in the spring. The single borders fared somewhat better for some reason, but even here much destruction was wrought, some of the bulbs coming up in the center of beds several feet away and in the middle of the paths, where they had been carried by the moles. Traps have quite failed to catch them, and dopping the soil with kerosene, poisoned apples and the like have, so far, had no effect. I am inclined to think that a concrete fosse will be the only certain way of barring them from my garden, and unless that were capped with a curb I am not sure of the efficacy of that even.

One mole trapped in the fall is worth several trapped in the spring after they have begun to breed. It is curious that while the county authorities offer bounties for moles, no such bounty is offered or allowed by the city, though the damage done by them inside the city limits is far greater than in the outlying farming lands. A few moles on a lawn will in a week's time cause many, many dollars' worth of damage, often making it necessary to tear up and regrade a considerable portion of the lawn.

But to return to our planting. Most bulbs do better in full sunshine, but as they bloom at a time of the year when there is little, if any, foliage on the trees, most positions will give sufficient light. The depth at which various bulbs should be planted and the distance apart will depend somewhat upon the size of the bulbs, but most lilies may safely be set five inches deep, that is, the tip of the bulbs that far below the surface of the ground and a foot at least apart. This gives room for in-



The latest example of
the Sanitary Modern
Bathroom completely equipped with
"Standard"
Green & Gold Label Plumbing Fixtures

In a new edition of our beautiful 100-page book—"MODERN BATHROOMS"—there are a number of bathrooms, both elaborate and inexpensive, splendidly illustrated and described in detail. If you are building a new house or modernizing the old, it will pay you to send for a copy and read it carefully. The prices of the bathrooms, completely equipped, range from \$69. to \$542. The equipment of each bathroom is the best and most economical possible to procure at its price. This book means money-saved to you. Send for your copy now.

Please enclose six cents postage and give us the name of your architect and plumber, if selected.

Address **Standard Sanitary Mfg. Co.**, Dept. 23 Pittsburgh, Pa., U. S. A.

Offices and Showrooms in New York: "Standard" Building, 35-37 West 31st Street.

Louisville: 325-329 West Main Street.
London, Eng.: 22 Holborn Viaduct, E. C.

Pittsburgh: 949 Penn Avenue.

New Orleans: Cor. Baronne & St. Joseph Sts.
Cleveland: 648-652 Huron Road, S. E.

CEMENT

Its Chemistry, Manufacture & Use

Scientific American Supplement 1372 contains an article by A. D. Elbers on tests and constitution of Portland cement.

Scientific American Supplement 1396 discusses the testing of cement.

Scientific American Supplement 1325 contains an article by Prof. William K. Hatt giving an historical sketch of slag cement.

Scientific American Supplements 955 and 1042 give good accounts of cement testing and composition, by the well-known authority, Spencer B. Newberry.

Scientific American Supplements 1510 and 1511 present a discussion by Clifford Richardson on the constitution of Portland cement from a physico-chemical standpoint.

Scientific American Supplement 1491 gives some fallacies of tests ordinarily applied to Portland cement.

Scientific American Supplements 1465 and 1466 publish an exhaustive illustrated account of the Edison Portland cement works, describing the machinery used.

Scientific American Supplement 1519 contains an essay by R. C. Carpenter on experiments with materials which retard the activity of Portland cement.

Scientific American Supplement 1561 presents an excellent review by Brysson Cunningham of mortars and cements.

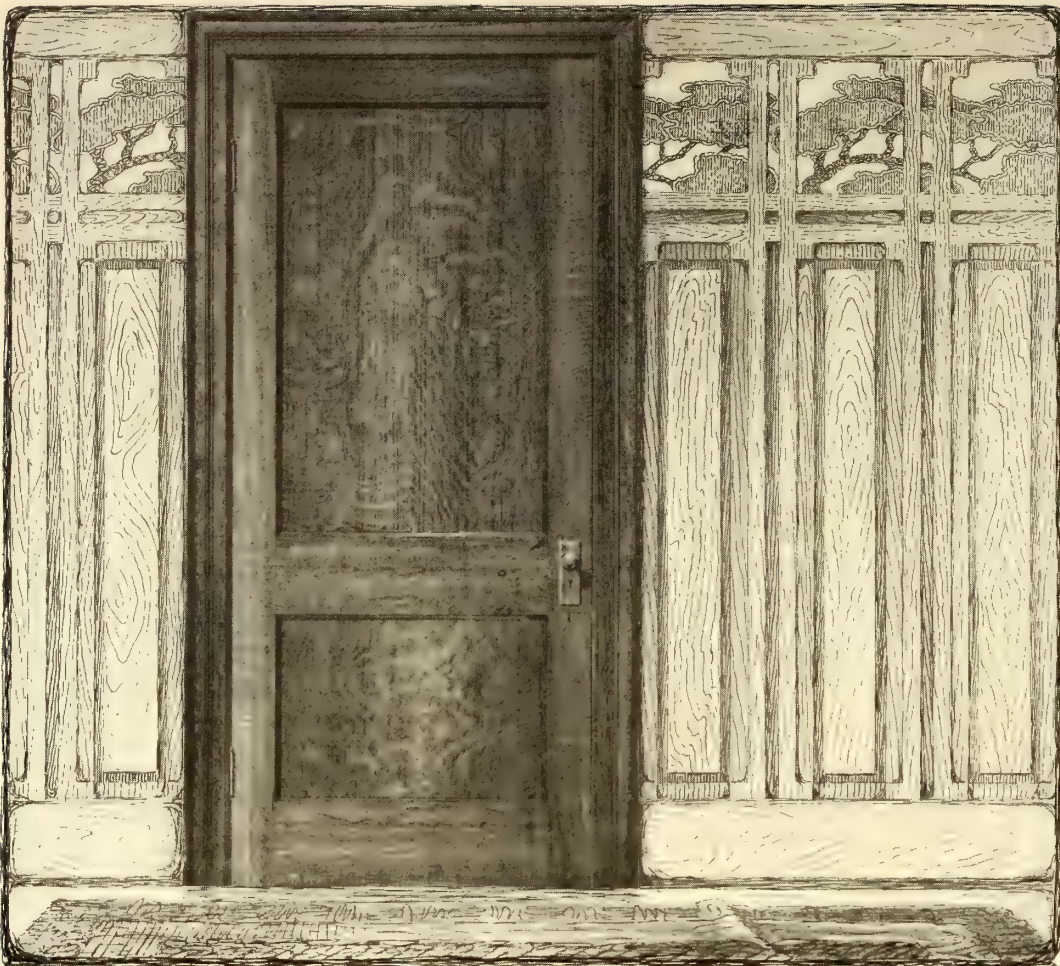
Scientific American Supplement 1533 contains a resumé of the cement industry and gives some valuable formulae.

Scientific American Supplement 1575 discusses the manufacture of hydraulic cement. L. L. Stone is the author.

Scientific American Supplements 1587 and 1588 contain an able paper by Edwin C. Eckel on cement material and industry of the U. S.

Any one of these Supplements will be sent for 10 cents. The entire set costs \$1.60, and constitutes an invaluable text book on the subject. Order from your Newsdealer or from

MUNN & COMPANY, 361 Broadway, New York



Substantial Refinement

Is reflected from every room where **Morgan Doors** are used. Their dignified designs harmonize with interior wood-work, decoration, and furnishings and their solid, honest construction gives the interior a sense of balance and permanence besides increasing the real value of the property.

Morgan Doors

are the most perfect doors manufactured. They are made of several layers with the grain running crosswise making shrinking, warping, or swelling impossible. They are veneered in all varieties of hard-wood, birch, plain or quarter-sawn red or white oak, and brown ash, mahogany, etc., and the delicate grain and coloring of each particular wood is brought out to the highest degree.

Morgan Doors are correctly designed by experts in all styles of architecture—Colonial, Empire, Mission, etc., and each **Morgan Door** is stamped with the name "Morgan" as a guarantee of quality, style, durability and satisfaction.

Write today for our handsome illustrated book "The Door Beautiful" which shows you more of the detailed beauty of **Morgan Doors** and why they are the only doors you should use in your building.

Morgan Company, Dept. A, Oshkosh, Wisconsin

Distributed by Morgan Sash & Door Co., Chicago, Ill. Morgan Company, Oshkosh, Wis. Morgan Company, Baltimore, Md.

Wall Papers and Wall Coverings

A PRACTICAL HANDBOOK

for Decorators, Paperhangers, Architects, Builders and House Owners, with many half-tone and other illustrations showing the latest designs

By **ARTHUR SEYMOUR JENNINGS**

EXTRACT FROM PREFACE

THE author has endeavored to include characteristic designs in vogue today, and to give reliable information as to the choice of wall papers as well as to describe the practical methods of applying them. In dealing with matters concerning decoration there is always the danger of leaning too much toward an ideal and of overlooking the practical requirements of commercial life. The author hopes that he has been successful in avoiding this fault, and that his book will be regarded as both practical and useful.

One Large 8vo Volume, Cloth. \$2

MUNN & CO., 361 Broadway, NEW YORK

Study Architecture

EASY LESSONS OR, STEPPING STONE TO ARCHITECTURE

By **THOMAS MITCHELL**

A SIMPLE TEXT-BOOK telling in a series of plain and simple answers to questions all about the various orders as well as the general principles of construction. The book contains 92 pages, printed on heavy cream plate paper and illustrated by 150 engravings, amongst which are illustrations of various historic buildings. The book is 12mo in size, and is attractively bound in cloth.

PRICE FIFTY CENTS, POSTPAID

Munn & Co., 361 Broadway, New York



Gas for Country Homes

Clubs, Hotels, Churches, Laboratories.

ECONOMY GAS MACHINE

gives a clear, steady, brilliant light and supplies gas for cooking, water heating, etc. Cheaper, cleaner and more satisfactory than acetylene, kerosene or electric light.

ECONOMY GAS MACHINE

automatically generates gas as consumed. None stored, so no danger. Self operating. Lighted the same as electric light, but without batteries. Eleven years success proves its merit. Write for booklet "THE ECONOMY WAY."

ECONOMY GAS MACHINE COMPANY
Stationary Gas Engines for Every Purpose
437 EAST MAIN ST. ROCHESTER, N.Y.

Thread & Thrum Rugs

are different from all other rugs, as you can have the color scheme made to harmonize with your requirements. Wool or camel's hair weft, heavy and durable. If your dealer does not sell them, write for color card and price list to
Arnold, Constable & Co., Distributing Agents, New York
The Thread & Thrum Workshop, Auburn, N. Y.

MANLOVE AUTOMATIC GATE



can be attached to ordinary posts. Is opened and closed by any vehicle, including Automobiles. Machinery is all above ground. Simple, durable, inexpensive. Especially adapted for Summer Homes and Country Clubs.

MANLOVE GATE CO., 272 E. Huron St., Chicago

St. Louis, Mo. Baltimore, Md.
F. Weber & Co.
1125 Chestnut St., Philadelphia, Pa.
Architects' and Engineers' Supplies



"FABRIANO" Hand-Made Drawing Papers
Superior to any other hand-made paper
F. Weber & Co.'s Illustration Boards, Air Brushes and Materials

This Pagoda Model \$3.00

VENETIAN, DUTCH, ITALIAN & TURKISH LANTERNS

Made of Heavy Wrought Iron with ruby, green, amber or white glass panels, which when lighted create an effect both artistic and beautiful. Fitted for oil ready to light, or can be adapted to gas or electricity. Absolutely unique for Porch, Hall, Den or Mission Room in the city or country home and for the Bungalow. Catalogue illustrates above; also Hanging Fixtures and Table Lamps for Library or Dining Room. Send stamp for catalogue and "Lamp Information"—knowledge acquired through years of experience.
The Rochester Lamp Co., Dept. C, Rochester, N. Y.



BRISTOL'S RECORDING THERMOMETERS

make continuous records of atmospheric temperatures, and are designed for both indoor and outdoor temperatures. Send for water catalogues.
THE BRISTOL COMPANY, NEW YORK Branches WATERBURY, CONN. CHICAGO

crease, and as the bulbs should not be disturbed for several years this amount of room is necessary.

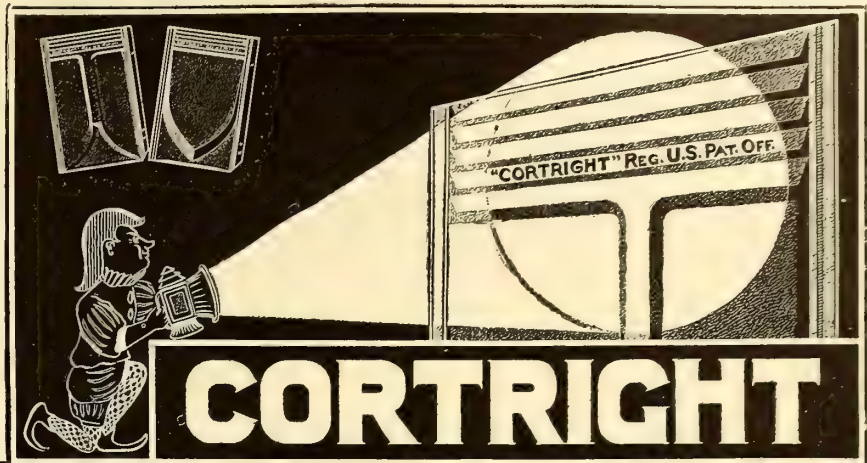
The list of fine lilies is so large that one hesitates to advise. One of the loveliest and most easily grown is the old white garden lily—*candidum* or Lily of the Annunciation. This lily, unlike most others, calls for shallow planting, setting the tip but little below the surface of the soil, but where it will be somewhat protected by other growing plants or shrubbery as peonies. Good drainage is essential to all bulbs, especially lilies, and in planting a situation where there is good natural drainage should be selected, or if lacking, the earth should be excavated eighteen inches or two feet, and several inches of gravel and broken stone filled in and the earth replaced, and if this is poor the surface soil only should be retained and good earth from the compost heap or leaf mold added. Under each bulb should be placed a little sharp white sand and a pad of sphagnum moss and the bulb covered with the sand; this insures individual drainage for each bulb.

The Japanese lilies—*roseum*, *rubrum* and *album*—are all exquisite, and as easily grown as *candidum* and the bulbs increase quite rapidly. *Auratum*, that queen of lilies, is as easily grown as any of the above if planted carefully in the fall, and if the precaution is taken to secure the large size bulbs, not the one or two-year pigmies so often sent out as first-class bulbs. These should be well supplied with drainage material and planted seven or eight inches deep. But to go into the many varieties of lilies is a subject by itself and not for a general article on bulbs.

Where tulips are to be grown in beds, which are to be used for other plants later on, it will be well to select the early blooming sorts, and those which are of the same height. But where the bulbs are to remain in the beds permanently the later blooming May sorts may be selected. Both double and single sorts are beautiful, and I am of the impression that one can not have too many of them. C. M. Powell, in his delightful book "A Country Home," advocates their planting among the strawberries, and one can imagine the flaunting blossoms bending above a carpet of snowy strawberry blossoms and green leaves.

Where the tulips are to be taken up and replanted in the fall it will be far less labor to plant the mixed bulbs, and as these may be had more cheaply than the named sorts, one may, therefore, have more of them. Only the choicest mixed should be selected, and one should have as many single as double ones, but plant the two kinds separate. Personally, I like tulips as borders to other beds more than for solid beds; here they may be left in the ground from year to year, and will increase rapidly. It may not be generally known that many tulips self-seed if allowed to ripen their seed, and will be found coming up in all sorts of unexpected places, but generally speaking I do not know that the formation of seed is good for the bulbs and, possibly, causes them to run out sooner. Tulips should be planted five inches apart and four inches deep, and if treated like a lily bulb with sand beneath, will be all the better for it. Manure is necessary for fine flowers, but should not come in immediate contact with the bulb. A good way to plant tulips or other bulbs is to throw out the earth for the width of the border and the depth of the planting, making the bottom of this excavated place as level as possible, and lay an inch of sand over it. On this the bulbs may be set an equal distance apart and then filled in above them. In this way they will come up of uniform height.

There are several very desirable forms of tulips aside from the single and double. One



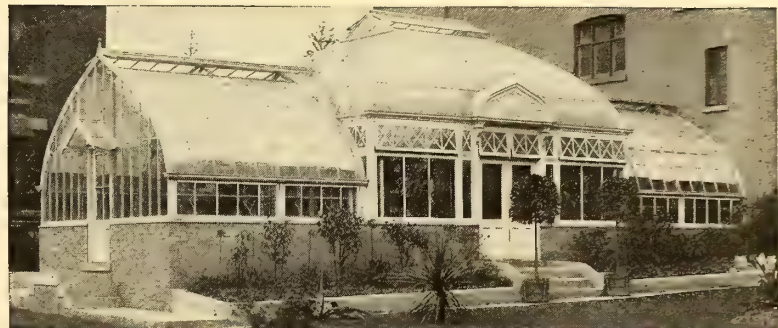
Suppose a client should ask you why you had not put

CORTRIGHT METAL SHINGLES

on his new building—a home, for instance. What answer would you give, supposing you had used slate? You couldn't say slate was more handsome; you couldn't say it would last longer, for **Cortright Metal Shingles** will last as long as the building itself. You couldn't say slate was more fireproof—it isn't half as much so as **Cortright Metal Shingles**. Frost will crack slate, so will heat; neither affect **Cortright Metal Shingles**. You couldn't say slate was cheaper unless you were right in the heart of the slate district. Now we're not trying to tell you how to run your business—not a bit of it. But we know the roofing business; we've studied all kinds of roofing; and, aside from being the manufacturers of Cortright Roofing, if we were architects we would specify it. 56-page book, "Rightly Roofed Buildings," will tell you why.

CORTRIGHT METAL ROOFING CO.

Philadelphia and Chicago



A GREENHOUSE FOR EVERY NEED

You will be interested to know that this particular house, with its curvilinear palm house, and wings each 16¾ feet long, is located right in the very midst of a crowded city.

Whether it be a small greenhouse for the amateur or the more extensive range in all its completeness, we can build to your especial advantage. Send for numerous examples of houses erected on country estates.

HITCHINGS & COMPANY

1170 BROADWAY, NEW YORK CITY

Cut down your coal bills, cut out your doctor's bills and promote your family's health and comfort by installing a

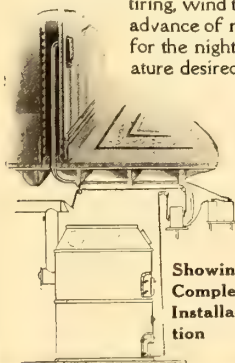
HOWARD THERMOSTAT

(Damper and Valve Regulator)

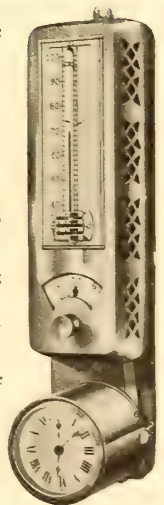
WITH CLOCK ATTACHMENT

Easily applied to all heating plants. Automatically keeps your home at an even, healthful temperature all winter long.

If you prefer to have your house cooler at night than during the day, the Clock Attachment saves you the trouble of "getting up early to turn on the drafts." Upon retiring, wind the clock and alarm springs, set the alarm hand about one hour in advance of rising time, and turn down the pointer to the temperature desired for the night. At the hour set, the pointer silently moves up to the temperature desired for the day. The motor then makes the correct adjustment of draft and damper, and when you arise the house will be at the desired temperature. Guaranteed for 10 years. Thousands in use for 25 years. Coal saved pays for it; therefore it costs you nothing. The most reliable and most perfect heat controlling device ever placed on the market.



Showing Complete Installation



TRIAL OFFER

If, after 30 days' trial, you are not satisfied that the Howard Thermostat (Damper and Valve Regulator) will do all we claim for it, send it right back at our expense and your money will be promptly refunded.

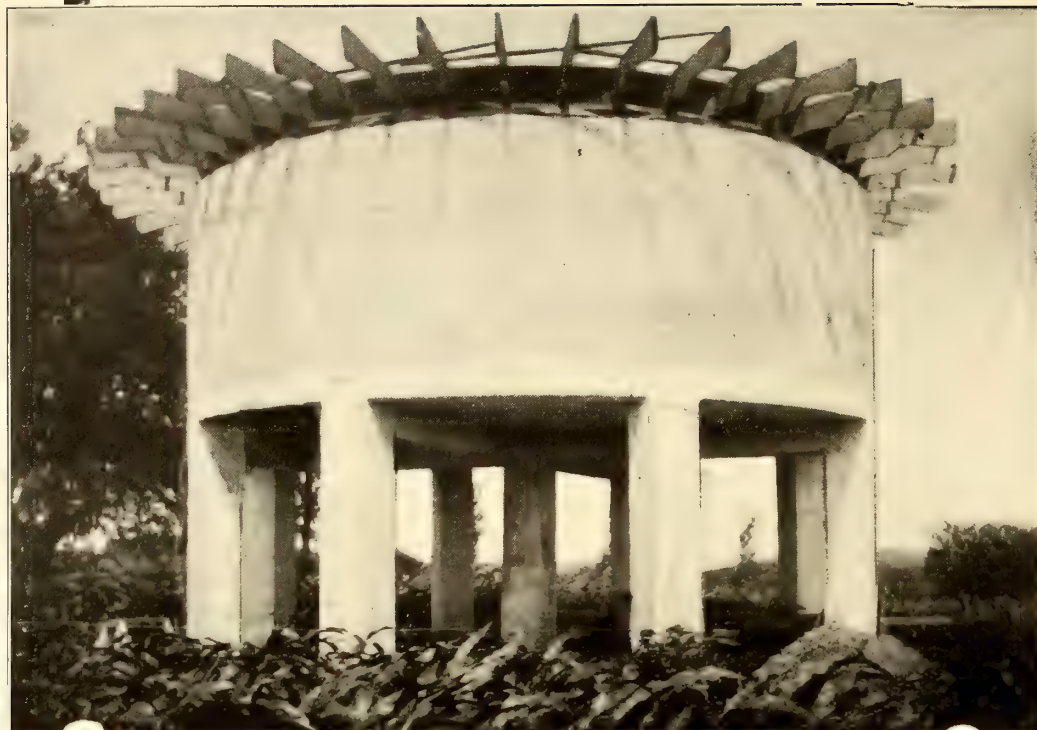
Howard Thermostats are sold by heating appliance men all over the country. If you will kindly send us the name and address of your furnace man or steam fitter, we will send you our booklet No. 17, which gives complete details about the Howard Thermostat. It is intensely interesting to any one who values his own health and that of those near and dear to him. Write to-day. Don't wait until the cold weather sets in.

Howard Thermostat Co., 42 West First Street, Oswego, N. Y.

FLOORS

ROOFS

NOTE CONTINUOUS BOND



**A concrete tank erected on estate of Edmund Tatham,
Katonah, New York**

Frederick J. Sterner, Architect - - New York
De Lancey A. Cameron, Builder - - New York

Tank designed for storage supply of 15,000 gallons, built entirely of concrete reinforced with Clinton welded wire. Before roof was placed over tank, and during winter months, ice 10 inches thick formed on water stored therein. No cracks or leakage have developed.

Clinton Wire Cloth Company
 CLINTON, MASS.

FIREPROOFING DEPARTMENT

ALBERT OLIVER

1 MADISON AVE., NEW YORK

WASHINGTON: ROSSLYN SUPPLY CO., COLORADO BUILDING
 SYRACUSE, N. Y.: PARAGON PLASTER CO.
 ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
 SAN FRANCISCO: L. A. MORRIS, 835 MONADNOCK BUILDING
 SEATTLE: L. A. MORRIS, 909 ALASKA BUILDING

Partitions

Cellings

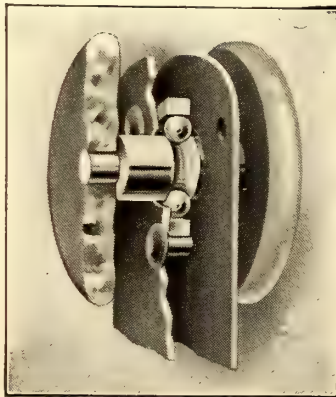
Lane's Trolley Parlor Door Hangers and Track

THE particularly distinguishing features of the Lane Trolley Door Hanger equipment are the excellence of the bearings and the lateral as well as vertical adjustment of the track.

Lane Trolley Hangers are made in both the rigid and adjustable pendant styles and with both single and double trucks. All are fitted with machined and hardened bearings as shown and in all the various details the quality of Lane products is maintained, thus virtually placing them in a class by themselves.

Send for Complete Catalog.

LANE BROTHERS COMPANY, (The Door Hanger)
 434-466 Prospect Street, Poughkeepsie, N. Y.



SECTION BALL BEARING IN LANE
TROLLEY HANGERS

of the most interesting of these is the by-bloom class, both red and violet. No two of these scarcely are alike, and the mingling of white and violet, splashed and streaked forms or the rose shades is charming. The picotees are another charming class, and the parrots are odd, interesting and handsome. The variegated foliage tulips are very ornamental, and should be in every garden. The branching tulips give so many more flowers to a bulb that they are well worth the somewhat higher price asked for them. These special tulips may be used to border beds of the more common sorts with good effect.

Where tulips are to be lifted after blooming they may be moved as soon as through blooming, lifting them carefully and "heeling them in" in some out-of-the-way corner until they are sufficiently ripened to store away in paper bags.

Crocus are usually left in the ground the year round, and are much planted on the lawn. The giant flowered crocus and the forty-flowered crocus are the most satisfactory to plant. The forty-flowered are marvels of bloom, sending up blossom after blossom, and entire bouquets of them at once. They are charming in combination with white, but do not blend so well when yellows and purples are mixed. Crocus should be planted about two inches deep and two inches apart.

Hyacinths require the same general treatment as tulips, but require somewhat more room, being set about seven inches apart and four inches deep. I find a good way to plant bulbs where there are a great many of them, and one does not wish to go to the work of laying aside the soil or using sand, is to use a short stick for a spacer and a cord for the lines, and place each bulb on the surface of the ground where it is to be planted before beginning to set them. In this way no space is skipped, and the work proceeds rapidly, also one is sure to know if the bulbs are to hold out or if more will be needed or greater space must be allowed to enable the bulbs to cover the given space.

Narcissus, jonquils and this class of flowers are at their best in long rows. They should be planted four inches deep and twelve inches apart. Narcissus increase by forming new bulbs around the parent bulb, and for this reason require much room.

The old-fashioned daffodill—Von Sion and the Pheasant's Eye narcissus—are the varieties most commonly seen, but these do not compare in beauty with the large chaliced varieties such as Empress, Emperor, Horsfeldii and Golden Spur or Sir Watkins. All of these are hardy with slight protection and are wonderful flowers when in bloom in long, undulating rows.

Anemones, while beautiful in the house and easily grown, are not really hardy at the north, nor are the ranunculus, but the scillas, sparaxias and lily of the valley are perfectly so, and the ixias may be grown in the open ground if well protected with leaves, and these covered with something to turn rain and preserve the dryness of the leaves.

Most of the other bulbs advertised by florists are more or less uncertain in amateur hands, and should be grown more as an experiment than as a flower to be depended upon.



Cattle Manure
in Bags *Shredded or Pulverized*

Best and safest manure for florists and greenhouse use, absolutely pure, no waste, no danger. Write for circular and prices.

The Pulverized Manure Co.
 21 Union Stock Yards, Chicago.



AMERICAN HOMES AND GARDENS



Price, 25 Cents. \$3.00 a Year

CONTENTS FOR OCTOBER, 1908

	PAGE
SEEKING SHELTER IN THE WATER	376
MONTHLY COMMENT	378
NOTABLE AMERICAN HOMES—The Seaside Home of Philip Lehman, Esq., Deal, New Jersey. <i>By Barr Ferree</i>	379
A SPECULATION IN ABANDONED FARMS	<i>By A. S. Atkinson</i> 384
A NOVEL SCHEME FOR A SUBURBAN HOUSE PROPOSITION.....	<i>By Charles Chauncy</i> 387
INDOOR BULB CULTURE.....	<i>By S. Leonard Bastin</i> 390
"BEINHURST"—the Summer Home of William A. Bein, Esq., at "Still Wood Park," in the Woodbridge Hills, near New Haven, Connecticut.....	<i>By Samuel Sherman</i> 392
MISS TOWER'S GARDEN AT LEXINGTON, MASSACHUSETTS	394
"SUNNYSIDE," A HOME AND SHRINE	<i>By Perriton Maxwell</i> 396
SPRINGHOUSES OLD AND NEW.....	<i>By Phebe Westcott Humphreys</i> 401
THE RESIDENCE OF HENRY G. LORD, ESQ., BROOKLINE, MASSACHUSETTS.	<i>By Paul Thurston</i> 404
HEATING AND LIGHTING WITH ALCOHOL.....	<i>By John R. Waley</i> 407
THE CRAFT OF BLOCK PRINTING.....	<i>By Mabel Tuke Priestman</i> 411
CORRESPONDENCE:	
PROBLEMS IN HOME FURNISHING	<i>By Alice M. Kellogg</i> 414
GARDEN WORK ABOUT THE HOME	<i>By Charles Downing Lay</i> 414

New Books

Bulbs for Fall Planting

The Use of Vines

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada, \$3.50 a year

Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



Seeking Shelter in the Water

AMERICAN HOMES AND GARDENS



Volume V

October, 1908

Number 10



The Seaside Home of Philip Lehman, Esq.: The Hall Is a Vast Apartment Completely Filling the Entire Center of the House

Monthly Comment



THAT the present time—literally just now—affords one of the most favorable opportunities in which to build is not nearly so widely known as it ought to be. For a number of years past the outcry of consumers against the high prices of material and labor has been of the loudest possible description, and everyone who has been in the least familiar with the building situation can count scores of undertakings that have been shelved because of the great cost involved. But notwithstanding the fact that building operations everywhere fell off because of the enhanced cost of material, prices continued to mount until it seemed as though there was to be no limit to the increase. And everyone felt this condition, the speculative builder, the individual owner, even the householder who wanted a few boards for a fence or a small number of bricks with which to repair a wall. As the last named class includes the majority of people living in this country the pinch was well nigh universal in its effect.

THE panic of a year ago wrought many changes in the financial situation, and presently extended to every phase of American endeavor. The building material trade was by no means the last to feel its effects, but it has certainly felt it and has continued to feel it for some time. Yet the results are only now being realized by consumers who have, many of them, fortunately awakened to the fact that now is the time to build, because prices are distinctly lower than they have been for some time. What better reason could be advanced for building than this? Even the question of paramount necessity is not more potent than this, because one can, sometimes, get along without objects of desire, though never long without buildings. But all sorts of makeshift contingencies can be availed of when great expense may be avoided, and hence the cheapness of building materials and conditions is a superlatively potent reason for engaging in any necessary building operation that may now be undertaken.

THIS condition is not likely to be permanent nor to remain in force for any considerable period. No class of builders are so susceptible to changes in the price market as the speculative builders of the large cities, because their operations are largely carried on with borrowed money, and there must be quick returns to yield profitable results. There has been a decided increase in this sort of building in many of our cities, and that it is clearly due to the fall in prices may be immediately established by anyone who will take the trouble to make comparisons with quotations and estimates made a year ago and, let us say, the day before yesterday. But no one believes these favorable conditions will prevail, no one looks upon them as permanent in any sense; they are matters to be availed of now, or the favorable opportunity will have gone and there will be a fresh postponement of building operations because of high prices. A second reason, then, for immediate work, and the better reason of the two.

WITH increased building operations must come increased betterment in the condition of all the allied trades. Low prices that are brought about by adversity confer no real benefit on anyone. They mean loss and stagnation of enterprise; they mean lack of work; they mean depression of industry; and they mean, in many cases, want and misfortune among many who may not even seem to be connected with the matter in hand. These conditions must be reversed and

the normal state reached in the swiftest possible time and in the most direct manner. We need, as the daily press has plentifully reminded us in the past six months or more, a quick return to prosperity. This will not be obtained by unnecessary effort or by forced conditions, but by a strict attention to the business in hand. In other words, by a sane solution of the special problem of the day. If, for the time being, the prices of building material are reduced, it is good business to take advantage of that situation. One helps oneself, helps many other people, helps the financial condition of the country and hastens the return of permanent prosperity by doing precisely this thing.

ONE of the most interesting developments of current financial conditions has been a realizing sense of the value of presenting a good front to the world. Every business man has long been aware that this quality is among the most valuable of business assets, and yet the very men who know this often invite disaster by proclaiming calamity aloud in the most public places. Scarce more than two short years ago the whole financial and commercial world of America was rent from top to bottom by the exposures of improper business methods that seemed to have reached to the very highest places. Reputations that presumably were as strong as the rock of Gibraltar disappeared over night or were irretrievably ruined in a single hour. The scribes, seeking good markets for their wares, rushed into the most public place, each vying with the other in the hideousness of his disclosures. As a matter of fact, we have not yet recovered from this uproar.

THE reaction came when it was found that these exposures were hurting general business, and that many innocent people were being injured by the mere display of other people's sins. As this state of things had been brought about by publicity, that vast public agent was enlisted in the great work of restoration. But it is always easier to pull down than to build up, and the eager voices and nimble pens that were so active in destroying have not found it so easy to repair the damages they wrought. Yet the plain duty of everyone is evident: all must help. It is a simple remedy, but a powerful one, and if it could but be applied to the work of reconstruction with the same vigor and force that was employed in destruction, our period of adversity would come to an end at once.

THOSE concerned with building in any of its forms have now an opportunity to do their share in bringing about the return of prosperity and individually benefitting themselves by hastening their proposed building operations. A multitude of reasons points that the present decrease in prices is simply a sag that, within a very short time, must return to the upward march that made building such an expensive operation only a short time since. Even now the reduction is not uniform, and is quite more distinctly marked in some parts of the country than in others. But it exists, and that is the main fact. That is the valuable fact for the builder, and that is the one great thing that should be borne in mind at the present time. The opportunity thus presented is one that should be availed of at once; it represents a condition that can not last, and we certainly do not desire another panic in order that it may be brought about again. Here, at all events, is something the builder, the investor and the home maker should know. It is a condition that invites the most rigid scrutiny, and which certainly promises a hopeful outlook for the near future of the building industry.



The House Is Built of Gray Stucco with Roof of Green Spanish Tiles

Notable American Homes

By Barr Ferree

The Seaside Home of Philip Lehman, Esq., Deal, New Jersey



HERE is but one place in the world where a house without trees has a legitimate reason for its erection, and that is directly upon the seacoast. One should perhaps add upon the Jersey coast, for in some more favored regions both trees and grass grow and flourish almost to the water's edge. The coast of Deal is by no means devoid of trees and herbage, but the former, though coming within what may be called speaking distance of the water, have resolutely and completely refused to flourish immediately at its margin. Mr. Lehman's house is directly on the sea, with magnificent outlooks over the broad Atlantic from every part of its water front, as well as practically from its two ends. It is a superb site of seven acres, as bare of trees as though nature knew not such adornments. Obviously if he would build directly above the ocean he must do without trees. The choice lay between the trees and the water, and those who have seen his charming house know that he made no mistake in ignoring the former and choosing the latter.

But if trees will not grow on the water's margin at Deal it is fortunate that grass can be made to thrive there, and Mr. Lehman's superb lawns, which cover every inch of his handsome property, are no doubt a special source of pride and satisfaction to him. The grounds are reached through two entrances on Ocean Avenue, each marked with high stone piers, with descending curves to the adjacent bounding wall. The driveways come together within and join in a common circle, from the center of which a single roadway runs to the house. The dignity of this approach is wholly that of

space and dimension. For the road is broad and long and straight, bordered with grass, and then with a privet hedge, inset in which, at regular intervals, are paneled pedestals of stone, each pair with a stone seat between it. Behind are the lawns, sloping down to the hedge, as they lie at a higher level than the roadbed.

The house stands at the head of the drive, and practically in the center of the entire property. Just before the house it divides again into two, and sweeps around a central circle, that there may be a proper distribution of vehicles, and an easy approach and egress. The treatment of the circle is immensely dignified and highly effective, and creates a monumental frontispiece of an unusually fine character. The double pedestals of the outer road here give way to single pedestals, which are arranged in solemn stateliness around the outer edge. The inner side of the drive, which is, of course, the outer side of the inclosed circle, is incased, above a grassed and ivied border, with a handsome balustrade, standing on a coping. The pedestals are surmounted with decorated vases, and there is a broad flight of steps at the head of the driveway by which the interior may be reached. The inner space contains a great central bed of hydrangeas, and the space without its incircling path is filled with segmental beds, box bordered, and planted with small evergreens whose varying shape and color, each bed being of a single variety, present an agreeable and effective variety.

The house itself has ample dignity and beauty. It was designed by Mr. John H. Duncan, architect, of New York. It is built of gray stucco with a roof of green Spanish tiles, a color combination that is not only agreeable but character-



The Sea Front Stands at the Head of a Spacious Lawn Reaching Clear to the Ocean's Edge

istic. The general plan is that of a letter H, with two short wings that project on both the entrance and the sea front, and which are joined by a somewhat elongated center. There is no external porch on the entrance front, the place of such a structure being taken by the porte cochere. The protection thus afforded is helped out, in a thoroughly satisfactory way, by a broad balcony at the second story that runs from end to end, and which is brought out almost flush with the pavilion walls. It is supported below by large consoles, with ornamented sides and faces; above, it is inclosed with a light iron railing bearing flower boxes, thickly planted with

gay geraniums and hanging ivy, an arrangement in planting and in color that is not only effective itself, but which is one of the most characteristic features of the exterior. The bay trees that stand in boxes behind the railing are also important factors in the exterior color of the house.

The first story of each of the end pavilions constitutes a loggia each with two round arched openings on the front, openings emphasized with molded arch bands that are continued on the adjoining wall, and by ornamental keystones. Above is a single large window, in a monumental framework, and with a balustraded balcony. There are smaller



The Porch of the Sea Front



The Formal Planting at the Entrance

but similar windows in the wall that connects the pavilions, while those of the third story are close up under the eaves and hardly count in the front at all. The broadly projecting roof is upheld by oak brackets and finished with a copper gutter. The house stands upon a terrace, which is completely surrounded with a balustrade, except at the entrance and at the great porch on the sea front, but which is interrupted on the north front for the kitchen yard, as will be apparent in the sequel.

The color of the exterior has been very carefully studied. The basic colors of walls and roof have already been mentioned. The balustrade, the moldings of the loggia arches, the consoles and brackets and window frames are dead white. The exterior blinds are



The Den Is Walled with Brick with Sandstone Trimmings

green. All the windows are fitted with exterior Venetian blinds, and are without shutters.

The sea front reproduces, with but slight modifications, the motifs and elements that have been so successfully employed in the entrance front. There are no loggias here, but the two arches of the lower story are glazed, and open directly into the adjoining rooms. The single upper window is repeated in the pavilions, and the windows of the connecting wall, as well as those of the third story, are identical in design and arrangement with those of the entrance front. The great point of difference here is the vast porch, built in three bays, and which not only fills the space between the pavilions, but which extends far forward beyond them. The terrace is considerably



The Living-room Is Finished in Green and White and Has a Sculptured Chimney Piece

expanded here, and is carried forward at the center, where it is stopped on each end of a curved projection beyond the porch roof. The terrace throughout is paved with large red brick.

The main doorway is simply framed, and has a single torch electrolier on each side in the adjoining wall. The doors are of glass, protected by a wrought iron grille. There is no vestibule, but the space just within the doorway, which is arched beneath the central platform of the staircase, is floored with a vast slab of green marble, laid in borders of white marble. The visitor is thus ushered immediately into the hall, a vast and spacious apartment that completely fills the entire center of the house. The stairs rise on each side of the entrance door, and constitute a monumental feature of

The windows have white lace curtains with cloud shades of thin white silk. The carpet is green. The furniture is, for the most part, wicker, in white and green. There are two Roman tables, with carved pedestals of white marble and tops of polished green marble. Directly in the center is a round Roman table of green bronze whose shallow top is a small aquarium, filled with water and containing gold fish. Great ornamental vases stand between the windows and on the opposite side of the room, and are filled with a fine collection of palms and other house plants. Two gilt electroliers depend from the ceiling.

The hall is the largest room in the house, and is actually an apartment of monumental size and character. The same scale of spaciousness is carried out elsewhere on this floor,



The Stairs in the Hall Are a Monumental Feature of Imposing Proportions

imposing proportions. The newels are handsome blocks of polished marble, each surmounted with a jardiniere. The stair well has a curved outer wall, the double stairs rising to a platform above the entrance door and completing the ascent in a single flight. The walls here, and in the hall, are finished in imitation Caen stone, cream white in color.

The plan arrangement is such that while the stairs are a notable ornament to the hall, they are actually not in it, since the space they occupy is contained in what is in effect an alcove, completely open to the central area, but not consuming any part of its floor space. The hall is a superb apartment, very long and wide, and of quite unusual height, so that its immediate impression is one of great spaciousness. It is treated, too, in a large and impressive way, with great panels on the side wall, a single great panel in the ceiling, vast openings into the adjoining apartments and windows of grand size opening on to the sea porch, and overlooking the ocean.

although the other rooms have less floor area. The great opening on the right admits to the living-room. It is finished in green and white. Directly in face as it is entered, and hence an actual feature of the hall, since it is completely visible from it, is a monumental fireplace. Two gains uphold a richly carved frieze, above which is the mantelshelf. The chimney-breast is elaborately paneled, with an ornamental cartouche above. The windows have heavily molded frames, the wall spaces being treated as great panels, which rise immediately above a low baseboard, and which are filled in with green. The fireplace is lined with tan-colored brick, and the hearth is of white tile, on which stand splendid andirons of wrought iron. The ceiling is white, and is treated as one great panel, slightly indicated without moldings, but with a small decorated wreath in each corner. As in the hall, the window curtains are white lace, with white cloud shades. The carpet is green and the furniture of

green leather. There are windows on three sides of this room, and, as the opening on to the hall is closed by glazed doors, it is an extremely light and airy apartment. Electric light is obtained from the central chandelier and from bronze side lights applied to the wall panels.

There is some space on each side of the stair well at the entrance, but you may be sure it is not wasted. On the left it contains the butler's pantry and a service passage to the main doorway. On the right it is filled by the den. This is comparatively a small room, furnished in the Mission style. The walls are brick-lined throughout, with sandstone corners and door and window frames and small carved panels in the upper part. The larger part of one end is occupied by the fireplace and chimney. Its salient feature is the great upper panel, per-

is obtained from a central chandelier and from side lights of gilt bronze. The curtains are similar to those in the other rooms, and great glazed doors separate it from the hall.

In planning a handsome seaside house such as this, one of the chief problems to be solved lies in the position and disposition of the kitchen and service departments. Here is a house the whole of whose exterior, except the entrance front, commands a view of the sea; even from the side windows lateral views could be had of almost equal extent with the magnificent outlooks from the sea front itself. Obviously none of the outer space could be spared for even so essential a matter as the kitchen; everything of this sort must be reserved for family use.

In most instances the problem would have been incapable



The Dining-room Is Paneled in Oak with Upper Walls of Imitation Caen Stone

fectly plain in the center with a surrounding border of wreaths. The fireplace is lined with gray brick, and has a hearth of red brick. The ceiling is plain, but is slightly domed; from the center depends a bronze electrolier.

The dining-room occupies the whole of the north end of the house. Like the living-room, it is lighted by windows on three sides. A hooded mantelpiece and fireplace occupies the center of the longer wall: it has red brick linings and a hearth of blue-green tiles. The room has a high dado of oak in panels which rise about half way to the ceiling. The upper part of the walls is finished in imitation Caen stone, disposed in large rectangular blocks. There is a narrow band of foliage and flowers at the top. The ceiling is paneled, with two great cross beams and numerous transverse beams, somewhat closely set, with plain white plastered panels between them. The carpet is green, and the handsome oak furniture is supplied with seats of green leather. Electric light

of any solution but the deliberate appropriation of such precious outlooks for this very essential and utilitarian purpose. Seashore property is invariably flat, and there is no space for the kitchen basement that is sometimes deemed as desirable in country regions as it often is convenient in the city. Mr. Lehman was fortunate, however, in owning land that was actually somewhat elevated at the spot chosen for the house. A depression was, therefore, made for a kitchen yard and service entrance, and both kitchen and service departments were placed in a basement, which, owing to its situation, has an abundance of light and air. Entrance to these important parts is gained through a double doorway contrived in two of the panels of the dining-room wainscot. The doorways are doubled, so that one may be used for entrance and one for exit: a collision of servitors is obviously avoided. The butler's pantry is immediately without, with stairs to the second floor, and hence to the servants' rooms.

A Speculation in Abandoned Farms

By A. S. Atkinson

THE possibilities of New England's abandoned farms are receiving renewed attention, and the dawning of an era of prosperity may not be unwisely expected for cheap hillside land in the older deserted portion of our country. Twenty years ago the abandoned farm question worried farmers and sociologists. Then arose a man of the Nutmeg State and stoutly advocated the planting of orchards on the rocky hillside, and the Hale orchards of peaches, apples and other fruits, became synonymous with profitable culture of "abandoned farms." But not all deserted homes of the pioneer settlers could thus be redeemed, and after a temporary rise in land value of a few farms there was a reaction, and the problem became more involved than ever.

But Yankee ingenuity and American aggressiveness are not easily discouraged. Such problems work out a solution through devious paths. History repeats itself through cycles, and we are now entering upon the third cycle of the "abandoned farm" question. It is a cycle in which commonplace observance of past methods has no part or show. It is the era in which ingenious application of new plans for particular cases spells success. There is no cut-and-dried method which can work out salvation for all. What is one man's medicine is poison for another.

The man from Massachusetts who made an abandoned farm region blossom into a garden was merely one pioneer in the new crusade. He was not a farmer, not even a countryman, and in the city he had made only an indifferent success as a business man. But he had New England blood in him, was born on a backwoods farm, and always longed to get back to the earth. Not business reverses, but ill health, brought the unexpected to happen.

He was forty-five when he took up the "abandoned farm" puzzle and sought to solve it, for himself, not for the public. He journeyed back in the Massachusetts hill country until he came to a region where land was at a discount. Farms and neighbors were as scarce as huckleberries in December. There were a few signs of a previous civilization—a disjointed shack that looked like a demolished bee-hive, a wooden inclosure that had done service as a barn, and a wilderness of abandoned fruit trees, vines, and berry bushes. The latter were still productive in spite of the lack of culture, and he gathered the luscious fruit to satisfy the demands of a hungry stomach.

"Here I'll pitch my habitation," he said. "I can at least live and find health. It's life here, but death in the city."

He journeyed back to the city, called up the real estate agent, and after weary hours of map-searching located his place.

"Oh, that place is of no value," explained the dealer in abandoned farms. "It's twenty-five miles away from a railway station, and you could never find a market for anything you raise. Now, here's another place located within five miles—"

"How much is the land out there?" quietly interrupted the searcher for health, turning a deaf ear to all blandishments.

"Why? Out there you can get the land at—at five dollars per acre, with the buildings thrown in."

The latter phrase was accompanied by a cynical smile, for "the buildings thrown in" only disfigured the landscape.

"All right!" responded the buyer. "I'll take the two hundred acres, half cash down and the balance a year later."

Then he hesitated, and finally said thoughtfully, "I should like to make a further agreement with you. I want the option on the surrounding farms at the same price, say at the end of one, two, three, and five years. I'm not rich, but if my experiment succeeds I don't want to be hemmed in later."

"By paying fifty dollars down on every hundred acres you can have the option for three years on the whole county," answered the shrewd dealer in land.

"Then I'll take the option on a thousand more acres. It's an experiment with me. I may fail, but it's worth it."

Thus for a thousand dollars the man came into part possession of two hundred acres and secured the option on one thousand more.

"I'll have a small empire to myself," he grimly remarked as he walked out of the real estate office. "No one can rub elbows with me and say I shall live on a twenty by sixty plot any more. I'll be as free as the birds and wild animals."

He shipped his few worldly goods out to the farm, purchased two horses, two wagons, some tools, seeds, and a number of pets. His wife accompanied him. They repaired the house and barn together and made it livable. They planted fruits, flowers, and vegetables for their own use.

They started a small chicken farm—eggs and broilers for their own use only. A dozen pairs of pigeons for breeding purposes were installed in a loft. Later followed half a dozen Angora goats, a pair of breeding pigs, two cows, and a good hunting dog. It was a pioneer procession that wended its way across the hilly country.

The goats were turned loose near the house to clear the tangled maze of weeds and bushes,



Broad Fields and Wooded Hills Characterize the Whole Region



One by One Simple Little Cottages Were Built Upon the Lake

and when partly cleared the ground was sown with grass to provide food for the cows and horses. There was little done that early spring and summer except to get things started. Winter was ahead and provision had to be made for it. Wood was cut and stacked away for fuel, land plowed and planted, and buildings repaired. The diet of the couple consisted chiefly of vegetables and fruits, with fresh eggs, and occasional wild rabbit, a squab or two at times, and later, spring broilers. Potatoes, turnips, cabbages, grain, and hay were stored away abundantly for winter use.

Then the beginning of the problem began. Up to this time it was merely the preparation for existence independent of markets and cities.

"This is a beautiful country and well stocked with game," mused the man. "This lake is a beautiful sheet of water, the pines and spruce fill the air with healthful odors, and the hills make lovely walks and sun-set views. I'm going to make this place an exclusive summer resort."

This had been his idea from the first. But as he developed his plans the idea grew and the work increased. The lake was fed by a clear stream of water, which he stocked with trout. He purchased quail for breeding purposes the following spring, protected and fed the wild rabbits, cleared the ground only near the house, built additions to the home, and made the interior clean and sweet with rough logs and unfinished pine boards. He was kept busy all that winter and forgot to be lonely. His health returned, and he found himself equal to the work.

By the following year he was ready for profits. Up to this time it had all been a steady outlay. The cost of living had been small, but all the improvements had cost him a good deal. His five thousand dollars of capital had dwindled to a pretty small sum, and something had to be done to bring in some returns.

He named the place the "X— Club," an exclusive organization, owned by one man. Through his former business associates he secured a few boarders the following summer. They came for the fishing, loafing, and hunting. Most of them were anxious to get away from all civilization, and here they found a rude home already prepared for them. It was like dropping off into the wilderness and finding a place to welcome you. They drove twenty-five miles through

a desolate region, and then found Paradise. They were fed on fresh fruits and vegetables, fresh eggs, spring broilers, young squabs, fresh-water fish, and some wild game. They were willing to pay handsomely for this service, and thought they were lucky.

"See here, Mr. J—, if you need any more money to fix up this place, I'll take stock in the concern," announced one business man. "But the club must be exclusive, and not open to every one."

The up-shot of this proposition was that a limited amount of stock was sold, but only to such members who were voted upon by those already in. This opened the way for taking up the rest of the land on which the pioneer had an option. Not only the thousand acres, but five thousand were secured. It included some of the finest forest and lake region as well as barren hillside farm land.

Within three years the region was converted into an ideal spot for summer vacation and for fall and winter hunting. Shrewd owners of adjacent land put up their prices from five dollars to twenty-five dollars per acre. They were surprised at the changes which had been made, but they were still far from gauging the exact condition of affairs. Under the united action and support of his limited stock company, the pioneer owner either bought up or secured the option on most of the desirable land within many miles of his country home.

He foresaw a land boom, and he was prepared for it. With the profits of his abandoned farm he could afford to hire a man, and in the summer he had two working for him. The lake and stream were more heavily stocked with trout and bass. Every season the fishing improved, and rigid rules were enforced as to the number of fish to be taken out by one angler. Meanwhile, the quail had taken kindly to their new home and were multiplying in numbers. Acres of buckwheat were sown for their exclusive use, shelters prepared for them in winter, and food distributed on the snow in winter. The rabbits were likewise cared for, and they became so numerous that it was necessary to organize hunts for them each season to keep them from eating up the farm.

By this time the "X— Club" was known as much for its good hunting as for its fishing, and members broke away from business in the middle of the winter to attend a rabbit



The Club House that Solved One Problem of the Abandoned Farm

drive or to uncover flocks of quail. They found the winter months so delightful, so restful, and so full of the vigor of country air, that they declared it was better up there when snow covered the ground than when you could pick daisies in the field and wild raspberries in the woods.

"I want a home here—a cottage," exclaimed a wealthy member one day. "Not an expensive place, but just a cheap pine shack that I can come to whenever the mood moves me. You see, my wife and boys are getting jealous. I talk about the good times I have up here, and they want to accompany me. I've told them there was no room in your house—explained that it's exclusively a club for men—but I can't put them off any longer. Now I want a pretty site on the lake and a little home. How much will it cost?"

This was the entering of another wedge. The owner sold half an acre of land facing the lake for five hundred dollars, and put up a house the next winter at an actual cost of eight hundred dollars, and turned it over to its future owner for fifteen hundred dollars. It was furnished by the owner, but the pioneer land owner received fifty dollars a year to look after it. Then came others. No member could have such exclusive privileges alone. Two more cottages were contracted for, and two more purchased choice sites for the future.

The services of two carpenters were required all the time after that, and the old abandoned farm began to assume a businesslike air. Lumber was scarce, and most of the houses were built of logs, stones, and finished off inside with unmatched timber. They were rustic in the extreme, but pretty and convenient. Each succeeding one was an improvement upon its predecessor. There was a certain amount of pride of competition between the members of the club, and walks and drives were laid out and maintained by the club.

While the stock of the club was owned by a number of men, its control was limited to the original two hundred acres. The broad fields and woods beyond were the ex-

clusive property of the first owner. Year by year he paid off the instalments on this land. Others hearing of the new "summer place" in the woods and hills sojourned thither, found the country delightfully restful and invigorating, and decided to settle there. They purchased building plots of half an acre up, and paid for them at the rate of nearly a thousand dollars an acre for lake fronts and one-third less for inland sections.

Upward of a dozen abandoned farms, uncultivated hill-sides, and waste woodlands were thus converted within five years into a pretty summer resort where city people paid good prices for land and spent money liberally for fresh farm products, good fishing, and, in winter, good hunting. The twenty-five miles across country was not considered a serious objection. On the contrary, it helped matters. It kept the crowd away, and made the place exclusive. The secret of the success of this experiment is summed up in the owner's words:

"I knew I was too far away to go to the markets, and so I determined to make the markets come to me."

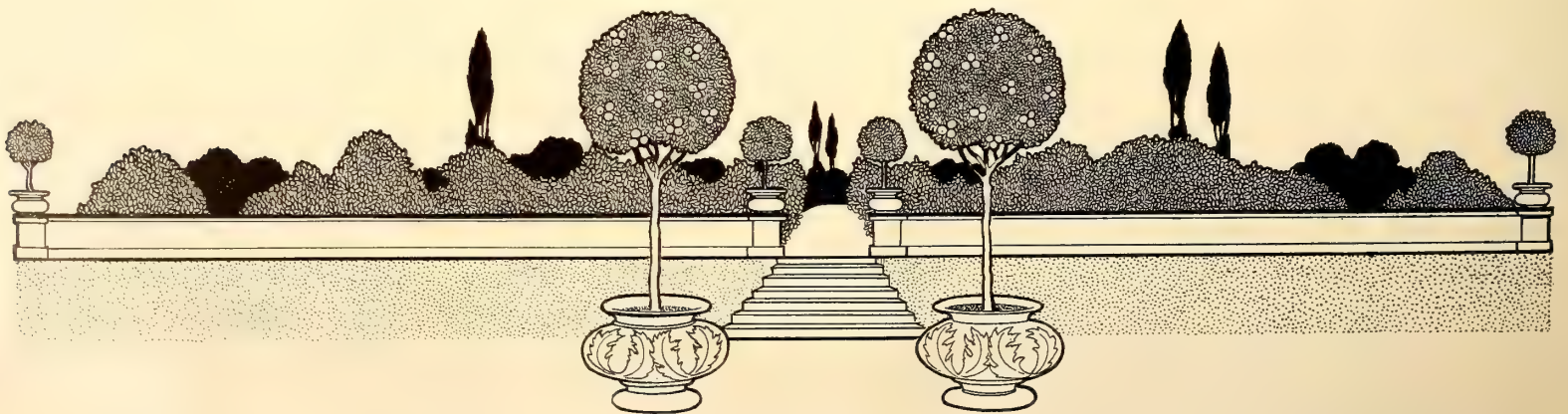
And to-day all the produce he raises is sold at what would be considered extortionate prices in the city, but the goods are all fresh and of the very best, and nobody grumbles. One can not live in Paradise and not pay for it—not in this world.

As a serious solution to the "abandoned farm" puzzle this successful experiment may not be of any extensive value, but it is suggestive. There are possibilities in many of these abandoned farms which a man

of a little ingenuity, some patience, and a fair amount of capital can develop and convert into cash. Their redemption may not depend upon general farming, special farming, or the application of modern systems of scientific farming, but it would be unwise to conclude that they must forever go to waste and stand as idle monuments to man's lack of ingenuity and foresight. At all events every experiment in this direction contributes its share to the solution of a real problem.



Nature Was Both Picturesque and Restful in this Quiet and Secluded Region





A New Grouping of Houses and Stables

A Novel Scheme for a Suburban House Proposition

By Charles Chauncy



NE of the most unusual and novel schemes which has been developed in the layout of two adjoining suburban sites is the one owned and planned by Dr. H. C. Register at Haverford, Pa.

The two plots are three hundred feet in width, and by placing the houses near the outer line, save sufficient distance for a driveway to pass to the entrances to each house, which is also placed at the side of the house; the space between is used for a bowling green, utilizing for a garden and breathing space that part of the property which is ordinarily used for the houses where they are not properly placed on the site.

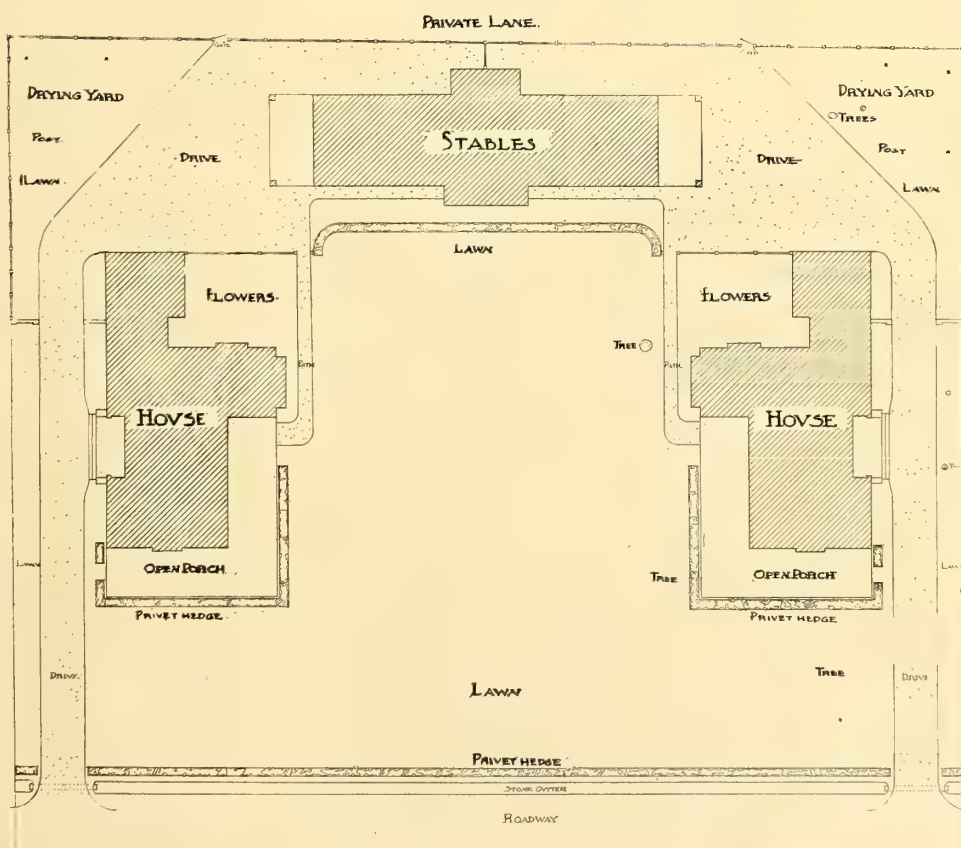
By this arrangement the living quarters of each house are kept further apart than is ordinarily the case. And placing the entrance on the side of the house permits of using the entire front of the house for the living quarters, thereby making the entrance and the hall a secondary consideration.

Both of the houses are built alike, so a description of one of them will suffice.

The terrace about the house and the first story wall from the grade to the level of the first story windows are built of red brick laid in Flemish bond with black headers. The remainder of the building is covered with stucco and treated with a white cement wash. The half-timbered work is stained brown. The roof is covered with shingles and stained a deep red, and is highly effective.

The hall is trimmed with chestnut and stained a soft brown tone. The walls are covered with a two-tone mustard yellow paper. It contains an ornamental staircase.

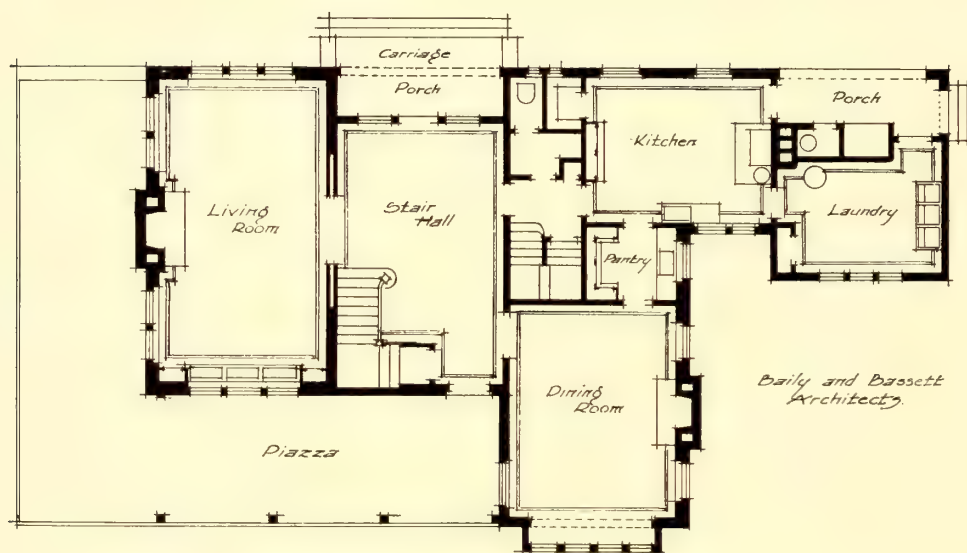
The living-room is trimmed with white pine and painted ivory white. The fireplace has red-tiled facings and hearth laid in white mortar and a Colonial mantel with paneled overmantel. The cluster of windows at either side of the room have window seats built in front of them. The windows are hung with green and white madras



Outline Plan of the Property



The Houses Are Built of Stucco with a White Cement Wash and Red Brick Base



First Floor



The Dining-room Has a Colonial Mantel

curtains over softer ones of lace. The walls are covered with a green-striped wall paper in two tones, and finished with a heavy molded cornice.

The dining-room has a white-painted trim and the walls are covered with a figured paper in two-tone autumnal brown color. The open fireplace has a Colonial mantel and brick facings and hearth.

The second story is divided into five sleeping-rooms and two bathrooms; the latter being wainscoted with tile and furnished with porcelain fixtures and exposed nickelplated plumbing.

The kitchen and pantry are trimmed with cypress and treated with a natural finish. Both the kitchen and pantry and laundry are fitted with all the best modern conveniences.

The third floor is utilized for extra guest rooms, servants' rooms and bathroom and trunk room. The cellar contains the heating apparatus, fuel rooms and cold storage. By this arrangement of the place it permits of the placing of the stables at the rear of the property and under one roof.

Considerable planting has been done about the grounds which have blended well the fine old trees and shrubs which surround the property.

Each stable contains ample space for the accommodation of horses, carriages required, and for the men's room and storage space in the second story. Messrs. Bailey and Bassett, of Philadelphia, Pa., were the architects.

The arrangement carried out in this plan is not only novel and interesting, but is eminently desirable and notable. For general adaptation it would imply a certain friendliness and even intimacy between the households occupying the two houses; but as a matter of fact their actual proximity is much less than is generally the case with houses built in pairs and rows. Even were the land area occupied by each house no more than might be ordinarily needed for dwellings of about the size of these, there is a distinct gain, since the land is occupied in a much better, more economical and more agreeable way than if each house was planted in the exact center of what might be called in own proper space. The stables, it is true, are brought into somewhat greater prominence than might have been the case had they been built as separate structures and each located behind its own house. This, however, is no valid objection to the scheme, since, in the plan adopted, the stables are very advantageously placed, and their pleasant architecture is surely a most delightful backing to the spacious lawn before them.

The arrangement discloses two of the cardinal principles in all suburban, or, as a matter of fact, in all building. These are the primary value of a good plan, and the almost equally important part taken in house building by a good exterior elevation. Now that Messrs. Bailey and Bassett have

shown us what a thoroughly desirable plan this is, we are under equal debt of obligation to them for translating the plan into effective and pleasing architectural forms. Such a plan as this will always be good, but excellent as it is in basic idea, it would quite fail of popular approval were the elevations less pleasing, the grouping of parts less successful, the detail less ably applied, the color less good. All these important matters are quite notably treated in their way, and hence the effect of the whole group is eminently effective.

The planning of the houses shows a distinct cleverness, an economical distribution of the interior, and an agreeable disposition of the rooms. The front portion of the house may, for purposes of analysis, be designated as the end; the front overlooking the lawn may be called the lawn front, and corresponds to the garden front of the ordinarily situated house. The entrance front is on the opposite side, and faces the edge of the lot; it is quite properly subordinated, and is arranged in accordance with the best ideals of modern planning. The kitchen and laundry alone retain their typical positions at the extreme rear of the house, and are located at the furthest point from the street.

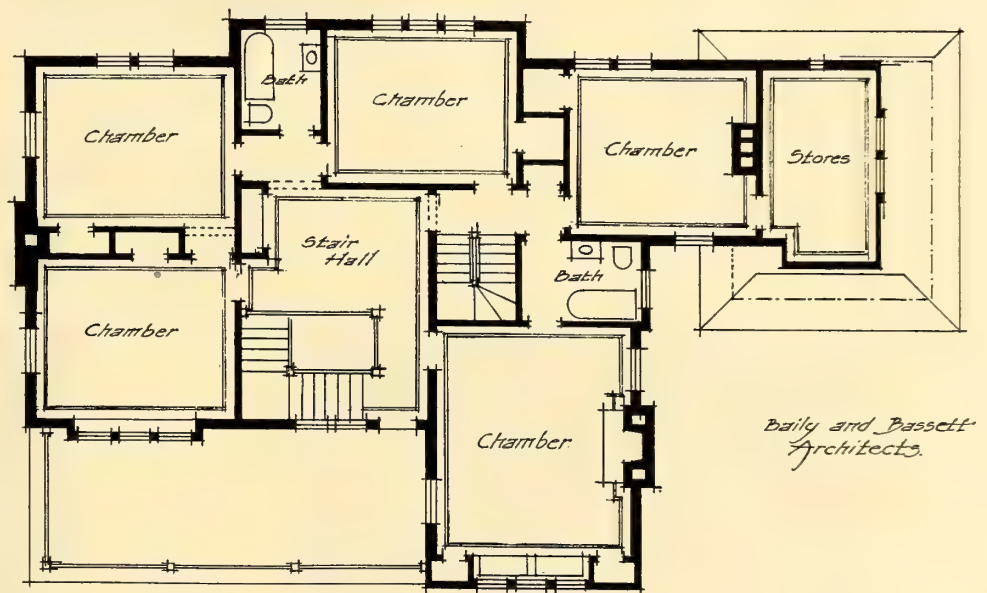
The advantages of this plan are disclosed by a careful scrutiny of the drawings. The living-room is, of course, the most important room of the house, being the largest and the most advantageously situated. It opens directly from the hall and has windows on three sides. The dining-room also opens from the hall, but to make way for the back stairs and necessary closet room it is pushed forward into the lawn space, and thus gains a window on the street front, making in all windows on three sides again. The houses being of moderate size, these rooms constitute the chief content of the first floor; but ample space is still in reserve for the service rooms, which consist of the pantry, kitchen and laundry. As the dining-room has been brought forward beyond the main line of the house, these parts are perfectly concealed from most views of the street, yet their windows overlook the central lawn, and the beauty of that spot is thus available from every room on that floor.

The designers of so good a plan as this encountered no difficulties in making an economical use of their space in the second story. The bedrooms here are conveniently located and are advantageously placed. They are bedrooms of good size, and are provided with ample closet room. Could more be needed? They are well lighted, and as three of the five have windows overlooking the lawn, the larger number of them have full benefit of that very agreeable center.

There are many reasons, therefore, why an attentive study of these plans, supplemented with careful surveys of the elevations, will repay attentive study.



The Half Timber Work and Exterior Wood Are Stained Brown



Second Floor



The Living-room and Its Cluster of Windows

Indoor Bulb Culture

By S. Leonard Bastin

A MATTER of primary importance is the making sure that the bulbs are purchased in the right way. Not only in the case of some kinds is early planting strongly to be recommended, but during the early days of the buying season one will stand a much better chance of securing the cream of the dealer's stock. Make certain that the bulbs you buy are really good. Of course, the best safeguard is to go to a reliable firm whose name stands for straight dealing, bearing in mind that for a good article one must pay a fair price. There are many establishments at the present time whose practise it is to advertise bulbs at a very low price in order to catch trade. This stuff should be avoided at all costs, as the results from material of third rate nature are always disappointing. It is not worth while cherishing bulbs in pots which only blossom in a half-hearted way, or perhaps do not flower at all. Mere size in



A Cut Bulb, Showing the "Heart"

or two open and see whether they have good "hearts." The need of getting good bulbs is rather strikingly brought home by an accompanying illustration. Here are shown two Roman hyacinths, both bulbs looking much alike externally, but totally different when they came to flower. In the case of the fine specimen, six or eight blossoms have been produced, while the other example has developed but one. It will be realized that the first-named is worth more than double the third rate bulb, and even then one has splendid value for the money.

Broadly speaking, almost any of the spring flowering bulbs may be grown successfully in an apartment. Naturally some kinds are better than others, and in the front rank of suitable sorts must be placed the hyacinths, especially the Roman and Italian varieties. Practically all the narcissi are good subjects, and many kinds of tulips will do well, although these plants like



The Relative Flowering Value of Good and Poor Hyacinth Bulbs



Bulbs Planted in Shells—A Novel and Attractive Method

a bulb goes for little, unless the specimen is at the same time heavy and firm. Whether the bulb will make a good show or not, entirely depends upon the size of the bud inside, and in buying a large number of examples it is as well to cut one

a little more sunshine than it is always easy to give them in a room. All the smaller bulbs, such as snowdrops, crocuses, and scillas, are very good subjects for indoor culture, and may be relied upon to make a fine show. Among other

bulbous plants which might be mentioned are freesias and lachenalias, both species flourishing well with the most ordinary treatment.

As has been hinted, it is desirable that bulbs for indoor flowering should be planted in good time. The bulbs mostly come to hand during the early part of September, and for those kinds, such as the Roman hyacinths and Van Thol tulips, which are the first to flower, it will not be too soon if they are placed in the soil at once. Opinion is very much divided as to the best receptacles for planting bulbs in, but there is nothing better than pots or shallow wooden boxes. It is a very simple matter to transfer the specimens from their growing place to any kind of fancy vase when they have nearly reached their maturity. There is no necessity to use soil in the planting of the bulbs, and by far the cleanest substance to employ is the brown cocoa fiber. Each bulb should be pressed firmly into position, care being taken that the pots or boxes are not overcrowded. It may here be noted that it is just as well not to plant all the bulbs at the same time, but to spread the business over a month or so. In this way it will be possible to arrange for a succession of bulbous plants in their full beauty throughout the whole winter.

As soon as the bulbs are planted they should be removed to a perfectly dark place, such as a dry cupboard where the temperature is even. A better plan than this, however, is to place the receptacles containing the bulbs in an old frame in the open, standing the boxes on the level bottom. Then cover them all completely in with dead leaves or fiber, taking care that the material is fairly moist. The bulbs may now be left in this condition for about two and a half months, at the end of which period those which were planted first will have started into active growth. In the case of bulbs which have simply been put aside in a dark place, it will be necessary to take an occasional look at them to see that they do not want for water. The object of this treatment is to make

in place speedily put them in front of a window where they will experience the full effects of the light. The outcome of this treatment is that the flowers are badly stunted just because the bulbs have not had the opportunity of making a proper amount of root growth as they would in a natural state.

Some of the narcissi are charming subjects for cultivating in pebbles. For this purpose a quantity of river shingle should be procured of not too fine a grain, and this if not clean must be washed again and again with pure water. The bulbs, which ought to be very sound ones, free from any scars, may be inserted in the pebbles as the fancy dictates, the shingle being put into any kind of ornamented bowl. It was formerly thought that bulbs would not flourish unless they could have some sort of drainage, but this is far from being the case. Providing the specimens are not given more water than they can take up from time to time, the plants will flourish well in bowls which have no outlet at the bottom. Of course, the remarks concerning the proper rooting of the bulbs applies in these cases as much as in any other.

As soon as it is wished to bring the bulbs into active growth, the pots, or whatever the specimens may be in, should be taken out of the darkness. For the first two or three days it is not a wise plan to expose the shoots to the full glare of daylight, as this is rather apt to check rapid development. Directly, however, the leaves have assumed the normal green coloring the specimens may be placed in



Lachenalias Are Good Subjects for Indoor Culture

sure that the bulbs are thoroughly well-rooted before they are encouraged to make any amount of top growth. It is just in this direction where so many people fail to obtain satisfactory results from their indoor bulb garden, by not putting the specimens in darkness in the first instance. The same point can not be too strongly emphasized in the case of hyacinth bulbs grown in glasses containing plain water. Most folk when they have filled the vases and put the bulbs

(Continued on page 410)



Snowdrops Are Easily Grown in the House



Growing Hyacinths in Water



Fieldstone Wall and Gate Posts Are Built at the Entrance to the Property

“BEINHURST”

The Summer Home of William A. Bein, Esq., at “Still Wood Park” in the Woodbridge Hills,
Near New Haven, Connecticut

By Samuel Sherman



ONE does not realize the beauty and the charm of the Connecticut Hills for the seeker of pleasure, recreation and health, until one has climbed their heights, and the hills of Woodbridge are not the exception to the many hills to be found in dear old Connecticut. So it is not surprising that

Mr. Bein, when looking for a site for his summer home, chose the one he did with its magnificent view of land and sea, for while it seems as if it were among the mountain tops, it is in reality only four miles from Long Island Sound. It is to these beautiful hills, which are always so fascinating to the lover of nature, that Donald G. Mitchell (Ik Marvel), the distinguished author, built his home and found rest and peace among them.

Mr. Bein built his house within view of the ascending roadway, which winds upward through the gate-

way, passing the stable on the way to the house, which is perched on a hill four hundred and sixty-five feet above the sea level and which is sixteen feet higher than West Rock. The house has been christened “Beinhurst,” and is of a simple and picturesque mountain lodge type of architecture.

The house proper is square in form, with a ten-foot veranda extending around it, and the whole is covered with a

roof which extends down from the main roof, sweeping gracefully over the veranda. The outer edge of the roof is supported on massive cedar posts resting on huge piers of moss-covered fieldstone; the space between the piers being weathered with bark slabs of native chestnut, oak and silvery gray birch, presenting a rustic effect on the exterior.

The roof is pierced with great dormer windows, which form the second story, and the whole is surmounted by an imposing stone chimney of unique design. The roof and the ex-



The Four Corners of the House Rest on Fieldstone Piers

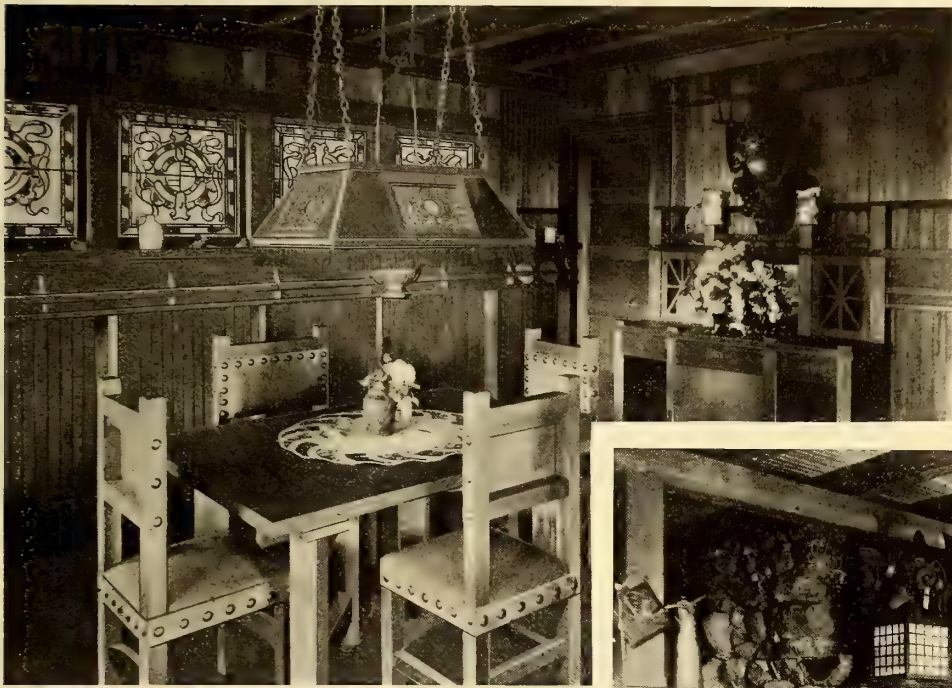
terior woodwork is stained with colors to harmonize with the natural surroundings, the whole having a most charming effect.

The first floor contains a living-room extending across the entire width of the house, and containing a great open fireplace

ing with the living-room, is trimmed and finished in a similar manner. A group of stained glass windows placed at one side of the room sheds a pleasant light over the apartment. The sideboard, built in at one side, is an attractive feature of the room. The kitchen is placed in connection with the dining-room and is fitted complete. There is a cellar under the house for the storage of fuel and supplies which is reached from an outside stairway.

The second story contains four bedrooms, trunk room and a bathroom, besides a servant's bedroom. The bathroom is furnished with porcelain fixtures and exposed nickel-plated plumbing. The rooms are large and airy and are fitted with all the modern conveniences.

The stable, which is passed on the way to the house, is built in harmony with its surroundings and in keeping with the house.



Roycroft Furniture in Native Elm Is Used
in the Dining-room

which would do justice to our Puritan ancestors. It is built to form an inglenook, with seats placed at either side of it, the fireplace itself being built of rock-faced fieldstone laid up in a rough manner. The hearth is laid with Welsh tile and the opening is furnished with a wrought iron hood. A rough-hewn log with clinging bark, supported with ornamental wrought iron brackets from which suspend lanterns, forms the mantelshelf. The stairs at the right of the inglenook ascend to the second story, and are in combination with the back stairway.

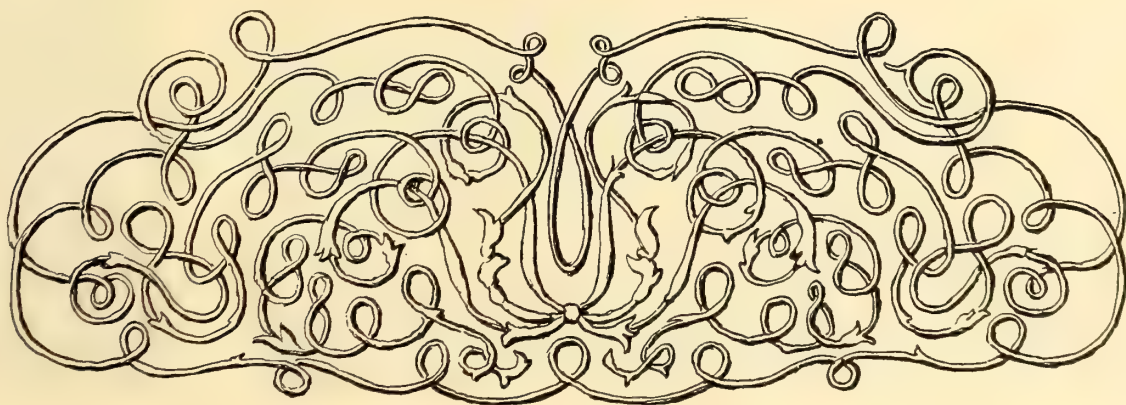
The exterior wall of the house being ceiled up with narrow beaded stuff and placed on a dressed studded frame, is exposed on the interior, and the whole is finished in weathered oak. The second story joists are exposed to view and are treated similar. The furniture for the main room was especially made of native elm and chestnut and is of the massive Roycroft style, stained and finished to match the trim. The chair seats and backs are covered with split hide in natural color and trimmed with large-headed hand-forged nails. The dining-room, connect-



A Great Rough Fieldstone Fireplace, Built in the Inglenook, Is the
Feature of the Living-room

It will accommodate several horses and carriages, and is fitted with all the modern conveniences.

At one side of the stable a watering trough of rough stones is built, into which a steady stream of spring water flows, pumped from the engine placed in the rustic house at the foot of the hill; this engine also supplies the main house with water. The entire plant—house, stables and engine-house—was designed by the son of the owner, Arthur G. Bein, a student of architecture.





The Pergola and Its Planting



The Entrance to the Pergola

A Garden in Massachusetts:

THE quiet beauty of the summer garden is seldom more delightfully illustrated than in the charming grounds arranged by Miss Tower at Lexington, Mass. Nature, if requiring assistance, is here surely assisted in precisely the way that yields the best result and the utmost beauty. The formality of the general arrangement, of the plan, is just sufficiently pronounced to give emphasis and orderly arrangement. The garden needs this, but often enough the formality of the arrangement is so developed that even the flower growth and blooming are subordinated to it.

Nothing of this sort can be said of Miss Tower's beautiful garden. Order and arrangement there must



An Arched Gateway



A T



A Straight-away Path Bordered with Flowers



Looking Across the



The Stepped Path



The Seat of the Pergola Wall



Gate



The Gate Ajar

Miss Tower's Garden at Lexington

be, else otherwise there would be nothing but a growing wilderness. But on the basis of a simple and natural plan, with fine emphasizing of the special points, there has been planted a wealth of floral beauty that has grown luxuriantly and exquisitely, overflowed all border rigidity, and sought, in large measure, its freedom from restriction. The paths are beautifully arranged and dressed with borderings; the gateways are charming in their simplicity; the lawn area is everywhere sufficient for the displaying of the floral beauty, and the pergola, which is the climax of the whole, and actually the chief structure within the garden, is finely situated and beautifully adapted to its purpose.



y Pond to the Pergola



There Is Beauty Everywhere



The Pergola and Its Planting



The Entrance to the Pergola



The Stepped Path



The Seat of the Pergola Wall

A Garden in Massachusetts:

THE quiet beauty of the summer garden is seldom more delightfully illustrated than in the charming grounds arranged by Miss Tower at Lexington, Mass. Nature, if requiring assistance, is here surely assisted in precisely the way that yields the best result and the utmost beauty. The formality of the general arrangement, of the plan, is just sufficiently pronounced to give emphasis and orderly arrangement. The garden needs this, but often enough the formality of the arrangement is so developed that even the flower growth and blooming are subordinated to it.

Nothing of this sort can be said of Miss Tower's beautiful garden. Order and arrangement there must



An Arched Gateway



A Triple Gate



The Gate Ajar

Miss Tower's Garden at Lexington

be, else otherwise there would be nothing but a growing wilderness. But on the basis of a simple and natural plan, with fine emphasizing of the special points, there has been planted a wealth of floral beauty that has grown luxuriantly and exquisitely, overflowed all border rigidity, and sought, in large measure, its freedom from restriction. The paths are beautifully arranged and dressed with borderings; the gateways are charming in their simplicity; the lawn area is everywhere sufficient for the displaying of the floral beauty, and the pergola, which is the climax of the whole, and actually the chief structure within the garden, is finely situated and beautifully adapted to its purpose.



A Straight-away Path Bordered with Flowers



Looking Across the Lily Pond to the Pergola



There Is Beauty Everywhere



The Structure Is of Stucco with Roof of Bright Red Tiles, as It Appears After the Alterations

"Sunnyside," a Home and Shrine

By Perriton Maxwell

Photographs by Arthur Hewitt



ALL literary landmarks in America there is none of greater historic interest, none more individually engaging, none better preserved than "Sunnyside," the home of Washington Irving, which stands on the northern edge of Irvington-on-the-Hudson, N. Y. Be-

sides being the one-time domicile of a world-famed master of letters, this fine old house, a part of which dates back to the middle of the seventeenth century, is a charming example of pure Dutch architecture, simple in its lines and effective from any viewpoint.

This interesting structure is built of stucco with a roofing of bright red tiles. The tops of the side walls are stepped in the old-time Dutch fashion: the windows are casemented and set with small leaded panes. The south front remains to-day as it was when Irving lived and wrote behind its ivy-clad walls. The charm of the place is now precisely what it was in the author's lifetime; it has been preserved with loving care since its famous owner passed into the shadows here in 1859. On

the river side gable of the house proper the date of its building (1650) is let into the stone in iron letters, quaintly formed. Irving acquired the property in 1835. It had been in the possession of a Dutch family that had fallen upon evil financial days. It had appealed to the author of "The Sketch Book" long before he had formed a determination to buy it; he had made it the focal point of interest in "Wolfert's Roost," the home of Jacob Van Tassel, in one of the Legends of Sleepy Hollow, and when Irving finally purchased the place it was his thought to make it merely a kind of rural hiding place to which he might flee when work was pressing or the fever of city life oppressed him. The existing small stone house was almost a ruin when Irving made it his own, and he immediately set about making it habitable. The work of repairing begun, the inevitable adding to, extending and enlarging process ensued. The present porch entrance was put up and a wing thrown out. What had started as a simple job of repairing ultimately became a considerable contract, for there was a general amplification and augmenting of the



Washington Irving

original modest house into a spacious, almost imposing country gentleman's seat.

The ineffable beauty of the natural setting which formed the background for his new home doubtless made irresistible appeal to Irving's fancy. In any case he soon purchased land adjoining the original property, and had the immediate neighborhood of "Sunnyside" laid out as it now appears. In approaching the house one passes through an iron gateway with stone posts and under a canopy of superb old trees of many species and all beautiful.

At the entrance is a circular driveway and a well-kept lawn, and almost hiding the lines of the house is a riot of ivy, wistaria and trumpet vine, climbing from ground to chimney top. The ivy is of the familiar hardy Scotch variety, and is the outgrowth of a single cutting given to Irving by Sir Walter Scott, who plucked it from the walls of Abbotsford.

The present owner and occupant of "Sunnyside" is Mr. Alexander Duer Irving, a grandnephew of Washington Irving. Here with his family the present Mr. Irving finds a charming all-the-year-round home, a retreat filled with cheerful memories and perhaps with the amiable shadows of early American authors and celebrities of other employments. Also the present occupant has added to the structure

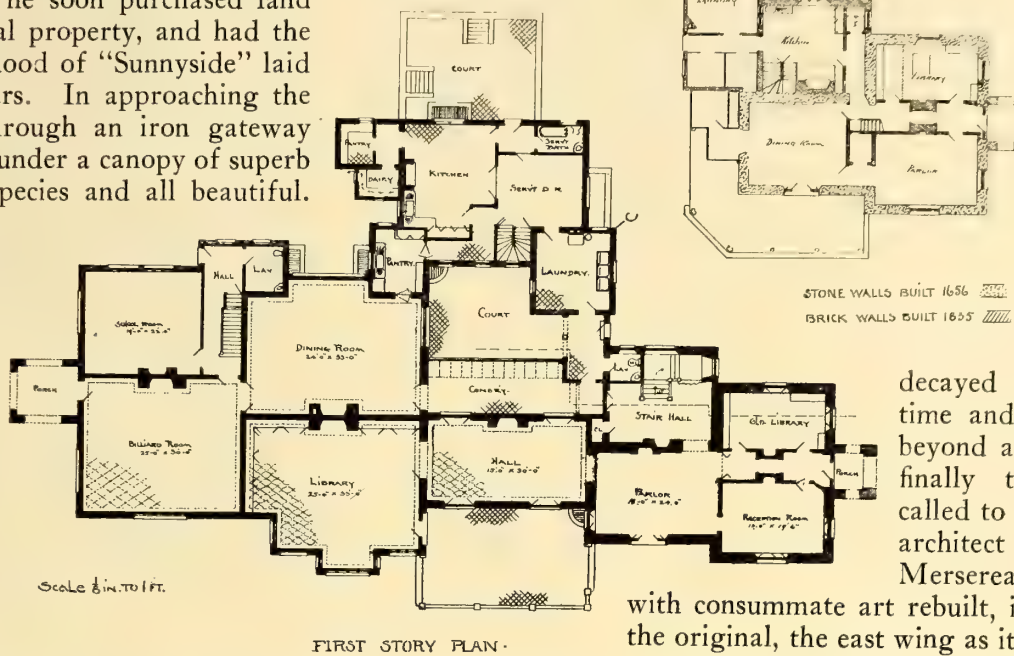
and beautified it in many ways, but never in any degree destroying its dignified old lines or disturbing its atmosphere of restful old-fashioned ease and quiet.

One of the more recent changes made in the charming structure was the complete demolition and subsequent skilful restoration of the pagoda-like annex on the east side, facing toward the road. The original small building had

decayed under the ravages of time and weather until it was beyond all hope of repair, and finally the present occupant called to his aid the well-known architect Mr. William H. Mersereau, of New York, who

with consummate art rebuilt, in exact duplication of the original, the east wing as it stands to-day.

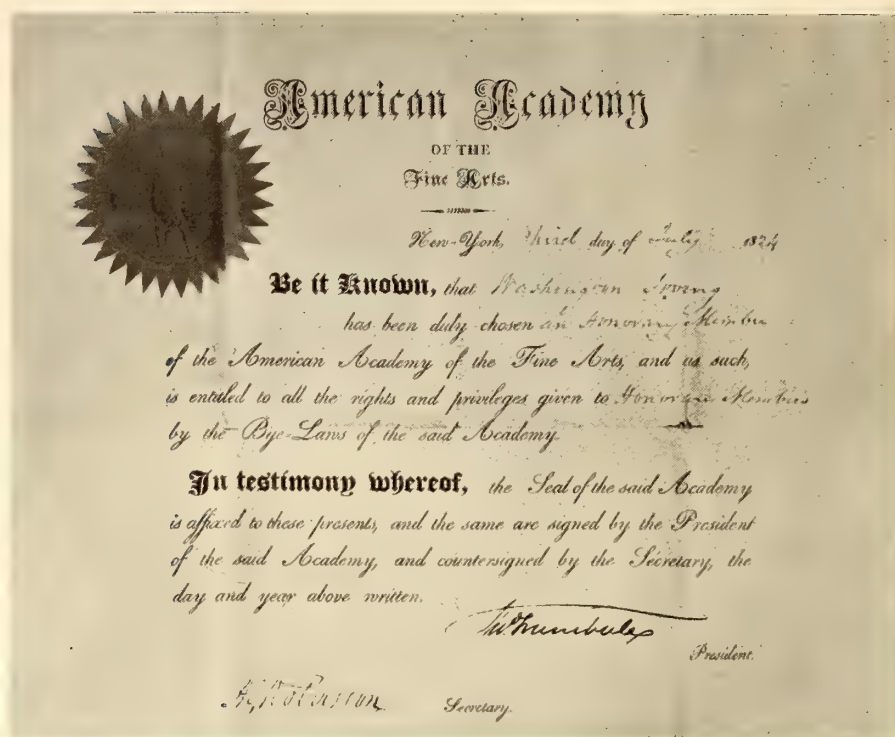
Naturally the most interesting room of the house is the genial author's study, an apartment of small size with an open fireplace, glass-incased book shelves and walls lined with prints of literary interest. Here it was that Irving wrote his "Life of Washington," the task upon which he set a higher value than all his other efforts, but which the world has not yet agreed to place before his more fanciful output in its affections. This literary workshop stands now as the author left it nearly fifty years ago. Two diamond-paned windows let in the light, and in each window frame is a com-



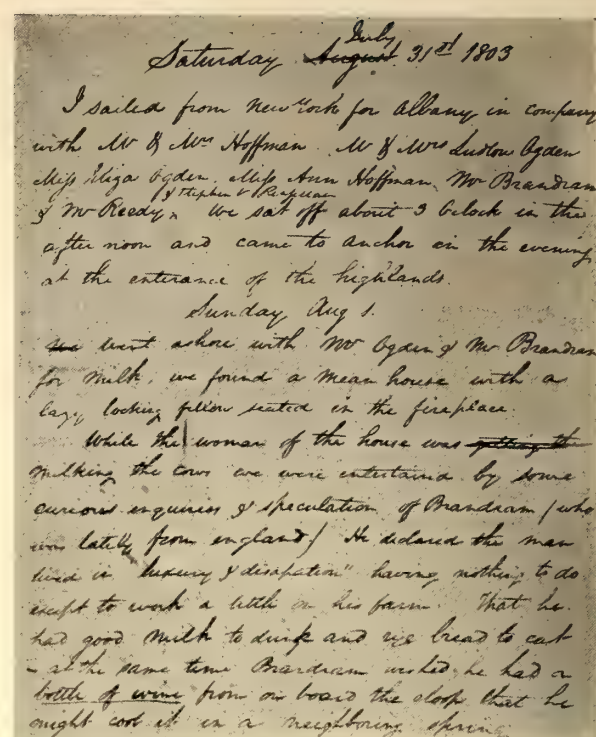
FIRST STORY PLAN.



The House Is a Charming Example of Pure Dutch Architecture



Irving's Certificate of Election as a Member of the American Academy of the Fine Arts



A Page from Irving's Diary Which He Kept with Sedulous Care

fortable seat. Books and pictures constitute the chief furnishings aside from the leather chair used by the author and a couple of graceful tables. Over the mantel is the familiar portrait of Irving as a youth painted by John Wesley Jarvis.

The woodwork of this interesting study is in dark green; the mantel is veined marble and onyx, and the walls are in a neutral tint of gray-green, which serves as an admirable background for the numerous prints and drawings, chief among

the latter being F. O. C. Darley's original illustrations of "The History of New York, by Diedrich Knickerbocker." Against the wall stands Irving's desk, a gift from his publisher, Mr. George P. Putnam; a plate set in the desk bears the inscription of presentation. Just above the desk are the originals of the illustrations published in "The Alhambra."

A souvenir of more than passing interest is the certificate of Irving's election as a member of the American Academy



The Study Remains as Irving Left It—His Portrait Hangs Over the Mantel



A Glimpse of the Drawing-room

of the Fine Arts which hangs in its frame on the walls of the study. It was no small honor in 1824 to be chosen for membership in this first of the nation's institutions of culture, and that Irving was deeply conscious of the compliment bestowed upon him is shown in his letter of acknowledgment addressed to John Trumbull, the great portrait painter and at that time president of the Academy.

And speaking of art, it may be of note, in passing, to call attention to the admirable likeness of Irving done in 1851 by Charles Martin. This portrait was executed soon after the author's life of Mahomet was issued



The Reception Hall

page in a pleasantly ominous way, and gives hint of the unctuous mirth which later made him famous on two continents.

The impression one carries away on leaving "Sunnyside" is that of having visited a perfectly appointed home which boasts the added charm of rare historic and literary association. And on stepping out into the old garden, back a bit from the house, this impression is strengthened, for here is a wooden fencing, preserved intact since Irving's day, and here are old-time flowers grown from the seeds of the blooms that gladdened his eye.



The Library

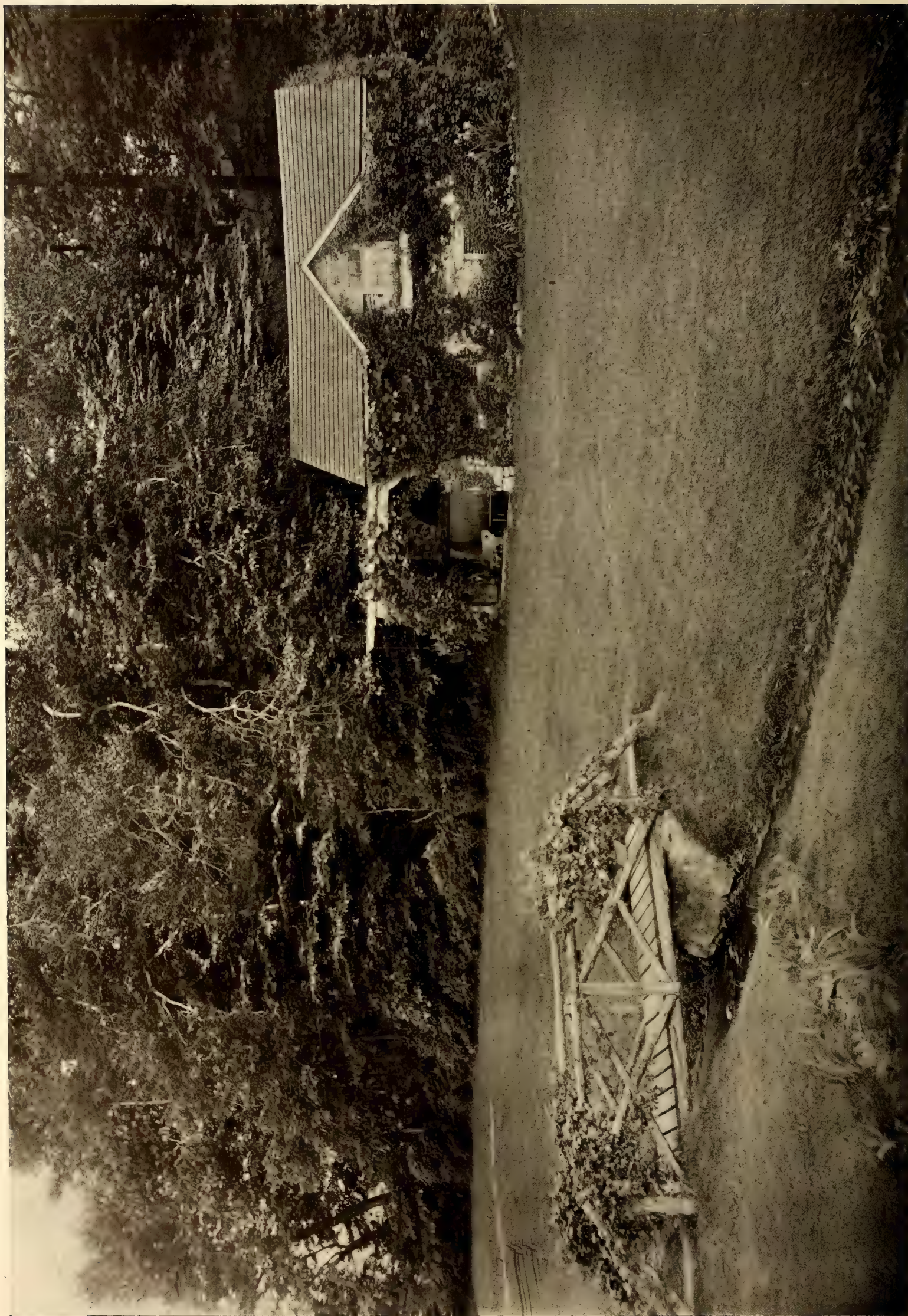
and when Irving was steeped in the atmosphere of Orientalism. Of all his portraits this one has remained the most popular, and is to-day the most generally accepted, as it is the most familiar, of the "counterfeit presentments" of the great master of "Sunnyside."

As one passes along the narrow entrance-hall, there is offered the glimpse of a small drawing-room at the left; this is done in white and red, with prints and brasses and some rare old mahogany chairs and tables. The music-room is also carried out in a scheme of white and dark red, with a few well-placed paintings on the walls, one a notable landscape piece by Inness. Beyond this room and to the right of it are the living-room, dining-room, billiard-room and the new library, one of the spacious additions to the house made by its present owner. Here are some valuable old tomes, among them the vellum-covered volumes collected by Irving for reference when he was at work upon his "Conquest of Granada." To the art lover and literarian alike the principal decoration of this room will prove the framed-up lithographic stones used in printing the colored illustrations for "Bracebridge Hall."

An illuminating glimpse of the conditions of life and travel in the early days of the last century are afforded by the diary which Irving kept, with sedulous care and an apparent interest, when he was budding into manhood. He was just twenty when he penned an account of his laborious journey up the Hudson to Albany in the company of congenial friends; a page from the future author's diary is reproduced with these lines, and it gives one an insight of his power of rapid character portrayal and his gift for fastening upon the essentials of a dramatic setting and the larger details of the human figure in its proper environment. His innate sense of humor also flashes across this



The Staircase and Grandfather's Clock of the Old Irving Home



The Dairy of the H. J. Verner Estate, Bryn Mawr, Pennsylvania

Springhouses Old and New

By Phebe Westcott Humphreys

Illustrated by S. Walter Humphreys



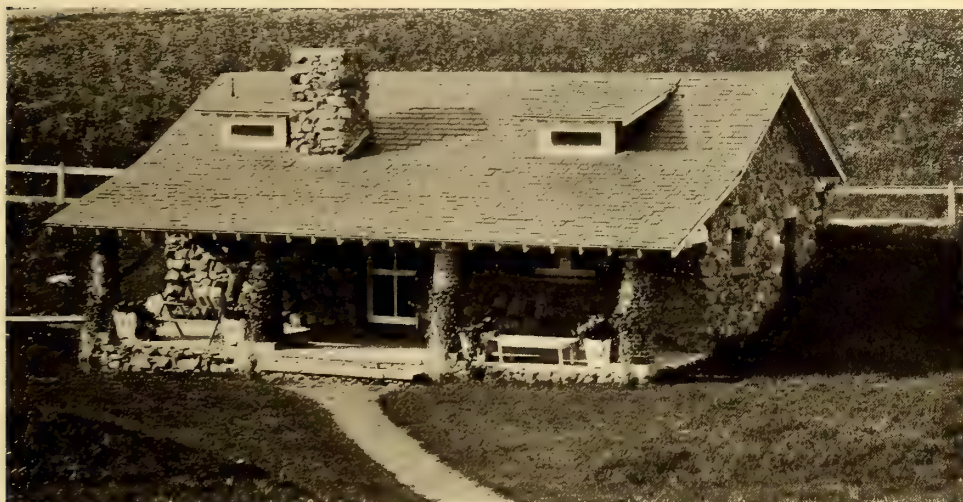
THE very suggestion of a springhouse calls up recollections of quaint, low eaved "homey" farmhouses; the simple life of old-time country homes, and the solidity and picturesque simplicity of ancestral estates. The charm of this home accessory, that was once considered a necessity from an economic standpoint—when it stood for more convenient handling and better prices for the milk and butter of the farm—has come to be an important factor in the home building of to-day. No country estate or farm home now seems quite complete without its picturesque and useful springhouse. Historic structures of crumbling fieldstone and tiny frame shelters guarding the gushing waters of hill slope and valley springs, are no longer hidden from sight by many years' growth of briars and bushes; but are cleared of obstructions to invite the traveler to refreshing waters, and to add unique beauty to the landscape. The useful springhouse of the farm dairy is adorned with flowering vines and converted into the most decorative feature of the homestead; and even country churches delight in this additional attraction to their church property, where the country members quench their thirst after their long "ride to meeting." In fact so widespread has its value become that

about the great stone fireplaces of the past. But I will never be content," he continued, "until I have actually built with my own hands a little springhouse of fieldstone such as I used to love on the old farm back in Ohio."

And build that springhouse he did! with huge delight and with the vim and eagerness of boyhood days, a joyous vacation season from town care was spent in constructing a crude but charmingly picturesque springhouse on a hill slope, copied from a low stone structure which he had admired on his frequent travels from his country seat to the city office. "And its chief charm," he gleefully added afterward, "lies in the fact that it cost less than ten dollars complete, as it was built entirely from the rough fieldstone of the surrounding acres, the only cost being the cement and sand for mortar, and a few fencing boards, hinges and lock for the door."

This offers a novel suggestion where cost must be taken into consideration. Such a springhouse, built entirely by the owner at odd hours, will require little outside of cement, if the fieldstone is at hand, as no other woodwork except the door and supporting scantling will be required; even the roof being a mere rounding over of the stone, with a rough cast finish of the cement.

On the Ryers' estate in Philadelphia—in the outskirts of beautiful Germantown—there is a springhouse of note that has attracted attention because of the gift of the estate to the City of Philadelphia as a public park. It might well be taken as a model for springhouse construction, because of its simplicity and convenience. The low stone walls are not remarkable, being simply rough stone and plaster cast; and the little frame addition built at one end, for sheltering the milk cans, is rather dilapidated, from being twisted out of shape by the roots of a mammoth buttonwood tree, for which the place is famous; but the principal charm lies in the interior arrangement. The big square floor of the main structure is laid with brick, with the exception of a space about eighteen inches wide extending along one end and side. This space has cemented bottom and sides, and is from six to eight inches deep, form-



Springhouse at Bernardsville, New Jersey

homebuilders in all sections are showing their appreciation of the restful beauty of this home accessory, until it gives promise of pervading every farm, home and country estate that possesses a spring of clear, cold water worthy of appropriate shelter.

A landowner, whose beautiful country estate, with its spreading farm lands on every side, is far dearer to him than his palatial brownstone mansion in town, said to the writer: "The sight of one of these low-browed springhouses among the sheltering hills and trees, with old-fashioned shrubs and flowers in the nearby garden, connecting it with the adjoining farmhouse, is heartwarming and redolent of the wholesome life and good cheer that centered



Inside the Springhouse



A Modern Spring House



Dome-shaped Spring-House at Andalusia



Old but Still Useful

ing an ice-cold waterway in which milk cans are set, and pans of cold custard, or whatever is to be kept or served deliciously cold.

The clear cold spring that runs in at one end of the stone structure flows directly into this waterway, continues down one side of the house and around the other end, where there is an outlet for draining off the surplus. The interior walls are plastered from floor to roof, and with the plain brick floor surface meeting the cement waterway and the plaster wall there is no woodwork to decay from dampness, and for the periodical cleansing a thorough hosing of floor and walls, and the draining, sweeping, flushing and refilling of the waterway, keeps this delightful food and milk room hygienically clean with little difficulty.

For twenty-five dollars—or even somewhat less, it is asserted—a springhouse has been built on the Dickinson estate, near Crescentville, of patriotic fame. As it is of generous dimensions—about fourteen by twenty feet—with deep underground walls and peaked roof, and with sheltering porch at the entrance-way, one readily surmises that this price necessitated an abundance of fieldstone to be had for the gathering, and also owner-building. In this instance, however, a stone mason's apprentice made a slight expense for work; a tight shingle roof, an extra door at the back and flooring boards for the interior brought the cost of material and stone laying near the twenty-five dollar mark, while the carpenter work, as well as the greater part of the stone work, was finished by the owner. This structure presents a novel feature of a second story. The entrance beneath the sheltering porch at the front leads down a few steps into low, cool depths, with a cemented floor; just above this entrance door flooring boards have been laid to form a ceiling of the lower floor and the floor of the upper. The boards, however, are laid in the form of slats instead of forming a close-fitting floor, thus forming a cool upper storage room with a narrow entrance at the back.

Another two-story springhouse is found at Hartsville, Pa., that is of novel type, as the roomy old-time structure where Washington and his army quenched their thirst in Revolutionary days has of late years been divided into three small rooms—one of the lower rooms, now a mere corner of the structure, containing the spring; the adjoining room being a tight, well ventilated, window-lighted storeroom, and the upper floor or loft room fitted up as a storeroom or children's playhouse.

In the Blue Mountains there are many low, stone springhouses thoroughly characteristic of the mountain homes adjoining—long and rambling, built substantially of stone, with over-hanging eaves, and nestled down in the wildwood shrubbery of rhododendrons and laurels, close beside a gushing, singing, sparkling mountain stream.

A good type found on many country seats is the dome-shaped springhouse, or a well-rounded mound. These are frequently banked up with earth and sodded to form a mound of green, that is kept smooth and velvety by frequent mowing, like the famous Andalusia springhouse illustrated; or the banked up earth is planted with some low trailing and blossoming annual, or allowed to "grow wild" with perennial vines, and brier and wild rose blooms. In the mound houses the entrance side is either walled up with stone, or there is a plain wooden entrance-way with only broad doors showing through the picturesque tangle of vines and shrubbery.

The more stately springhouses of the modern country seat are redeemed from undue "newness" when the spring which they are designed to shelter has an outlet near stately old trees—wide-spreading elms or willows or grand old buttonwood trees that have stood for a century or more.

In point of cost the perfectly appointed dairy on the estate of J. Ledyard Blair, Esq., at "Blairsden," in Bernardsville, N. J., greatly excels the average structure devoted to this purpose. The thick stone walls display their purpose, however, in suggestive coolness for the interior. The picturesque chimney and the massive pillars of fieldstone, like the walls, produce the charm of local color.

The section of the beautiful H. J. Verner estate, at Bryn Mawr, Pa., that has been devoted to the dairy, might well be described as a spot full of natural suggestions, which have been developed in a strikingly individual manner. Here on an even more pronounced scale is shown the delight in local color and in the typical setting of woodland shelter and rocky slope in the background and green meadows with sparkling stream in the foreground. Here the fieldstone construction is hidden during the summer by a luxuriant tangle of flowering vines. The stone arches of the porch show through the vines, suggestive of a cool resting place for the dairy maids; and additional vine shelter and seclusion is afforded by a stately pergola reaching out beyond the stone porch. Down in the meadow slope the charming picture-setting is completed by a shallow brook with stepping stones and vine-covered rustic bridge.

Even the most elaborate and costly of these perfectly equipped modern dairies are never out of harmony with the old-time ideal of springhouse conception when thus made informal and unconventional by fitting perfectly into the picture of their surroundings. Although types may vary greatly between the ten-dollar structure of rough field stone and the elaborate Verner structure, they each fit so perfectly into the landscape that they seem to have grown there. In this lies very largely their peculiar charm.



The Springhouse Porch



Half Hidden in the Ground



The Door by the Tree Side

The Residence of Henry G. Lord, Esq.

Brookline, Massachusetts

By Paul Thurston



THE suburban home of Mr. Henry G. Lord, at Brookline, Mass., shows what can be done in the building of an attractive small country house, without any particular style, yet with sufficient artistic value to give it a charming atmosphere. The house stands on an inclining bit of land, and though it is quite close to the road there has been sufficient planting done about the porch, terrace, piazza, and the grounds in general, to insure a certain amount of privacy. Though the site which surrounds the house is not large, it has the appearance of a greater one, for the reason that it, and its neighboring grounds, are blended into each other, and the result presents the appearance of a larger estate than it really is. Tall oak and chestnut trees grace the site and add a dignity to the already delightful spot.

The building is treated in a very excellent harmony of color, with the outsides covered with shingles, stained a soft brown, and is in keeping with the old ivory-white paint of its trimmings. The roof is also covered with shingles.

The entrance is through a vestibule which is built on the porch on the outside of the house, thereby insuring a square hall on the inside. The hall, square in form, is furnished with a high paneled wainscoting, and a massive beamed ceiling, treated with old ivory-white; it affords access to all the principal rooms. The stairs are boxed, and are separated by an archway. An entrance to the outside, and to the service end of the house, is obtained from this hall.

The reception-room is on the left of the entrance; it is fitted up in a dainty manner. It has a low Colonial wainscoting, painted white,

above which the walls are covered with moire antique paper of a creamish white color, with borders of roses and ribbons in pink and white. The cornice and ceiling is white. A bay window is thrown out at the front of the room, under which there is placed a paneled seat.

On the right of the hall is the living-room, which is trimmed with cherry. The walls have a paneled wainscoting, above which they are covered with green striped wall covering, finished with a massive wooden cornice. At one end of the room there are bookcases built in to the height of the wainscoting, over which are three windows; the tops of the bookcases are covered with a cherry top, forming a flower shelf. A fireplace, built with Roman brick facings and hearth, and with its massive paneled mantel and overmantel, is quite the feature of the room. Opposite the fireplace is a broad bay window, which forms an entrance to the living-porch, which is quite isolated from the rest of the house, yet is within close touch with the entrance-porch by the way of the terrace.

The dining-room, which is entered from both the hall and living-room, is quite the feature of the house. It is oval in form and its exquisitely formed lines are well brought out. The walls are covered with a rich crimson brocade effect, in harmony with the old ivory-white trim of the room. There is a white painted chair rail which breaks the height of the room, while at the intersection of wall and ceiling there is a massive wooden cornice. The polished floor, the rug of fine coloring, made to conform to the shape of the room, and the furniture of mahogany, with the chairs designed after the Sheraton model, make a complete and harmonious effect. The group of three windows placed at one



A Few Favorite Books Should Always Be on Hand in the Bedroom



A Glimpse of the Reception Room



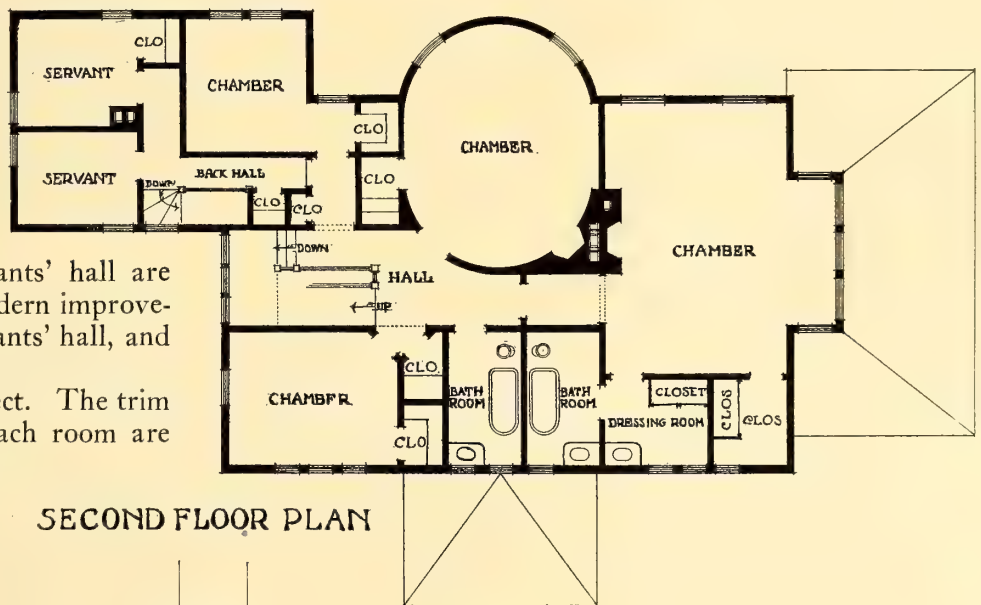
The Base of the House Is Screened with Well Chosen Planting

end of the room provides an excellent place for the buffet, which is placed under the small center window.

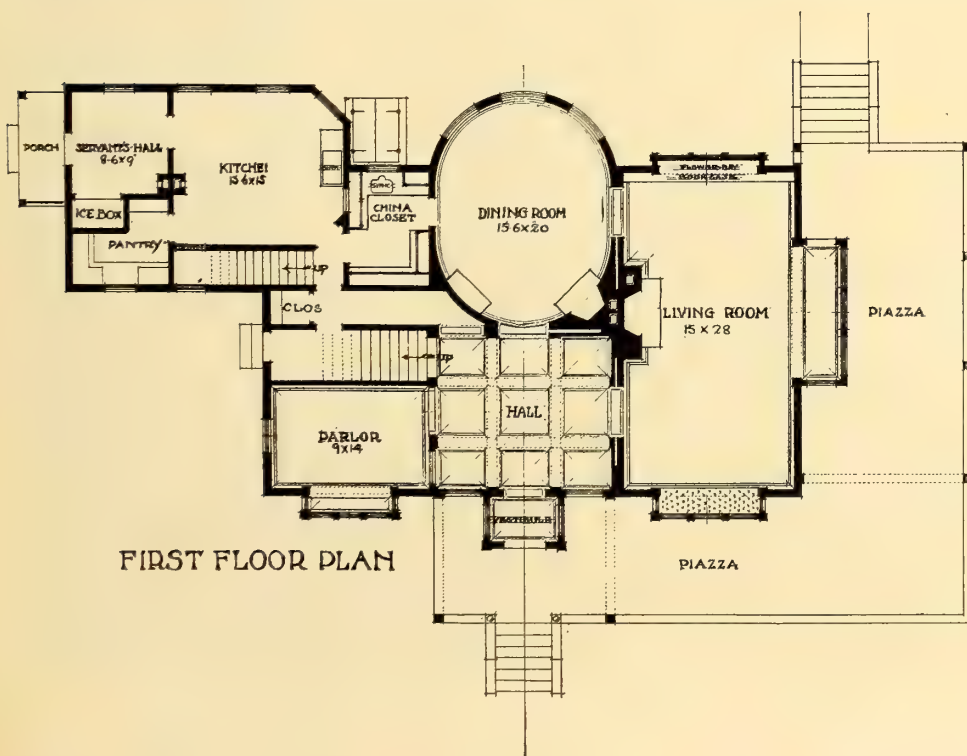
A large butler's closet, between the dining-room and kitchen, is fitted up with dressers built in, with drawers under the counter and cupboards above the counter inclosed with glass doors. A butler's bowl is fitted up complete. The kitchen and servants' hall are fitted in a complete manner with all the best modern improvements. A large refrigerator is built in the servants' hall, and is convenient of access from the rear porch.

The second floor is treated with excellent effect. The trim is painted old ivory-white and the walls of each room are covered with artistic wall covering, one color scheme being adopted for each room.

The owner's suite consists of one large room



SECOND FLOOR PLAN



FIRST FLOOR PLAN

provided with well fitted up closets, large dressing-room and bathroom. There are also three guest rooms and bathroom on this floor, as well as two servants' rooms which are placed over the kitchen extension, and which are reached from the main hall and from a private staircase. The owner's room has an open fireplace with tile facings and hearth and a mantel of Colonial type. At one side of the fireplace there are bookcases built in, and also a paneled seat. The principal guest room also has a fireplace. The bathrooms are tiled, and each is furnished with porcelain fixtures and exposed nickel plated plumbing.

The third floor contains a complete billiard room, trunk room and ample storage space. The heating apparatus, fuel rooms, and

cold storage rooms are placed in the cellar, which extends under the entire house, and has a cemented bottom.

It was stated at the outset of this article that here was a country house without any particular style. This is undoubtedly true, since it would be quite impossible to classify this dwelling as belonging to any one of the historic styles of architecture. Yet this very fact touches on an important point, since what is the true value of style-designation in considering any structure, whether it be a house or other building? There is a strange demand for architectural nomenclature among people who do not even know what the various styles are nor where they are most typically illustrated. It would add no merit to Mr. Lord's house to describe it as belonging to any particular style, even were



The Living-room Has a Paneled Overmantel and Fireplace with Roman Brick Facings

it possible to do so. The main point, and indeed the only one of any value or importance, is that it is good.

This is the very essence of all architecture, but this house offers a good example of the no-style house, since it speaks aloud so deliberately what it is, disclaims its freedom from tradition, emphasizes its independence of precedent, and is, withal, so generally good and agreeable. The last is, indeed, the one great quality to be sought in all building, and the lesson is the more notably taught here, since it is done in so unpretentious a way.

This is another noteworthy point, for a house does not have to be pretentious to win support to itself or be interesting and good. Direct and quiet lines, simplicity in design, simplicity in treatment, simplicity in effect, all these yield admirable results when properly handled and administered, and once more Mr. Lord's house may be taken as an excellent illustration of results to be obtained in following these lines.

The methods by which the successful characteristics of this house were obtained may be readily studied in the accompanying plans and photographs. The plan is, of course, the basic point, the fundamental element on which the success of the

building is to be achieved or its failure accomplished. The house begins with the spacious central hall. To one side, and completely occupying the whole of this side, is the living-room, naturally made the largest room in the house. On the other side of the hall a small parlor or reception-room is arranged on the entrance front. The dining-room is again in the center and occupies a commanding position behind the hall; its beautiful and novel form has already been adverted to. The stairs are behind the parlor, and thus, as has been pointed out, completely free of the hall, while the kitchen and service room occupy a position still further in the rear, but connecting with the dining-room, and have a wing or extension all their own.

Surely nothing could be simpler or more direct than this, and yet there are some

notable elements of novelty here which lift this plan out of the commonplace and give it original merit of its own. The spacious hall is itself a surprise, since its dimensions are actually larger than a house of this size would seem to suggest.

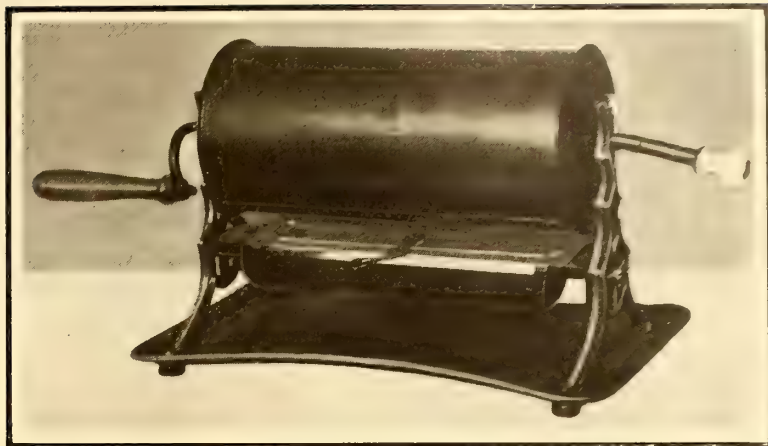
Messrs. Fehmer and Page, of Boston, Mass., were the architects of this house.



The Dining-room Is a Charming Apartment, Oval in Plan



Solid Alcohol—Alcohol, Ether and Gun Cotton



Alcohol Coffee Roaster

Heating and Lighting with Alcohol

By John R. Waley



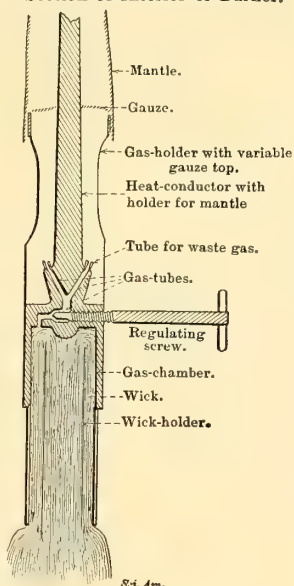
ALCOHOL, be it pure or denatured, is in many respects superior to kerosene and gasoline for the heating of rooms and of cooking and other household utensils.

Alcohol can be used in almost any stove which burns gasoline, and in a "blue flame" kerosene stove with little or no change it has all the advantages of a good fuel. As a household fuel it has many additional ones. It is safer than most substances of its kind; the accidental fire can be extinguished with water, whereas kerosene and gasoline fires are spread thereby. Alcohol is not greasy by nature, nor can there be any disagreeable odor attending its use. The flame is at all times non-smoking, as well as odorless, and thereby is rendered especially desirable for cleanly cooking, particularly for broiling. The kitchen utensils are never blackened by the alcohol flame, and time and labor are saved by this fact, too.

Advantages not so easily observed, but which are none the less real and important, are found in the increased healthfulness and purity of the air of a closed room in which an alcohol stove is burning, as compared with one containing a kerosene or gasoline stove.

A larger part of the heating value of alcohol than of petroleum comes from the combustion of the gaseous element hydrogen, which produces a hotter flame and no noxious combustion products, but only water. Alcohol should be used, therefore, whenever possible for heating, because it produces far less carbon dioxide and deadly carbon monoxide than petroleum products. Alcohol, it may be expected, will soon cost about the same as gasoline and but a trifle more than kerosene

Section of Interior of Burner.



Alcohol Lamp Burner

weight for weight. The relative costs of equal amounts of heat theoretically given off by these three are:

Gasolene.....	1.35
Kerosene.....	1.02
Alcohol.....	2.19

The apparent superior economy of petroleum products in theory is not borne out in practise. There are greater heat losses from the gasoline and kerosene flames than from the alcohol flame; the latter, because it contains no solid incandescent carbon, does not radiate heat so much. These facts and others of a purely technical nature, combine to make the cost of alcohol heating only about one-fifth more than that of kerosene or gasoline for equal heating effects. This slight difference in cost, which may soon be changed to the favor of alcohol by its cost falling below that of the others, is more than compensated by the advantages just mentioned.

It has not sufficed to hinder the widespread use of spirit for such purposes in Europe.

The denaturing of grain alcohol with small amounts of wood alcohol and benzene, as the United States regulations prescribe, in no way interferes with its value as a fuel; it is necessary only that the denatured alcohol should correspond to at least ninety volume per cent. pure alcohol, and should not be denatured with any solid substance.

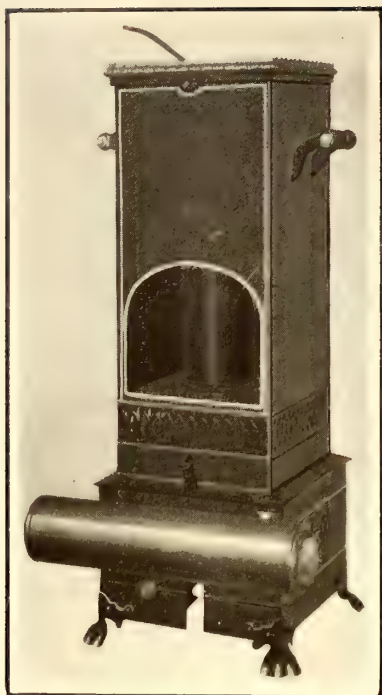
In this connection a novel form of alcohol fuel, called Smaragdin, which has recently been introduced abroad, may be mentioned. It is solid and comes in small cubes about one-third inch in size, and consists principally of alcohol with the addition of a little ether, which together dissolve a small amount of gun cotton. This sets to a jelly-like solid, which



Alcohol Lamp with Welsbach Mantle



Ordinary Type of Alcohol Lamp



Hot Jacket Alcohol Stove

will keep for a year or more in a closed vessel with little loss by evaporation. A heap of this "solid alcohol" is illustrated in the engraving, and a few pieces of the same are seen burning in an open, shallow dish. The alcohol quickly evaporates on exposure to the air. This form of fuel is easily carried in small amounts and can be used for heating where no alcohol burner is available, for it can be burnt in any non-combustible receptacle, or can be used as ordinary alcohol. It burns quietly and leaves almost no residue. In Germany, one-half pound, equal to about half a pint of al-

cohol, costs approximately thirty-five cents.

When it is desired to heat a room with an alcohol stove, the intense heat of the alcohol flame is usually reflected out into the room by means of a curved sheet of copper, or from a piece of non-combustible material like asbestos, which the flame renders red-hot. Or the gases circulate around metal jackets before leaving the stove, and the hot jackets then radiate the heat into the room. These heaters have been especially developed in Germany, where they are quite generally used. They are useful wherever the hot air, hot water,

avoid excessive vitiation of the atmosphere. This is at all times to be avoided as far as possible, but it occurs to a less extent with alcohol heaters than with either kerosene or gasolene burners.

Grain alcohol has long been used for this purpose abroad. In America, because of its greater cheapness, methyl or wood alcohol has been used to an extent which is hardly realized. This will be displaced by denatured grain alcohol very soon, as it is cheaper, and in many respects far superior.

One of the most widely used of the alcohol burning utensils is the familiar chafing dish. Equally well known are the spirit lamp tea-kettle and coffee percolator. The infusions of tea and coffee so obtained are not surpassed in flavor by those obtained with any other utensil. The coffee percolator is simple in operation; the ground coffee is placed on a sieve situated just below the glass portion, and water is introduced into the lower vessel. The glass globe serves to condense any little steam that is formed, for the water does not boil. The water when sufficiently heated rises because of its expansion through the central metal tube, which extends from near the bottom of the water up into the glass globe. The hot water flowing from the top of the tube percolates over the coffee on the sieve, and runs back into the vessel from which it started. The main mass of the water does not boil, but circulates up and down, and the infusion is thus made without impairing the delicate aroma and flavor, as is done when coffee is boiled. When sufficiently strong, the coffee is drawn off by means of the faucet at the side.

For travelers and picnickers the utensil known as a simple spirit cooker is very handy; the lamp and support for the pot can be placed within the same, so that the whole is very compact. Some of these devices have a support for three eggs, which

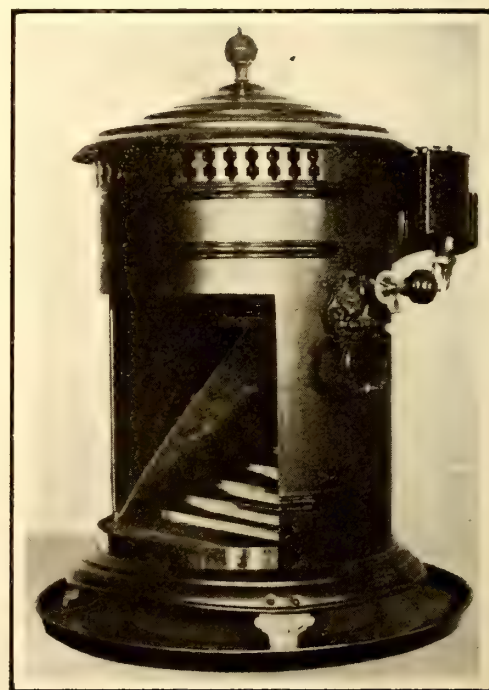
can be boiled in the coffee while it is being made, so that a light breakfast can be prepared with the one burner. There is also a gauze arrangement for toasting bread, which can be placed on a small stove like this.



Alcohol Bunsen Burner



Alcohol Water Heater



Alcohol Heater With Reflector

or steam system of heating by coal is not available; it is to be recommended, however, when used in a closed room for any length of time, that the escaping products of combustion be led into a chimney by a specially constructed flue, in order to

An engraving shows a German stove with two burners; they are made with three and even four burners, so that any meal can be readily prepared with the one stove. Each of these burners will boil a quart of water in six to seven minutes, one gallon in twenty to twenty-five minutes. Each burner uses one-quarter to one-third quart of alcohol per hour for the hottest flame, which, with alcohol at twenty-five cents per gallon, will make each cost only two to three cents per hour. A gallon of water can be kept boiling for one hour, however, with one-tenth of a quart of spirit, at a cost, therefore, of less than one cent.

An extremely handy utensil, and one which is extensively used in Germany, is the flat-iron. These come in all sizes and weights up to twenty-five pounds, and cost two to five dollars. The heating is done by a tube-like burner, which projects into the iron, and which is first started outside on a special stand. The iron becomes hot in ten minutes at the most, and remains at a constant temperature as long as the reservoir at the end is kept full. It holds about one-tenth quart, which lasts one hour on an average, and costs for this length of time less than one cent. There is no danger attending their use; and they do not require careful handling. The advantages of these irons, especially for warm weather, are obvious.

Another household utensil which is popular in Germany but is new in America is the water heater. The water is continuously admitted from the supply pipe through the faucet just back of the thermometer at the side. The burner is started as usual, and in fifteen seconds or so hot water flows either from the shower—the tube of which is here detached—or from the lower tube; the thermometer shows the temperature which is regulated by the rapidity of the flow of water. There is considerable escaping heat from the apparatus, which heats a small bathroom quickly. One quart of alcohol, costing less than ten cents, will heat forty gallons of water to a temperature of about ninety degrees Fahrenheit in ten to fifteen minutes, depending on the initial temperature of the water. This apparatus is twenty inches wide, seven inches deep, and about twenty inches high, without the shower, which adds forty inches. The whole can be fastened to the wall on brackets.

Its cost is about thirty-five dollars in Germany.

Still another apparatus is that used for the hot air drying of the hair, towels, handkerchiefs, etc. A small spirit lamp at the base heats the air, which is forced through the apparatus and out of the spout by means of a revolving fan. The apparatus is very light, and can be held in one hand and operated with the thumb. It costs about three dollars.

A burner much used for heating utensils in chemical laboratories and in scientific work is the Bunsen burner. Alcohol may be used where

gas, which is cheaper and more convenient, is not obtainable. To start it a little alcohol is poured around the lower part and, being ignited, it heats that portion of the lamp so that the alcohol from the reservoir vaporizes when it reaches that point. After this the lamp itself furnishes sufficient heat to continue the vaporization. The rush of vapor sucks in air through a small hole seen near the cock of the burner, and the mixture burns at the top in a long, intensely hot flame. This burner is very efficient in bringing articles to a high temperature. A soldering-iron blast lamp is similar in construction and operation. The reservoir, however, is attached immediately and rigidly to the burner, which is provided with numerous holes for admitting air, and is operated with the thumb. It costs about three dollars. Another utensil which is used to some extent in Germany, although it probably will find little use here, is the coffee roaster.

Although the flame is practically colorless and non-luminous, alcohol can furnish most efficient and satisfactory illumination. For this purpose the intense heat of the alcohol flame is employed to bring to a white heat a so-called Welsbach mantle, a gauze-like hood which incloses the flame. It is composed of combinations of the rare chemical elements cerium, thorium, erbium, yttrium and zirconium. This form of light was first invented by the Austrian chemist,

Auer von Welsbach. The mantle emits a soft, intensely white light when strongly heated, without undergoing any permanent chemical or physical change. These mantles are now widely used with gas on a specially constructed burner, and it is a well-known and demonstrated fact that the cost of gas consumption for

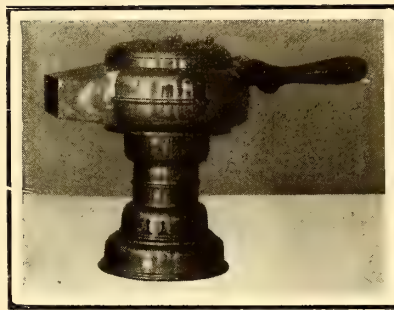
equal lighting effect is much less than with the naked self-luminous gas flame.

In order to secure the most intense heat and therefore the greatest illuminating power, as well as for other reasons, the gas is burnt in the Welsbach light in what is known as the Bunsen burner, in which alcohol can be utilized. It is vaporized at the base by the heat of the metal burner, mixes with air and burns at the top within the mantle, producing the well-known Welsbach light. In substance, therefore, the Welsbach gas light and alcohol light are the same. The only difference is in the addition of a suitable arrangement at the base to vaporize the alcohol.

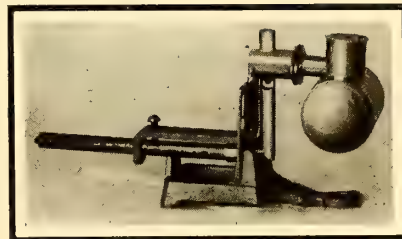
The vaporizing section of the alcohol lamp does not differ much in external appearance or size from the ordinary kerosene lamp. Complete lamps of several varieties are shown in the illustrations. The base of an ordinary oil lamp may be used without change, an additional mantle holder and vaporizing part for the alcohol being all that need be purchased new. The lamp is started by the ignition of a little alcohol at the base, obtained either by pumping up a few drops by pressing the little handle projecting from the base of the burner or by the addition of a few drops from a can through



Soldering-iron Blast Lamp
Using Spirit



Spirit Burning Hair Dryer



Burner for the Alcohol Flat Iron



Solid Alcohol Burning in
an Open Vessel



Simple Spirit Cooker

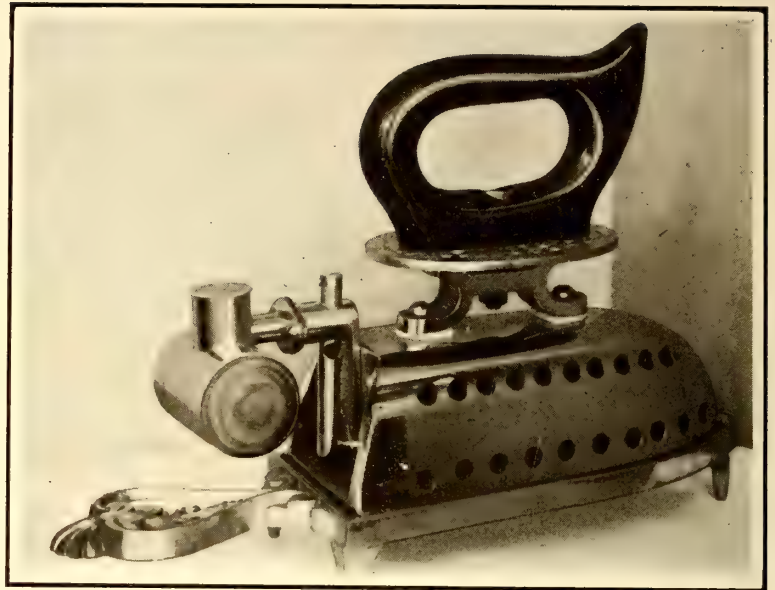


Two-burner Alcohol Stove

the oblong opening just beneath the chimney. A lighted match is applied here, the alcohol takes fire and quickly heats the base, and on opening the gas valve by a few turns of the screw regulator at the side the flame leaps up to the mantle and the light is ready for use. It can be easily adjusted by the screw regulator, and instantly extinguished by closing the same. The construction of a burner of this type is shown in cross section in the diagram. The wick, which is composed of cotton, absorbs the alcohol, which, passing upward, is vaporized by the heat of the metal part marked "gas chamber." This remains constantly hot while the lamp is burning, by the conduction of heat from the flame within the mantle through the metal "heat conductor." The vapor mixes with air in the gas holder and burns above the gauze and within the mantle. The wick, of course, is not touched by the flame nor is it scorched; but nevertheless it should be replaced once every three months or so. These lamps average fifty candle power, so that they are equal to three incandescent burners.

There are many places and occasions which require a portable hand lamp, and these are much used even in cities

and towns where gas and electricity can be had cheaply, as is well known. For such purposes it may be confidently asserted that no lamp is as satisfactory as the alcohol incandescent lamp. Those of twenty-five candle-power produce



An Alcohol Heated Flat Iron

only eight-six grams of carbonic acid gas per hour, whereas a kerosene lamp of the same power produces two hundred and thirty-four grams of this gas. The fouling of the atmosphere of a room lighted by alcohol is, therefore, less than half that caused by petroleum lamps. Furthermore, alcohol lamps are perfectly safe, and can be carried about from place to place. They do not make the hands greasy or oily, as do kerosene lamps. They require very little attention, there being no wicks to trim. The light is uniform and the lamp never smokes. As regards the initial cost, the price of the alcohol lamp is about the same as that of the kerosene lamp now in use. The cost of operating the two is about equal also, for one-half gallon of alcohol will furnish as much light as one gallon of kerosene, which costs about half as much as alcohol.

Indoor Bulb Culture

(Continued from page 391)

a well lighted situation, where they will experience any sunshine that may be about. At this stage the most remarkable feature is the quick rate at which the shoots develop, especially if the plants are in an apartment which is well heated. In quite a few days the leaves are fully expanded, and this is followed shortly afterward by the opening of the flowers. As in the planting, it is not wise to have too many specimens under way at a time; the show can be spread over a much longer time if just a few examples are brought out to the light once a week. When once the blooms are out it will be found that they will last very much longer in a cool north room, for in the case of most plants a quick growth spells a short life.

All kinds of flowering bulbs are ideal subjects for household decoration. As has been hinted, it is in a general way better not to grow the bulbs in fancy vases, especially as it is such an easy matter to transplant them. The time chosen for removal should be just before the flower buds expand and yet when they have all been formed. If the business is done too early, the plants will be likely to receive a check. When the right time comes each bulb should be carefully taken from the pot or box, in such a way that the roots will be injured as little as possible. Next cleanse the roots in warm water, and when the bulbs are quite free from dirt

they may be placed in the vase or bowl. A very good material in which to embed the roots is damp moss, and this, if pressed firmly round each bulb, will hold the plant in an upright position. The appearance of the whole thing will be much enhanced if when the planting is complete the surface of the material is covered with some bright green moss.

Daffodils look very charming if they are seen to be springing up through some fresh grass—a simple matter to arrange with the aid of a piece of turf. The covering, besides looking attractive, also serves the purpose of keeping the roots of the bulbs moist. A very novel method of planting flowering bulbs is that of arranging them in large shells. The receptacles can usually be obtained from any dealer in curiosities, and should be good sized examples without any cracks in them. An idea may be gathered from an accompanying picture as to how very ornamental these objects look, in fact there are not many ways of arranging flowers so decorative for a dinner table. Another delightful way of planting out flowering bulbs is to place them in a good sized basket of artistic design. In order to prevent the water from draining through the bottom, it is well to have a tin tray (galvanized to prevent rust) that will exactly fit. Such an arrangement carried out with Roman hyacinths would make a fine centerpiece.

The Craft of Block Printing

By Mabel Tuke Priestman



A Group of Block Prints Designed and Executed by Students at the Pratt Institute, Brooklyn
The Smaller Pieces Are Emphasized by a Few Stitches of Darning

THE popularity among craftsmen for ornamenting fabrics with block printing is coming much to the fore. It can scarcely be called a new idea, however, as calico printers in the seventeenth century printed patterns by this method, and hand-made wall papers have always been printed by means of a block. It is, however, the latest revival of an old craft, and has been taken up with great enthusiasm.

Block printing seems to possess a charm for those who have come under its spell, evidenced by the pitying expression that flits over the face of the expert when the novice asks what advantage it possesses over the stencil.

One advantage it has is that a dark material looks decidedly better ornamented by means of the block print than the stencil. Then, again, stenciling does not require the same amount of skill, and is sometimes rather monotonous when a great many yards of the same design have to be done. I honestly believe one reason for the preference being given to block printing by those who are familiar with both is that the patterning with a block has a charm of uncertainty about it as to the result of each impress.

Some workers hold that the fabrics thus ornamented have an added attractiveness when the depth of the impressions are not entirely uniform. Certain it is that a piece of material can be much more rapidly decorated with the block, as it can be moved much quicker than a stencil. The latter has to be fast-

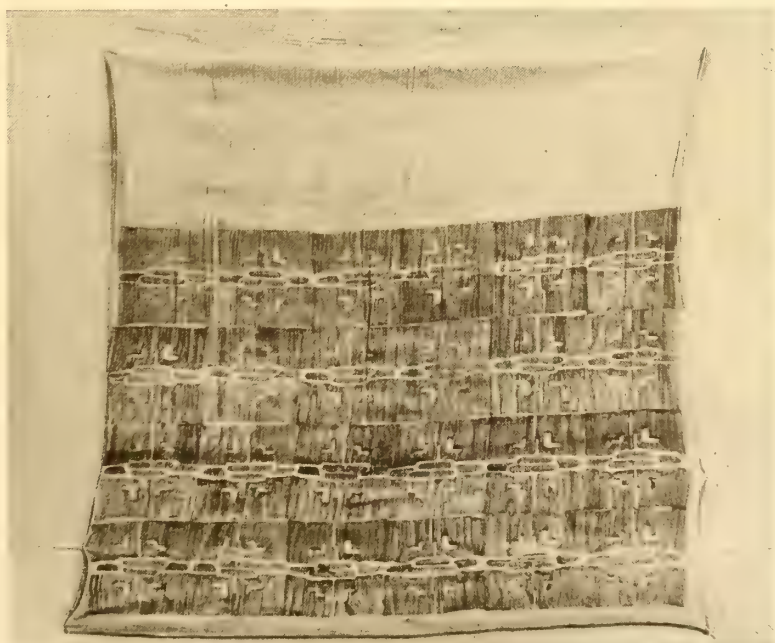
ened in place, and needs blotting paper adjusting below every time the stencil is moved, and all this is a little tedious.

A fine, close-grained wood must be selected for the block; boxwood and holly are the best, but are not always easy to get. Maple is also a good wood for the purpose, and has the advantage of being easily obtained, as children's building blocks are made of it, and as these come in just the sizes that many craftworkers use, they are a great convenience, at any rate for the beginner.

The block can be cut with a sloyd knife costing thirty-five cents, but the carving is more easily and quickly done with chisels and gouges. A set of six can be purchased for one dollar. These tools all vary slightly, some being more curved than others. The chisels are used for cutting round the design and for smoothing the background, while the gouges are used for digging out the spaces. For the first attempts a simple geometrical design should be chosen. First

make the design on paper and then trace it carefully on to Japanese tracing paper and paste it on to the block. Shade the parts that will be cut out. This small help will save many a block from being spoiled. It is so easy to carve out the wrong space, unless there is something to indicate which is to remain. When carving the lines may become obliterated, so go over the lines with a thick lead pencil.

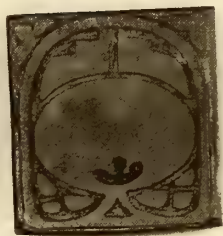
It is best to place the block on the table on which a cleat or piece of wood has been nailed. Then press the block firmly against the cleat, and nail another on the



A Brown Design on Copper Silk

other side of the block, thus keeping it perfectly steady while being carved.

Make a channel with the gouge a little distance from the design. Then take the straight edge chisel and cut vertically into the wood close to the design. When a curve is reached, use the curved chisel. Go slowly when near the edge of the design, so as not to split the surface. When all the design has been outlined with the chisels, the background can be cut away with the gouges. Small pieces should be removed, as if too large pieces are attempted the pattern may be chipped. Cut to the depth of from half an inch to one and a half. If the wood is too tough to remove by pressure, use a small hammer for striking the tool. When the block is all cut, the Japanese paper must be washed off, and it must then be sandpapered



Some Blocks Require Very Little Cutting

block. This is advisable when a very delicate design is used. Japanese frets can sometimes be purchased and made use of for block printing. The question of the nature of the block must be left to the choice of the worker. If a craftworker is proficient with the saw, and has no wood carving tools, by all means let the fret saw be used.

Block prints can also be made from plasta, and when modeling has been learned the blocks can just as well be molded as carved. They are generally done in cylinder form, but can be made flat just as well. Plasta, or composite clay, or plasterine, can any of them be obtained from any kindergarten supply store. It comes in paste form, and is put up in boxes costing twenty-five cents. It is moistened with water and molded into designs by a few simple tools used for making pottery, or by the fingers. When the plasta is hard it needs firing in a kiln. This porous material takes up the color just as well as a wood block.

To make a color pad take a piece of felt and glue on to a square of glass or on to an old plate. Some workers prefer to nail the pad on to wood, but of course this is a matter each worker decides for herself.

Dyes, oil colors, dry paint, and water colors are all used for mediums. Water color can only be used when the material will not have to be washed, so its use is usually confined to the printing of the inside covers of books. A few drops of gum are used to keep the color from spreading. Oil paints are the best medium, as there is no question of their not being fast. They are thinned with turpentine, but it is always best to add a little mucilage. The diluted color is spread on the pad with a paint brush



Background of Coarse Linen



A Clean, Sharp Design

on both sides. While care is advised for the beginner, some craftworkers often cut a block on their hand with a sloyd knife in less than half an hour, but, of course, much depends upon the individual, and those who do this are skilled craftsmen.

Some block printers prefer to cut the design out of thin wood by means of a fret saw, and then glue the fret on to a

used when the material will not have to be washed, so its use is usually confined to the printing of the inside covers of books. A few drops of gum are used to keep the color from spreading. Oil paints are the best medium, as there is no question of their not being fast. They are thinned with turpentine, but it is always best to add a little mucilage. The diluted color is spread on the pad with a paint brush



Block Prints Made by the Students of the Pratt Institute. Workers Vary Considerably in the Depth of Cutting

until the felt is saturated. It must not be too wet. Try it by turning it upside down. It must retain the color without dripping. If there is too much color place the pad on blotting paper.

If dye is preferred, the directions must be carefully followed and the necessary fixant used, either dextrine or gum tragacanth, instead of mucilage. Either the powdered dye or the moist sold in tubes may be used, diluted with hot water. Dyes are only permanent when all the directions are followed. When a fabric has been printed with dyes, a damp cloth must be laid over it and pressed with a hot iron. The heat and the fixant are what make the dyes fast, and when done the materials can be washed without the design fading or running.

Having now got all in readiness the fascinating part of printing is the next process. At first the block is too new to take up the color, so it must be laid face downward on the pad and wiped off a number of times with a cloth, until the pores are filled. Stretch the fabric on the table and hold in place with thumb tacks. Then take the pad in the right hand and place the carved side in the color. Examine it when lifted, and if a fine even color is all over the surface, press the block firmly and quickly on the fabric. If a fine cloth is being ornamented an ordinary pressure will make a good impression, but if the material is of coarse texture, like Russian crash, or canvas, the block must be hammered with a mallet. Strike fairly in the center of the block, to insure the print being even, not dark at one end and light at the other. It takes a little nerve at first to print, as, of course, the block can not be moved when it has once touched the fabric.

Printing by a block does not make as dense an impression as a stencil; it has a porous appearance, allowing the texture of the material to be seen through the color. This is what appeals to the artist so strongly in fabrics ornamented in this way. The samples of printed mummy cloth pasted on to cardboard show this effect.

There is a long list to choose from of suitable fabrics. Linens of all kinds are excellent, and especially hand-made Russian crash. A visit to the kitchen linen counter in any large store will reveal all kinds of inexpensive linens, in gray or tan color, many of which are excellent for the purpose of block printing. When dark materials are needed for portieres, denims, art tickings, and domestic monk's cloth are all suitable. A very beautiful portiere for a studio was made from tobacco brown denim, ornamented with a square rose in copper. The imported Arras cloth, which can be

obtained in such a wide range of colors, comes in admirably for portieres. Cheap materials like mummy cloth and cotton crepe lend themselves admirably to block printing.

One of our illustrations shows a hanging of crepe cloth. The design is the color of the background, the print forming the relief for throwing up the pattern.

Another illustration shows two dark hangings of green with the design standing out in relief and with a darker print than the background curtains; for an artist's room they leave nothing to be desired. They are suggestive of pattern only, and make one realize why block printing appeals so strongly to all art lovers.

Crinkled silk is also a favorite fabric. Another illustration shows a brown design on copper silk.

The group of block printed linens arranged on a table are full of suggestion. The large table-cover or bedspread is of



Blocks of Various Designs

fifty-inch linen canvas of natural linen color. The design comes out strong and bold, and must have been well hammered in. The tablecloth in the center has finishing touches of darning. This is particularly attractive for tray cloths and table-covers, and adds a touch of refinement so necessary for all table linen.

Velvets, especially the imported art velvets with a cotton back, are most beautiful when ornamented with block printing, and can be made into glorious sofa pillows. The outline may be emphasized with embroidery stitch in silk, adding to the richness of the pillow.

Another innovation is to have an outline made by the pyrographic pen. This broad line of dark brown is suggestive of lead lines, and often can be used with excellent effect for dark fabrics, especially if they lack character.





CORRESPONDENCE



The Editor of *American Homes and Gardens* desires to extend an invitation to all its readers to send to the Correspondence Department inquiries on any matter pertaining to the decorating and furnishing of the home and to the developing of the home grounds.

All letters accompanied by return postage will be answered promptly by mail. Replies that are of general benefit will be published in this Department.

Problems in Home Furnishing

By Alice M. Kellogg

Author of "Home Furnishing: Practical and Artistic"

THE SELECTION OF FLOWER HOLDERS

A NEW JERSEY correspondent, L. E. A., asks: "Can you suggest something suitable for holding cut flowers that would not be very expensive, yet would be more artistic than the highly decorated vases that I find in the department stores? We have lately bought a suburban home, and our garden is giving us a great deal of pleasure by supplying us with quantities of flowers for



A Group of Flower Holders

the house. As I have heretofore lived in the city, my attention has only just now been called to this item of furnishing, and I am quite at a loss what to use for my bouquets."

In selecting vases or jars for cut flowers one may keep in mind that they are usually in permanent view as ornaments, even when they are not in active service. Their shape, color and decoration should, therefore, be carefully considered from the two points of view—as an ornament for mantel shelf or table and as a background or frame for the flowers. Usually, in the best china and glass shops there is a special corner devoted to flower holders, and here one may select in plain green glass a vase for sweet peas, and a taller shape, suitable for the long stems of carnations, in iridescent glass (Nos. 1 and 3 in the illustration). In a finer glass with gold decorations one may find pretty baskets and low vases for holding violets, pansies and lilies of the valley. At the Japanese stores, by avoiding the counters filled with over-decorated, crudely colored vases and jars, the discriminating buyer will be rewarded with the discovery of some plain green pottery (No. 4 in the illustration) that is specially suited for pink or red roses. Another contribution from Japan is the gray and green mug at the extreme right of the illustration that seems especially adapted for holding nasturtiums. Brass and copper are now very much in demand for cut flowers, and yellow, orange or bronze-colored blossoms are the best to associate with these metals. No. 2 in the illustration is an antique copper jug made in Russia, its generous opening making it useful for chrysanthemums, dahlias or tulips.

For supporting the stems of flowers there are various devices in glass, for lapping wire. These are worth buying.

A QUESTION ABOUT THE PLATE SHELF

"Is a plate shelf ever used on a part of the dining-room wall?" asks E. B., of Michigan. "I have wanted a shelf between two windows to hold some old pitchers and platters, but I understand that such a shelf, or rail, should extend entirely around the room."

Although a plate shelf is usually carried around the four walls of a dining-room, this rule need not always be followed. Oftentimes it is the variation from the regular plan that gives interest to interior furnishing. In filling the space between the two windows with a shelf

(Continued on Page x)

Garden Work About the Home

By Charles Downing Lay

INEXPENSIVE PLANTING

A LETTER has recently come to me asking about the cost of planting a place of five acres with an interesting collection of trees and shrubs, and asking further if this cost (which my correspondent supposes to be considerable) can be reduced in any way.

But let me quote the letter: "The place is now almost bare. The old cherry and pear trees about the house are dying, and on the rest of the place there are only a few apple trees which bear fruit that is worthless except for cider. The old house which is on the place we shall use for a few years until we have become accustomed to the place and have had time to decide on the best site for the new house. So you see we are in no hurry to make a show at once, but shall enjoy doing the work slowly and watching the trees grow. Can we buy small shrubs and trees, a few at a time, and complete the planting in five or six years?"

The idea is a good one, and it will be fun to carry it out. You should begin by preparing a small plot of ground for a nursery, selecting the best land and preparing it with great care and thoroughness. It may happen that this nursery plot can be used afterward for part of the gardens so that the labor spent on it now will not be wasted.

In October you can begin planting small stock which can be bought at very low prices from nurserymen and collectors, and the cost of packing and transportation will be very little compared to the charge on larger stock. The percentage of loss on such stock will be negligible. The only difficulty is that as they must be bought in lots of ten or more to secure low prices you will probably have more trees than you can use, but you may be able to sell them or to give them away to advantage. They must be grown in the nursery as crops are grown on the farm, cultivated and fertilized, and their growth will be astonishing.

Some of the things will be big enough to move to permanent positions after one season's growth, and others will need a longer time. Having the stock growing on the place in this way there will be no excuse for unseasonable planting; which must often be done when the plants come by freight from a distance.

Another advantage of this way of doing the work is that the planting can be made very thick at first and afterward thinned out, since the cost of the plants has been little and the labor required is so much less than with larger trees. The chance to thin gives an opportunity to save the largest and most flourishing of many individuals. If an accident happens to a young tree there is another quite near to take its place.

On my own small place I have followed this scheme in a way.

From Robert Douglas I bought seventy-five white pine seedlings two years old. They came by mail, postage prepaid, for a dollar. They were three to four inches high when set out in my nursery, and after several transplantings and perhaps five years' growth they were five to six feet high and ready to set out permanently.

Berberis thunbergi I got in the same way, fifty plants for a dollar.

From collectors in Pennsylvania and the South I got: 10 *Euonymus americanus*, 2 feet high, for 20 cents; 10 *Cornus florida*, 2 feet high, for 20 cents; 10 *Liquidambar styraciflua*, 2 feet, 50 cents; 10 *Castanea pumila*, 2 to 3 feet, 75 cents; 10 *Ilex verticillata* (this I could have collected just as well), 2 to 3 feet, 25 cents; 10 *I. opaca*, 1 to 2 feet, 30 cents; 10 *I. glabra*, 1 to 2 feet, 50 cents; 10 *Chionanthus virginica*, 2 feet, 40 cents; 10 *Diospyros virginiana*, 3 feet, 75 cents.

In the pastures and woods nearby I have collected, the only cost being labor: Red cedar, 1½ to 15 feet; juniper, 8 feet wide; hemlock, 2 to 3 feet; laurel, 2 to 3 feet; vaccinium, 3 to 4 feet; *Viburnum*

(Continued on Page xi)



A CONCRETE RESIDENCE AT CLIFTON, MASS.

Houses of Concrete are recognized as the most inexpensive, durable, fireproof and sanitary houses known. They need no paint or repairs, are cool in summer, warm in winter, and combine the qualities of stability, utility and beauty. The second edition of our book,

Concrete Country Residences

contains photographs and floor plans of over 160 *Concrete Houses* that have been constructed in various parts of the United States. It illustrates numerous styles of architecture, besides showing several types of **concrete construction**, and is invaluable to those who contemplate building.

A copy of this book (10x12 inches) will be sent, express prepaid, upon receipt of \$1.00

The Atlas Portland Cement Company, Dept. 10, 30 Broad St., New York City

☞ Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

☞ The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

☞ If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING
COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.

Denver

CHICAGO

Trenton

PROBLEMS IN HOME FURNISHING

(Continued from page 414)

the proportions and design should be carefully suited to the style of trim that already exists in the room.

CHOOSING A HALL PAPER

A former correspondent of this department, M. C. C., of Maryland, in a second letter says: "I have followed the advice you gave me in the June number about painting the wood-work (with the exception of the stair treads) in my hall an ivory white, and am very much pleased with the result. Its freshness, however, makes the old wall paper look dingy. I feel that a new paper is needed, and I would like you to suggest something that will not cost more than a dollar a single roll, and as I have had a plain paper I would now prefer something quite different."

A new French paper showing Italian garden scenes, and printed in soft shades of brown, lavender and green, and costing only ninety cents a single roll would look well in the white-painted hall of this correspondent. As the design is interesting no pictures will be needed for decoration.

COMBINING A SITTING AND BEDROOM

Rather an unusual problem comes from a resident of a Philadelphia suburb. R. E. G. writes: "This fall I shall go to my sister's home for an indefinite period, and as I have my own circle of friends I would like to make my one room serve as a sitting-room and bedroom. I do not like the idea of a folding bed—perhaps you can suggest something better—and I do not know how to dispose of dressing things. As I have a private bathroom I shall not need a washstand. The furniture I have on hand is a chest of drawers of good style, an antique mahogany secretary with high top and a piano. What must I add to make my room comfortable and suited to the conditions mentioned?"

The question of the bed may be settled by buying a white enameled iron bed with a low head and foot—a design manufactured expressly for sitting-rooms—and with a cretonne slip and three large, square pillows at the back the effect will be that of a wide, comfortable divan. Instead of the flowered cretonne, a foliage pattern copied from a Fontainebleau tapestry (forty cents a yard) may be used for the covers of bed and pillows, and the blues, greens and yellows of the pattern may be repeated in other furnishings of the room. The secretary may be transformed into a dressing table with a little care given to the interior arrangements, and the chest of drawers may take the place of a chiffonier. If closet space is lacking, one of the new kinds of wardrobes may be added. A bookcase with glass doors (on which a thin silk gauze may be shirred) will hold various small things that need to be close at hand yet away from observation. An armchair and a rocker in willow may be stained an olive green, and a small settle to seat two persons will be a helpful adjunct to the room. A three-fold screen covered with the foliage cretonne may be placed in front of the bathroom door, and the piano may be placed opposite the entrance door. A round table to hold a lamp and a small tip table for a tea tray will be needed. If rugs are to be bought they may be of small sizes that suit the disposition of the furniture.

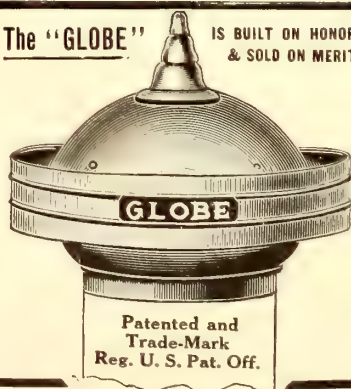
MANTEL DRAPERY

Whether to have a mantel drapery or leave the shelf bare is the question that R. S., of Missouri, asks. As the particular conditions of the room are not given in the letter of inquiry only general suggestions can be made in reply.

For a fireplace that is well designed a scarf

The "GLOBE"

IS BUILT ON HONOR
& SOLD ON MERIT



THE "GLOBE" VENTILATOR

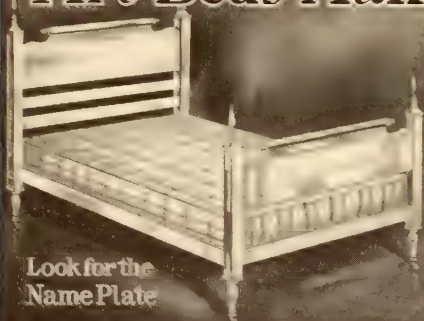
IN GALVANIZED IRON, BRASS AND COPPER
ALSO WITH GLASS TOPS FOR SKYLIGHT

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. Smoky Chimneys Cured

"Globe Ventilated Ridging"

Mfd. by GLOBE VENTILATOR CO., TROY, N. Y.

Art Beds Make Artistic Bedrooms



Your home is judged by the furnishing of the bedrooms. One glance at these rooms, if they are not dainty and artistic will destroy the good impression made by your living and reception rooms. The bed is the key-note in bedroom furnishing.

"Art Brass Beds"

are artistic and pleasing. They are made in period patterns, Colonial, Renaissance, Louis XVI, etc., to match other furniture. **The finish will never tarnish or need attention. Parts cannot loosen, casters easy rolling, ball bearing.** Send us your dealer's name for a copy of our book "Masterpieces in Brass," Free.

Choose from our book, and we will see that your dealer is supplied with the style you select.
Art Bedstead Company, 3705 Rockwell St., Chicago.
Metal Beds and Cribs for homes and institutions.

or other drapery may well be omitted, but, as is often the case in a rented house, a slate, black walnut or ebonized mantelpiece is such a disturbing feature that it is better to shut it out. Instead of making a fitted cover, however, a strip of Bulgarian embroidery, a length of Swedish hand weaving, or a piece of fine Oriental brocade may be laid on the top of the shelf, and allowed to hang several inches over the edges. The eye, attracted by something really good in decoration, will not be impressed by the larger object that is radically inartistic.

A bedroom mantel that seems to be hopelessly ugly may be greatly improved by a narrow frill made up with a heading. The pattern should match something else in the room—curtains, bed or furniture coverings—to look well, and the width should be four inches with the heading one inch wide. If the mantel is of slate or marble, a piece of board shaped to fit the top may be covered with a strip of the cretonne and the frill tacked along the front and sides.

A NEW WALL DECORATION

P. R. I., of Detroit, Mich., in describing his bachelor apartments, writes: "I intend to re-decorate my small apartment of two rooms and bath, and I would like to use something that will be more durable than paper. Burlap I am tired of seeing in the other apartments in this house, although I like its texture effect. Still, I should prefer something a little different from a plain color. I have some fine photographs of Whistler's etchings, and these I want to show against my wall. The frames are of French walnut and the woodwork is of dark oak. The window light is all from the north. The only colors in my rooms are in the Oriental rugs, and these are so subdued that they will accord with any refined color that is associated with them."

With these conditions, and considering the individual preference, the best selection for the wall covering is one of the new art cloths that is applied in the same manner as the burlap. The surface looks like a woven texture with a slight touch of bronze. The cost is sixty cents a square yard. One of the combinations of red and yellow produces an apricot tone that would look particularly well in the north exposure, and, by its almost plain surface, afford a suitable background for the Whistler pictures.

GARDEN WORK ABOUT THE HOME

(Continued from page 414)

dentatum, *V. acerifolium*, *Rhus glabra*, *R. copallina*, clethra; white oak, 12 to 18 inches; swamp white oak, 6 to 12 inches; Virginia creeper, clematis, wild grape, wild roses of many kinds, bay, sassafras.

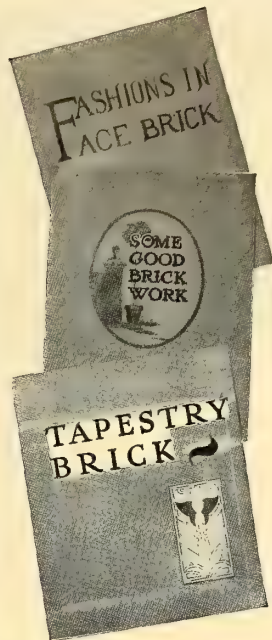
Collecting these has been only a pleasant incident in many delightful drives in country lanes.

From a mountain nursery I bought: 50 *Rhododendron maximum*, 3 to 5 inches, \$1.25; 25 *R. catawbiense*, 3 to 5 inches, \$1.00; 50 *R. punctatum*, 6 to 9 inches, \$1.25; 10 *Oxydendron arboreum*, 1 to 2 feet, \$1.00; 10 *Ledum groenlandicum*, 12 to 18 inches, \$1.00; 10 *Pieris floribunda*, 6 to 12 inches, \$2.00; 10 *Dendrium buxifolium*, 6 to 12 inches, \$1.00.

These have grown in spite of many unavoidable hardships, so that the *Rhododendron maximum* are now a foot and a half high and make a respectable show under the trees in the dingle.

From other nurseries I have bought tiny conifers which are now thrifty young trees.

The neighbors who took an interest in my efforts gave me layers and suckers of *Spiraea Van Houttei*, *S. prunifolia*, *S. bumalda*, *Syringa vulgaris*, *S. vulgaris alba*, Philadelphus, honeysuckle, wistaria, privet.



BRICK LITERATURE
Sent free for your benefit
and our own.

Can You Afford to Build

without making a study of up-to-date materials?

☐ Face Brick is inviting, refined and honest. Its infinite variety of permanent shadings makes it susceptible of artistic treatment impossible with any other medium. Our *Tapestry Brick* is the highest development of this highly effective material.

☐ Recent improvements in manufacture have produced colors and textures hitherto unfamiliar. ☐ May we send you illustrated literature which will put you in closer touch with the best building material known?

FISKE & COMPANY INC
FACE BRICKS ESTABLISHED
FIRE BRICKS IN 1864

175 FIFTH AVENUE

NEW YORK CITY



STEEL CEILINGS

For Effectively
Decorating All
Kinds of Rooms

YOU CAN GET THEM IN



Appropriate Designs for Residences, Business Rooms, Auditoriums, Etc.

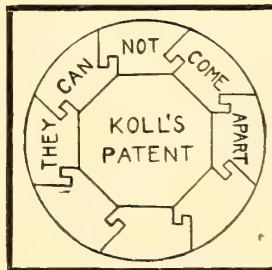
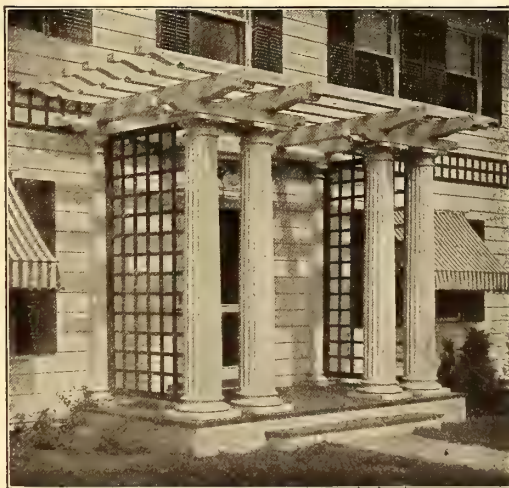
☐ Largest and most complete line of artistic STEEL Ceilings in existence. Covers the field so completely you can get just what is required, whether bold or elaborate designs or something comparatively simple.

☐ Before buying a Steel Ceiling of any description, get full details of Berger's "Classik."

ASK FOR CATALOG D-64

The Berger Mfg. Co., Canton, Ohio

New York Philadelphia Boston Chicago
St. Louis Minneapolis San Francisco Atlanta



KOLL'S PATENT Lock-Joint Columns

Suitable for Pergolas, Porches
or Interior Use
are made exclusively by

HARTMANN-SANDERS COMPANY

Elston and Webster Avenues, CHICAGO, ILL.

Eastern Office, 1123 Broadway, NEW YORK

Send for Catalogue A-19 of Columns, or A-29 of Sun-dials, Pedestals, etc.

The

AERO SYSTEM

HOUSE CLEANING

— ON TAP —

VACUUM

CLEANING

CLEANS BY
SUCTION



The Only Practical System

For refined homes of the better class—for home-owners who insist on the best of everything, and who are willing to pay for the high mechanical efficiency which alone makes mechanical cleaning practical. Our "Aero" System, *permanently installed* like the steam or hot water heating system, the gas or electric light system, is the only house cleaning system worthy serious consideration.

The "Aero" System is *powerful*—cleans *thoroughly* instead of superficially—draws dust irresistibly from the very texture of all house-fabrics, simultaneously cleaning and airing them, drawing dust through piping into tank in cellar; no dust in the air—no disarranging furniture.

"Aero" Systems are installed by our own engineers, insuring correctness and accuracy.

We are the Pioneers and Make the Most Complete Line of Mechanical Cleaning Machinery in the World

"Aero" Systems are installed in modern buildings from coast to coast throughout the country—in the best hotels, great modern office buildings, hospitals, churches, fine residences, schools, city, county and state buildings, factories, and by great railroad and steamship lines—wherever the highest efficiency is required. We make a variety of types, to meet all requirements, all made with painstaking care and accuracy and precision, viz.:

No. 1—Aspirator System (steam jet) for large buildings having high pressure steam. Made in all sizes.

No. 2—Motor-driven Rotary Pump System, for large buildings where high-pressure steam is not available. Made in all sizes.

No. 3—Railroad Coach Cleaning Systems.

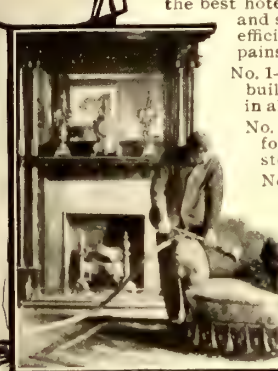
No. 4—Eight Models Portable Vacuum Wagons for house-to-house custom cleaning business.

No. 5—Two Models Portable Compressed Air Wagons, for same purpose as No. 4.

No. 6—RESIDENTIAL SYSTEM, actuated by Motor-driven Rotary Vacuum Pump.

Write for Literature Write today. Designate by number the type in which you are interested. If you are considering installing a mechanical cleaning system, you will *protect* yourself by writing for our "Aero" literature. *A permanently installed cleaning system is the only practical system*, and the "Aero" System is approved by Government and General Architects, modern building owners and engineers everywhere.



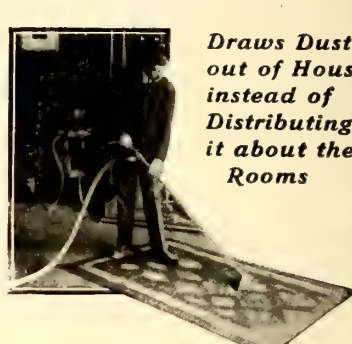


WE LEAD THE WORLD IN THE MANUFACTURE OF

VACUUM-PRODUCING CLEANING MACHINERY

AMERICAN AIR CLEANING COMPANY

Draws Dust out of House instead of Distributing it about the Rooms



414 Sycamore Street,

Milwaukee, Wis.

Details of Building Construction

A collection of 33 plates of scale drawings with introductory text

By CLARENCE A. MARTIN
Assistant Professor, College of Architecture,
Cornell University

This book is 10x12½ inches in size, and substantially bound in cloth. **Price \$2**

MUNN & CO., 361 Broadway, NEW YORK

Colonial Houses FOR MODERN HOMES

A COLLECTION of designs of houses with Colonial (Georgian) details, but arranged with modern comforts and the completeness of the twentieth century.

Written & Illustrated by E. S. CHILD, *Architect*

They show large, correctly drawn perspectives, full floor plans, and complete descriptions, with estimates of cost. The designs are **new, original, unique, consistent**, but not stiff nor constrained. Made, not by an artist, but by an architect. They combine beauty of exterior with complete and convenient interiors, with kitchens, laundries, pantries and closets carefully and skilfully considered.

If you are at all interested in the subject, you will enjoy this publication.

Price, postpaid, \$2.00

MUNN & CO., 361 Broadway, NEW YORK

Many of these shrubs grew so fast that I could divide them after one season, and they were multiplied in that way until I was "overstocked."

Some trees were grown from seed. My *Gleditsia triacanthus*, for instance, came from seed that I picked up in a certain famous "yard" in Cambridge.

Cuttings of ivy from famous English ruins or graves I have had poor luck with. Perhaps because the cuttings were badly handled before they reached me.

Roses I bought from mail-order nurseries. They were tiny things, but grew well, and the climbing sorts were layered until the original five became twenty.

The trees should be transplanted in the nursery every year or two in order to have them make a growth of fibrous roots, and with the oaks especially to prevent the growth of a long top root.

Nut trees are best grown from seed which can be planted in the autumn, or if the nuts are kept in sand all winter they may be planted in the spring. This is the surest way to get a good catch, as the seed planted in October may be found by squirrels. It is useless to plant nuts which have been dried for eating, as the drying destroys their vitality. It is nearly impossible to transplant trees like the hickory, chestnut, walnut and butternut, and the feat is not worth attempting, as they grow rapidly from seed.

Put five or six nuts in hills ten or fifteen feet apart. Those that come up can be thinned as may be necessary for the health of the strongest specimens.

It is an open question with people who plant many trees, whether anything is gained by planting large trees, and it seems probable that a small tree (an oak say one and one-half inches in diameter and eight feet high) will

in ten years be larger and better than a tree seven or eight inches in diameter and twenty feet high planted at the same time.

TREES FOR THE BIRDS

J. A. L.—There are several trees which you can plant about your house to attract birds, and most of them are beautiful trees.

Cherries, of course, the birds eat eagerly, but the tree is not a very charming one, except when it is in blossom; at other times it has too utilitarian an aspect.

The mulberry, whose fruit ripens next after the cherries, is a picturesque tree, but the berries are a great nuisance except that they bring the birds in great numbers. The mulberry should not be planted near the house, as the berries, which make a bad stain on clothes, cover the ground under the tree for about two weeks.

Birds eat wild cherries (*Prunus serotina*), but not so much as the mulberries, perhaps because they come at a time when there are many bush fruits ripe.

Eleagnus longipes bears a palatable red berry which seems to be a dainty for the birds; at any rate I never get a ripe one, so I think the birds watch it closely and pounce on every berry as soon as it has developed properly.

The sassafras berries the birds are very fond of, and it would be impossible to find a more lovely tree at any season or one that is so little planted.

The high holes (flickers) apparently like the Pepperidge berries more than any other, for the trees seem always full of high holes when the berries are ripe. This, too, is a magnificent shade tree, and, like the sassafras, it is distinguished in winter by its interesting skeleton of twigs and branches.

Ordinary fruit trees attract the fowls of the barn yard more than those of the air, I think,

Take off your Hat to the
Write for Circulars
and Prices to
F. E. MYERS & BRO.
Ashland, Ohio

THE PUMP THAT **PUMPS** **HAY TOOLS** **BARN DOOR HANGERS** **MAY RACK CLAMPS**

WIZARD BRAND
1 BARREL EQUALS
4 WAGON LOADS
STABLE
MANURE

Sheep Manure
Kiln dried and pulverized. No weeds or bad odors. Helps nature hustle. For garden, lawn, trees, shrubs, fruits and house plants.
\$4.00 **LARGE BARREL.** Cash with Order. Delivered to your Freight Station.
Apply now.
The Pulverized Manure Co., 1 Union Stock Yards, Chicago.

Keep Your Cellar Dry

No excuse now for wet cellars. Send stamp for Catalogue E, with full instructions, prices and testimonials.
The Farnham Co., Engineers, 1 Madison Ave., New York

but there are several things like *Pyrus arbutifolia* which holds its berries through the winter that may sometimes be eaten in a hard season.

The service berry (*Amelanchier*), which is sometimes used for pies in the back country, must certainly be eaten by the birds, and its other charms are so many that everyone should be able to find room for it.

Whether birds eat the haws of the thorn trees or not I do not know. I should think they would, they look so good!

Hackberry, which has only a limited use in ornamental planting, has small berries which must sometimes be good to fall back on when more luscious things fail.

The many fruit-bearing shrubs which the birds like will be planted about the house also. A list of these we may give at a future time.

AN UNAPPRECIATED TREE

The sweet birch (*Betula lenta*) is a round-headed tree of medium size which should be used more often in ornamental planting. Its branches low, usually six or eight feet from the ground when growing in the open, the branches sometimes bending until their tips touch the grass.

The bark of the trunk is roughly broken into rectangular grayish slabs often covered with fine lichens. The small branches and twigs have a smooth, shiny and reddish bark with a green underlayer, like the wild cherry. The bark has the characteristic odor of birch when crushed, and it may be eaten.

These slender, long and pliant twigs have given "Dr. Birch" his name, and really they are not more suited for any use, unless it be to make brooms for genre painters' properties! When the leaves are gone and the bare tree is seen against the sky it seems crowded with twigs: a lace work in silhouette of drooping, swaying lines.

It is excellent as a thin screen in winter, and nothing is better as a companion for pine trees, which, if they have not some such purple haze of twigs before them in the winter, seem too strong a green and emphasize too plainly the general bareness of the woods and the brown tones of dead grass.

When the birch leaves first appear they are the purest shiny green, such a green as the emerald with the same depth and vigor. Later on they lose their brightness, and become a darker and a warmer shade.

The long branches and withe-like twigs sway back and forth as they give to every breath of air, that one would scarcely be conscious of in any other way, making a constant play of light and shade. There are no deep shadows or brilliant high lights in the birch, since the leaves are not shiny above or lighter colored beneath.

Though the leaves grow in the midst of the head they do not prevent one from seeing through. It is not a dense shade like the horse-chestnut, but is thin enough to give an invi-



Family Contentment

No family can enjoy the home or do best work if obliged to huddle around a stove or fireplace. Different members of the family want to do different things in different rooms in all parts of the house.

AMERICAN & IDEAL RADIATORS & BOILERS

warm, with no dangerous drafts. No coal gases, soot, or ashes reach the living rooms—to menace health and destroy furnishings.

The first cost is all the cost there is—the outfit lasts as long as the building, with no repairs. IDEAL Boilers and AMERICAN Radiators save enough in fuel, labor, and house cleanliness to quickly pay off their original or first cost—thereafter they are a *lasting investment*.

Do not wait to build a new home, but enjoy comfort and content in the present one. Put in without tearing walls or partitions. Sizes for all classes of buildings—smallest to largest—in town or country. Our free book, "Heating Investments Successful," tells much that it will pay you well to know. Sales offices and warehouses in all large cities of America and Europe.



ADVANTAGE 15:—The fire pots of IDEAL Boilers burn the largest possible amount of air to get the full heat out of each lump of coal.

Dept. 6

AMERICAN RADIATOR COMPANY

CHICAGO



THE GORTON QUICK-OPENING RADIATOR VALVE



ONE-THIRD OF A TURN OF THE LEVER
HANDLE WILL OPEN OR CLOSE THE VALVE

Send for Prices

GORTON & LIDGERWOOD CO.

96 LIBERTY STREET, NEW YORK



T. H. BROOKS & CO. CLEVELAND, O.

FLOOR & SIDEWALK LIGHTS.
OF EVERY DESCRIPTION.
SEND FOR CATALOGUE.

Our well-equipped
Book Department
is prepared to re-
commend & supply
MUNN & CO.

BOOKS

Relating to Archi-
tecture, Ceramics,
Decoration, Rugs,
Furniture, etc. :: ::
NEW YORK

To Good Housekeepers!

Dear Madam:—

A SHABBY piece of furniture never *looks* worth sending out to be refinished—It really *is* worth it. You forget that it isn't the *wood* that is worn—it is the *finish*.

Replace the *finish*—the piece is as good as new. When you do this yourself, the expense is slight and the labor nothing.

You must first *remove* the old finish. Varnishing over it looks *cheap*—shiny—home-made.

The old finish is a coat. Johnson's Electric Solvo takes this off quickly, easily. The piece is then left "in the white"—new wood—to be finished as *you* like.

Choose one of Johnson's Wood Dyes (14 shades). A shade to suit you. If too dark, add alcohol, if not dark enough, add our Flemish Oak Dye, No. 172. You'll find the dye thin like water. It enters the wood pores evenly—it brings out the beauty of the grain—the lights—the darks.

JOHNSON'S
ARTISTIC WOOD FINISHES
JOHNSON'S

You cannot make a "spotted" job if you try. It contains no varnish to *cover* the beauty of grain. It is a dye that accentuates the effect you want. Each shade is always the same.

The finishing is equally simple. Johnson's Prepared Wax is pastelike. It is applied with a soft cloth. It dries instantly. Rubbing with a dry cloth then gives a velvety protecting finish of great beauty.

The same treatment will refinish your woodwork and floor. This is worth your consideration for Johnson's Wood Finishes do not mar, scratch nor peel.

Every paint dealer carries these three simple necessities—Johnson's Electric Solvo—Johnson's Wood Dyes—14 shades—30c and 50c—Johnson's Prepared Wax—10c and 25c.

48-Page Illustrated Book Free—
Edition AH-10

Our text book on "The Proper Treatment for Floors, Woodwork and Furniture," will be sent you or your friends free for your names and addresses.

S. C. JOHNSON & SON, Racine, Wis.

"The Wood Finishing Authorities"

tation to the eye to pierce to the mysteries beyond.

The changing shapes of the openings are a constant fascination to one lying under the trees, and the shadow cast upon a lawn is broken up by many changing spots of light, now flashing pure green and again shut out.

The outline of the birch is not regular, it is often oval and broader than it is high, or the oval may be turned on end. The outline is broken up and softened by whole branches growing beyond the general outline and by single twigs pushing out.

Often the tree seems to be permanently bent to one side and to have grown away from the high winds.

In autumn the leaves turn a light yellow, almost the color of primroses or of lemons.

The flower catkins and the seeds are interesting details of this beautiful native tree.

THE USE OF VINES

By E. P. Powell

FOR house walls I do not know of a single vine so good as the grape. It not only furnishes an immense amount of fruit, and ripens it well in such a location, but it gives a period of flowering with most delicious fragrance. The wild grapes are preferable for rampant growing, for perfumed flowers, and for shade. There is, of course, a difference in varieties. Some of them will grow hundreds of feet, covering the whole side of a large house, and are absolutely hardy. Of the cultivated grapes I do not know of one better fitted for this purpose than August Giant. It will grow thirty or forty feet in a season, will bear bunches about the size of Concord, but better flavored. It does not ripen, however, in August, but late in September. Very few of the growers catalogue this variety, but I think that the old Campbell stock is still in existence at Delaware, Ohio, and Mr. Josselyn, of Fredonia, N. Y., I think, can supply it. Niagara is another good wall grape; so is Herbert, a superb black grape—the best of Rogers' hybrids in that color. Gaertner is pretty good, and Concord will do very well. The Lindley can not be surpassed, provided you give it a running mate that will furnish pollen—such as Worden or Moore's Early; and these are also both good wall grapes.

Besides the grape the small cottage can be sufficiently covered with running roses, such as Helen Gould, or it can be shaded with wistaria. The wistarias are pretty well adapted to this sort of work, although to be seen at their best their splendid lilac or white clusters must hang down. This makes them peculiarly well adapted to veranda shelters. The same vine is capital for growing over a tree; but much better is the trumpet creeper—a very bad vine for clinging to a house. The bignonia most common in the South is venusta, and it is vastly finer than the trumpet creeper of the North. It is also a bad vine for the house. It is very stout and clingy, and it runs with astounding rapidity. It will grow seventy-five feet from the ground in a season. If it is killed back, as it sometimes is, it starts up like Jack's beanstalk, in the winter, throwing out great bunches of flowers at every six inches, until it fills a whole tree with its golden bloom. It takes hold of anything, and asks no help anywhere. All the time it is throwing off, to right and to left, armlets ten feet long, that are almost a mass of floriference. On a house this becomes too much and unmanageable foliage. For Southern houses the Cherokee rose is much better.

For arbors I once again recommend the grapevine, those of less rampant growth. Several of the honeysuckles are specially adaptable to this purpose, but, probably, best of all are some of the varieties of clematis. The Jack-

ARE YOU LOOKING FOR A MACHINE THAT WILL

plane out of wind, surface straight or tapering, rabbet door frames, rabbet and face inside blinds, joint, bevel, gain, chamfer, plow, make glue joints, square up bed posts, table legs, newels, raise panels, either square, bevel or ogee, stick beads, work circular mouldings, etc., rip, cross cut, tenon, bore, rout, rabbet, joint and bead window blinds, work edge mouldings, etc.? If so, drop us a postal card, and we will send you a descriptive circular showing two views of our No. 62 Universal Wood Worker.

Write

209-229 WEST FRONT STREET

J. A. FAY & EGAN CO.

CINCINNATI, OHIO

No. 62. UNIVERSAL WOOD WORKER

manii, deep violet, and the Henryi, creamy white, are two of the very best, but I have yet to see anything for late summer comparable to paniculata. It is a luxuriant grower, entirely hardy, and covers a veranda or pillar or fence or any other support with a delicate florescence late in the season. Its shoots make twenty-five feet easily in a year. For earlier blooming on the same arbor, trellis or porch, grow our common American white clematis. For wild places, or rockeries, make liberal use of American ivy, commonly called Virginia Creeper. The glory of this ivy is the autumn coloring. It can be used to clamber up old trees and fill them with inconspicuous foliage in the summer, but a glorious mass of color in the fall. I have never seen it finer than when growing over old stumps, or charred trees, ten, twenty or thirty feet high. It manages to give a noble appearance to old charred wood lots.

For low-growing vines I have yet to find anything more delicious than the common nasturtium. Of course, it must be sown every year, but it grows with great rapidity, and covers low trellises and fences with one of the most wholesome flowers in existence. However, make more use of the grapevine. It will never disappoint you, and it keeps the house cool, while it is furnishing the best of food for your table. An ordinary barn can just as well furnish you ten bushels of grapes, or twenty, as to have its walls hot with the summer sun and bare of all suggestions of either beauty or utility. Remember to fasten your house vines to wires, running horizontally across the siding. The vines that I have recommended will do no damage to the wood, but if tied to wires will be of decided preservative value to the paint. In some parts of the country the bittersweet is one of the very best of vines to plant for almost all purposes. It grows about ten feet in a season, with fine large leaves, yellow flowers, and clusters of orange-colored fruit. There is, however, one drawback to this vine, that it easily gets buggy or covered with aphids. It does not like the shade. For sunny spots it is excellent. In Florida there is a wonderful vine called the velvet bean. It grows sixty to seventy feet in a season, and is loaded everywhere with flowers and brilliant seedpods. The bean resembles the old cranberry bean. With a little care you can grow this bean as far north as New York and Boston, but it will not ripen its seeds in those latitudes. It is a legume of the highest value for forage and for adding nitrogen to the soil. We may be able to get a sport of it much more hardy.

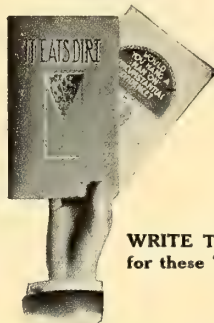
I have not laid too much emphasis on this matter of planting vines. Nature intended them to fill up gaps, and to run around on offices that other vegetation can not fill. Her ideal vine seems to be the honeysuckle, in a small way; and the grape in a large way. Use these just as freely as you can. Do not leave a pile of stones or an old stone fence or a bit of wild scrub in its unsightliness. I have left out of my count quite a number of vines that will suggest themselves to you, because of their beauty or because they can be easily obtained.

Living in a section where the hops is grown for market, I wonder that this vine is not more often used for ornament. In some sections the wild hop vine is also very beautiful. However, do not make too much of wood trellises and arbors just to have them covered with vines. As a rule these woody things are only half covered, and are excrescences rather than ornamental. I have seen a great many wooden arbors about the country, and they are generally about as beautiful and about as useful as observatories on the tops of private houses. The most artificial and disagreeable place I ever saw in the country was made up of arbors, rockeries, sheared evergreens and

A complete revolution in CLEANING

No more sweeping
No more dusting
No more beating
No more "house cleaning"

Less work
Less time
Less trouble
Less annoyance



WRITE TO-DAY for these "2 Books"



"It Eats Dirt"

The "INVINCIBLE" Electric Renovator Gets all the dirt all the time

Removes every particle of dust and dirt in one operation. Germs, microbes, moths, insects along with the dirt. All in the one operation—no subsequent "dusting" or "wiping up." An electrically-driven machine does all the work—handy, portable. Creates a strong suction or draw. A hose is attached and to that a nozzle or tool. As the tool is passed over the object to be cleaned, dust, dirt and germs are drawn into a "Receiver," which is taken out and dumped after the cleaning. Cleans and renovates everything: Rugs, Carpets, Curtains, Draperies, Upholstery, Floors, Walls, Ceiling, Ledges, Relief Work, Bric-a-brac—any article or thing (without removal) used in the Home, Office Building, Institution, Church, Theatre, Store or any place of abode where there is an electric current—alternating or direct.

The "INVINCIBLE" is not a toy
It is built for a life-long service

Of the very highest and best construction known to mechanics. Aluminum throughout (except motor), with handsome frosted finish. Really a beautiful machine. All corners and edges rounded. No awkward projections. Compact and simple. Easily portable on 6-inch ball-bearing wheels. Nothing complicated. Nothing to wear out, give out or get out of adjustment.

The "INVINCIBLE" is not a vacuum machine. It works on an entirely newly applied principle—thoroughly and effectually, with no wear or tear on furnishings and furniture. You can clean better, easier, quicker and cheaper and with less help with the "INVINCIBLE" than any other method. Removes not only surface dirt, but from within, beneath; from the very fibre itself, without the slightest injury. Saves the work of many people on large cleaning operations.

Write Dept. F for our Booklet, "IT EATS DIRT." Large third edition nearly exhausted. Also testimonials of enthusiastic users. You should KNOW what these Two Booklets disclose about this new and only effective way of cleaning.

Electric Renovator Mfg. Co.
934 Farmers Bank Building, Pittsburg, Pa.

Harmony in Hardware Trimmings

The matter of hardware for a home is not a detail of small importance—the selection should have your own attention. The right sort of hardware has a distinctive decorative value and the owner of the home should give expression to his own taste so that it may always be a source of pleasure and delight, chosen to harmonize perfectly with style of architecture and general scheme of ornamentation.

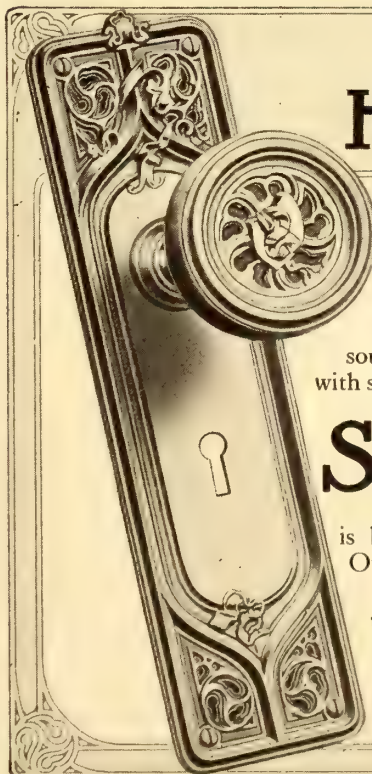
Sargent's ARTISTIC HARDWARE

is beautiful and durable—the perfection of hardware art. Over seventy designs are handsomely illustrated in

Sargent's Book of Designs—Free

together with many helpful suggestions and an explanation of the Easy Spring Principle of Sargent's Locks. The *Colonial Book* illustrates this line especially well. Both books are valuable—but sent gladly on request. Write at once for them.

SARGENT & CO., 156 Leonard St., New York





"Fighting Bob's" Own Story of the American Navy

Rear-Admiral Robley D. Evans has written a series of remarkable naval articles—articles which will arouse the interest and the patriotism of every thinking American.

Throughout the series runs the strong, lovable personality of "Fighting Bob," the man who, as Kipling said, "Has *lived* more stories than Zogbaum or I could invent."

His vivid story takes up the sailing of the fleet, its target practice, manœuvres, the supremacy of American gunners, and many other subjects.

This series constitutes "Fighting Bob's" own message to the American people, after his half century of service, and will appear each month, beginning in

Hampton's BROADWAY Magazine FOR OCTOBER 15 CENTS

We feel that we are justified in declaring Admiral Evans' series of articles to be the most important magazine feature of recent years.

☛ "The Supreme Court—in the Light of the Coming Election," by Eugene P. Lyle, Jr., is another of the interesting and valuable features of Hampton's BROADWAY for October. Other articles by Porter Emerson Browne, Lindsay Denison, James H. Collins, and others.

☛ Stories by Jack London, Mary Heaton Vorse, Maxmilian Foster, and other leading fiction writers.

☛ The most beautifully illustrated popular magazine in America. ☛ Sold by all dealers.

Send 25 cents with this coupon and we will send you our September, October and November magazines, and also a magnificent photogravure of Admiral Evans, printed on India tint paper, suitable for framing; size, 11 x 14 inches.



Name _____

Street _____

Town _____ State _____

Benj. B. Hampton
94 W. 35th St.,
New York

Enclosed herewith is 25 cents, for which you are to send me your magazine for September, October and November, and also the photogravure of Admiral Evans.



The expense and annoyance of painting will not recur every year or two if you use

DIXON'S SILICA-GRAPHITE PAINT

the "Proven Shield for Steel Work." Durability records in all climates; write for a few.

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.

other artificialities. Instead of these, plant living arbors of close growing evergreens. The arbor vitae is perhaps best of all for this purpose. Trim the young trees so that the outside of the circle will gradually rise in a conical outline, but let the inner limbs reach together overhead. After the trees are fifteen feet high you can shape the inside as you please. Vines can be combined with this growth to complete the shade, but I do not recommend it.

As soon as anyone has established himself or herself in the country he should begin to study every bit of vegetation, and he will soon find that there are a host of beautiful things around him that have never been put to any use. Among the rest he will find that he can make much better use of the common leguminous

plants, and I should dislike to close this little sketch without suggesting that there are few prettier things than beans and peas. In your vegetable garden you may make these to grow in such a way as to be highly ornamental. I would suggest that a trellis of tall growing peas have a few sweet peas mixed with them, and in this way you will get not only that which is eatable but that which is of equal use on the table.

The Scientific American Boy

By A. RUSSELL BOND. 320 pages, 340 illus. \$2.00 postpaid
A STORY OF OUTDOOR BOY LIFE

☛ Suggests a large number of diversions which, aside from affording entertainment, will stimulate in boys the creative spirit. Complete practical instructions are given for building the various articles, such as scoops, canoes, windmills, water wheels, etc.
MUNN & CO., Publishers, 361 Broadway, NEW YORK

Green Corn Every Day

Make Kornlet Waffles for breakfast, Kornlet Salad for lunch, Kornlet Oysters for supper. There's no end to the making of delicious Kornlet dishes.

Kornlet

(The Heart of the Kernel)

shouldn't be classed with canned corn. It is the creamy pulp of a tender, highly flavored variety of sweet young corn at the height of its milk. Get a can to-day and prove its goodness.



Look for recipes on every wrapper. Valuable book of recipes sent free on request.

If your grocer hasn't Kornlet, write us.

THE HASEROT CANNERIES COMPANY,
Cleveland, Ohio, U. S. A.

Van Dorn Iron Works Co.

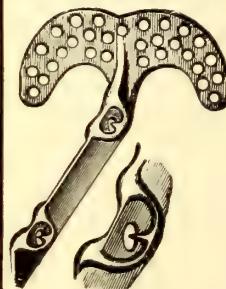


PRISON, HOUSE & STABLE WORK

JOIST HANGERS
LAWN FURNITURE
FENCING, ETC.

CLEVELAND, OHIO

STANDING SEAM ROOF IRONS



PATENTED

CLINCH right through the standing seam of metal roofs. No rails are needed unless desired. We make a similar one for slate roofs.

Send for Circular

Berger Bros. Co.
PHILADELPHIA

MY BIG \$5.00 OFFER



Includes a year's subscription to that splendid monthly magazine, the

Journal of Modern Construction

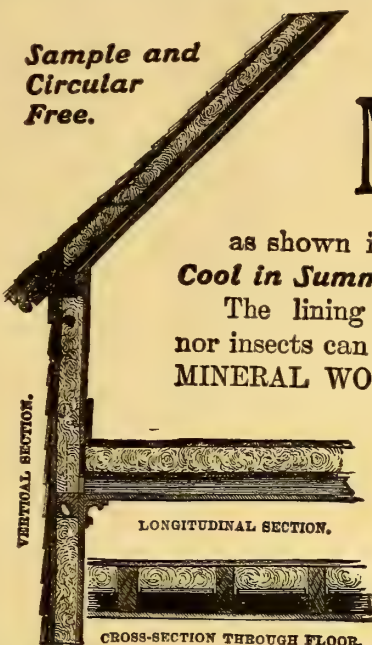
Devoted to building interests. Specializes concrete work and designs for Concrete Block Houses. Takes up the new building material

of the day. Regular subscription price, \$2.00 a year; A Set of Complete Blue Print Plans (meaning full size working drawings and specifications) selected from my new book of 76 Attractive Houses, costing \$1,000 to \$4,000, and a full itemized Bill of Material. Send \$1.00 NOW for book of 76 plans, and three months' trial subscription. The \$1.00 can be applied later on the \$5.00 offer. MAX L. KEITH, 403 Lumber Ex., Minneapolis, Minn.

American
Homes and Gardens
and
Scientific American

To one address \$5 per year Regularly \$6

Sample and
Circular
Free.



A House Lined with Mineral Wool

as shown in these sections, is *Warm in Winter,
Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice,
nor insects can make their way through or live in it.
MINERAL WOOL checks the spread of fire and keeps
out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.
140 Cedar St., NEW YORK CITY.



We are
thoroughly
equipped to
design and
manufacture
Lighting Fix-
tures strictly
correct in line
detail in all
recognized
styles

*For the protection of our clients, our trade-mark will
be found on each and every piece of work made by us*

The Enos Company

MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
San Francisco, 1748 California Street
Toronto, 94 King Street, West
Pittsburg, G. P. Norton, Penn at 4th St.
Chicago, W. K. Cowan & Co., 203 Michigan Blvd.
NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & Co., BOSTON



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER TILING

An Ideal Floor Covering for Court
Houses, Banking Institutions, Churches,
Hospitals, Libraries, Business Offices,
Restaurants, Vestibules, Elevators,
Kitchens, Laundries, Pantries, Bath-
rooms, Steamships and Floating Pro-
perty generally.

We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street

"I'D have sliding doors in my
house if I could only be
sure they wouldn't stick
or get off the track."

How many times have you heard
that? The ALLITH Reliable
Parlor Door Hanger overcomes every
possible objection and makes sliding
doors what they should be—a great
convenience.

For they cannot bind, stick or jump the
track, and the wheels are made of fibre
pressed so hard, they roll as noiselessly as
a billiard ball.

If you are building or remodeling the house,
you really ought to send for our latest catalog
and give us the name of your architect. He knows
our door-hangers are good and will specify them
if you say the word.

ALLITH MANUFACTURING CO.,
2107 W. Taylor St., Chicago.



has a soft, mossy green color
all of its own.

In originality of design, beauty
of lines and refinement of ex-
pression, it has secured that
"quiet ecstasy" from the con-
noisseur.

To the things in your home that you are
proud of, add one of our rare designs
and have a double appreciation coming
from your own joy in living with it and
the commendatory remarks of your
neighbors.

In various forms of lamps, vases, ferneries, candle sticks,
punch bowls, trays, etc. Ask your local dealer or write
us for booklet.

THE GATES POTTERIES,
651 Chamber of Commerce, Chicago.



Chickering pianos

THE RESULT OF SKILL, inspired by a keen appreciation of the artistic and a desire to live up to an enviable reputation, directed by the latest scientific knowledge, and practical experience gained by eighty-five years of piano building. ¶ The resulting excellence, both as to tone, touch and general staying power, is the reason and the only reason for the uniformly high favor in which it is held in exclusive musical circles. ¶ It is conceded to be a standard of comparison for all other makes.

Made Solely by CHICKERING & SONS

826 Tremont Street

PIANOFORTE MAKERS

Boston, Mass.

Established 1823

AMERICAN HOMES_{AND} GARDENS



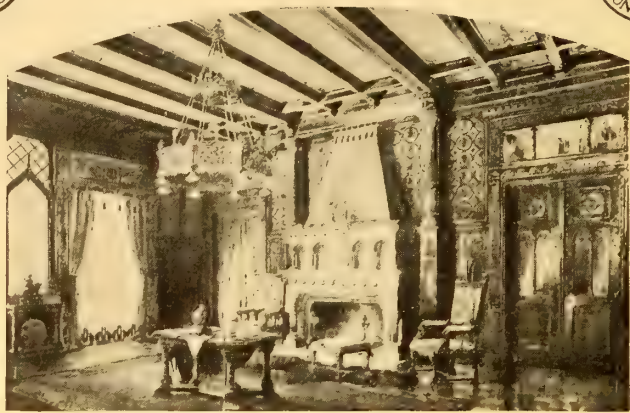
\$3.00 A YEAR

MUNN & COMPANY, Publishers

PRICE, 25 CENTS



FLINT'S FINE FURNITURE



DECORATIONS AND FURNISHINGS

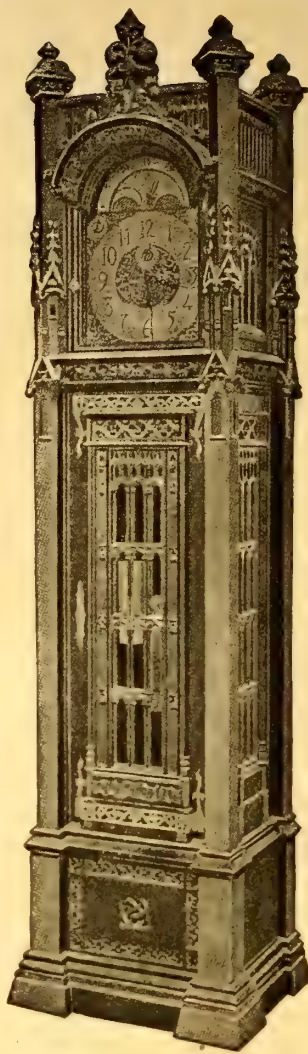
Our Decorative Department is a collecting and assembling point for all the varied stocks and allied industries of this large establishment. It draws its inspirations from all the Decorative periods through the vast collection of Furniture, Art Objects and Fabrics we have on view, which puts us in a position to co-operate completely with owners and architects who wish authentic Decorations and Furnishings of any period.

Upon request, artists will be sent for consultation and colored drawings and estimates submitted.

GEO. C. FLINT CO.

43-47 WEST 23rd ST.

24-28 WEST 24th ST.



HALL CLOCKS

The most useful and ornamental article you can have in your home is a fine HALL CLOCK. We make many styles and kinds, with or without chimes.

The "Banjo," which is so popular for dining-room and library, is a most satisfactory clock.

We also make a full line of Marble Clocks and Regulators.

If your local dealer does not sell our line, send direct for new illustrated catalogue.

Waltham Clock Company
Waltham, Mass.

❧ Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

❧ The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

❧ If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

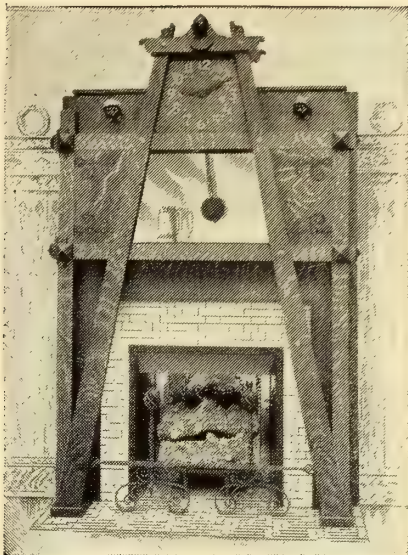
11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO



Serpentine Crepe

The cheapest and most effective fabric for Draperies, Curtains, Screens, etc.
Send for free samples.
PACIFIC MILLS, BOSTON, MASS.



Artistic Mantels

Our Catalogues contain 130 designs, including Mission, Colonial, White, Mahogany and Oak. Everything, from the very cheapest to the best.

Fireplace Hardware and Tiling of every description.

Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.
Unity Building Chicago, Ill. Clark Building Jacksonville, Fla.
Factory, Knoxville, Tenn.

MENNEN'S BORATED TALCUM TOILET POWDER



"Baby's Best Friend"
and Mamma's greatest comfort. Mennen's relieves and prevents Chapped Hands and Chafing.
For your protection the genuine is put up in non-refillable boxes—the "Box that Lox," with Mennen's face on top. Sold everywhere or by mail 25 cents. Sample free.
Try Mennen's Violet (Borated) Talcum Toilet Powder—it has the scent of Fresh-cut Parma Violets. Sample Free.
GERHARD MENNEN CO., Newark, N. J.
Mennen's Sen Yang Toilet Powder, Oriental Odor } No Samples
Mennen's Borated Skin Soap (blue wrapper) }
Specially prepared for the nursery. Sold only at stores.

Bound Volumes

For 1905	\$3.50
For 1906-1907, each	\$5.00

American Homes and Gardens



MUNN & COMPANY, Publishers
361 BROADWAY, NEW YORK

Cottage Designs

By far the most complete collection of plans ever brought out. Illustrated with full-page plates.

\$1 each • Sold separately

MUNN & COMPANY, PUBLISHERS
361 BROADWAY :: NEW YORK

No. 1. Cottage Designs Twenty-five designs, ranging in cost from \$600 to \$1,500	No. 3. Modern Dwellings Twenty designs, at costs ranging from \$2,000 to \$5,000
No. 2. Low Cost Houses Upward of twenty-five designs, costing from \$750 to \$2,500	No. 4. Suburban Homes Twenty selected designs, costing from about \$3,000 upward

Thousands Pleased
with our
Booklet on Good Furniture



So charming is our brochure "Furniture of Character" that many have written us that it is an "artistic delight," a "master-piece of value and beauty," a "work of art," "exceedingly beautiful," a "gem," etc., etc.
In it we have told what can only be suggested in any advertisement—interesting facts about the celebrated and favorably known
BERKEY & GAY
correct reproductions of Colonial and Period furniture for the dining room, bed room and library
It will be mailed to any address upon receipt of 16 cts. in U. S. stamps to partly defray expense.
If not acceptable, return same and stamps will be refunded.
This high grade furniture with our guarantee shopmark can be secured at modest prices through the leading furniture stores.
BERKEY & GAY FURNITURE CO. Estab. 1859
Please Address Dept. M. Grand Rapids, Mich.




KILHAM & HOPKINS, Architects, Boston

Beautiful **Silver Gray** and **Moss Green**, **Italian Tile Red**, Etc.—
These are the artistic colors produced on your **Bungalow** or **Cottage** by using
DEXTER BROTHERS' English Shingle Stains
No disagreeable odor.
Samples of colors on wood sent **FREE**
Dexter Bros. Co., 103 & 105 Broad St., Boston, Mass.
AGENTS: H. M. Hooker Co., 128 W. Washington St., Chicago; W. S. Hueston, 6 E. 30th St., New York; John D. S. Potts, 218 Race St., Philadelphia; W. W. Lawrence & Co., Pittsburg, Pa.; F. H. McDonald, 619 The Gilbert, Grand Rapids, Mich.; F. T. Crowe & Co., Seattle, Spokane, Tacoma, Wash., and Portland, Ore.; Klatt-Hirsch & Co., 113 Front St., San Francisco, Cal.

Belgian Hares

Rufus Red, Registered, and Pedigreed Stock For Sale.
Send three 2-cent stamps for Illustrated Catalogue.

Pleasant Ridge Rabbitry
Cor. Dudley St. & Hampton Ave.
Station B LONG BRANCH, N. J.

BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont

THE METROPOLITAN MAGAZINE

The Great Monthly for the American Home

NOVEMBER

"THE FIRING LINE OF A NATIONAL CAMPAIGN," by John R. Winchell

A glance behind the scenes of the great political organizations during a presidential year.

"SPEED ON LAND, ON THE SEA AND IN THE AIR," by Charles H. Cochrane

A valuable and entertaining exposition of the marvelous growth of speed and its trends.

"THE PLAY AND THE PLAIN PEOPLE," by Brander Matthews

A story by this master of English, of the relation of the drama to humanity.

"THE WAY TO REST," by Eustace Miles

Another striking article on the possibility of always feeling fit.

Other articles and stories by R. E. Vernede, Mary Cholmondeley, Frederick Walworth Brown, H. H. D. Peirce, Clinton Dangerfield, Lucy Pratt and others.

15 CENTS A COPY
\$1.50 A YEAR

Every direct purchase of five dollars' worth of R. H. Russell's books will entitle you to a year's subscription to this great magazine

THE BEST READING

THE TIGER AND THE INSECT

By John Habberton. \$1.20

Illustrated by Walter Russell. If you have read "Helen's Babies" you won't be in danger of missing this long-awaited sequel to that famous and laughable book.

MORE WOLFVILLE STORIES—THE BLACK LION INN

By Alfred Henry Lewis. \$1.50

Illustrated by Frederic Remington. Stirring stories of adventure on the frontier, told by Westerners snowbound in an old inn.

THE WIND IN THE TREE

By The Duchess of Sutherland. \$1.50

An introduction, through a series of charming love adventures, to people and manners of the widest interest.

HER MAJESTY THE KING

By James Jeffrey Roche. \$1.50

Illustrated by Oliver Herford. Full of wit, originality, and satire.

CHARLES DANA GIBSON

on his recent return to this country, reiterated his statement that he would not return to the pen-and-ink work which made him famous. Mr. Russell has collected these drawings and offers seven volumes:

The Social Ladder, Americans, A Widow and Her Friends, The Education of Mr. Pipp, Sketches and Cartoons, Pictures of People, People of Dickens.

Printed on heavy plate paper and bound in Japan vellum. \$5.00 a volume.

He offers many other important art publications, including Frederic Remington's books and prints. Enriched editions of Rossetti, William Morris, Burne-Jones, and one of the wittiest satires ever penned, by James McNeill Whistler.

He will, upon request, send information about limited editions, signed personally by James McNeill Whistler, Charles Dana Gibson, Frederic Remington, and others.

Write for a list of other important publications.



R. H. RUSSELL, Publisher



Dept. A., 3 W. 29th St., New York

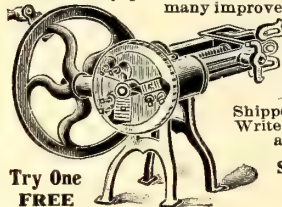
STEAM OR HOT WATER HEATING PLANT FOR THIS HOUSE \$125.00



INCLUDING BOILER, RADIATORS, PIPE, VALVES, FITTINGS, and everything complete for installation according to our simple plans and diagrams. We can save you an immense amount of money on any kind of a heating plant, furnace, hot water or steam, installed under our binding guarantee of satisfaction or money refunded. FREE BOOK and FREE ESTIMATES. If you are interested in any kind of a heating plant for either a new or an old house, write for our 80-page book, "Modern Systems of Home Heating," state what kind of heating plant you want and we will give you a detailed estimate and plan for your building that will show you how you can save one-third to one-half on your outfit and take no risk whatever. WE GUARANTEE EVERYTHING. Write today. Address, SEARS, ROEBUCK & CO., CHICAGO, ILL.

Standard Bone Cutter

quickly pays for itself in increased egg production. Cuts green or dry bone, meat or gristle. Guaranteed the best of all bone cutters or money refunded. Runs easiest, cuts fastest, lasts longest. Cuts bone across the grain, giving greatest feeding value. The standard is the only positive automatic feeding cutter built, has many improvements found in no other, is low in price and built to stand the work. Eleven different sizes from \$6.75 to \$195, for hand and power. Cut shows No. 9, price \$8.80. Shipped on 10 days' trial free. Write for free catalog, prices and free trial plan.



Try One FREE

Standard Bone Cutter Co., Milford, Mass.

Colonial Houses FOR MODERN HOMES

A COLLECTION of designs of houses with Colonial (Georgian) details, but arranged with modern comforts and the completeness of the twentieth century.

Written & Illustrated by E. S. CHILD, Architect

They show large, correctly drawn perspectives, full floor plans, and complete descriptions, with estimates of cost. The designs are new, original, unique, consistent, but not stiff nor constrained. Made, not by an artist, but by an architect. They combine beauty of exterior with complete and convenient interiors, with kitchens, laundries, pantries and closets carefully and skilfully considered.

If you are at all interested in the subject, you will enjoy this publication.

Price, postpaid, \$2.00

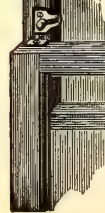
MUNN & CO., 361 Broadway, NEW YORK

SPECIAL OFFER to Carpenters

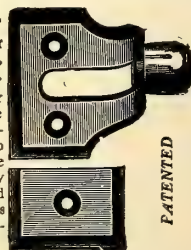
BUILDERS AND OWNERS OF HOMES

IVES PATENT WINDOW VENTILATING LOCK.

A Safeguard for Ventilating Rooms. Pure Air, Good Health and Rest Assured.



To introduce this article, Four Ventilating Locks in Genuine Bronze, Brass or Antique Copper Finish will be mailed to any address prepaid for One Dollar. Will include a forty page Hardware Catalogue and Working Model to carpenters who wish the agency to canvass for its sale. Address



PATENTED

The H. B. Ives Co. NEW HAVEN Conn., U.S.A.

For Five Dollars

American Homes and Gardens and Scientific American

SENT TO ONE ADDRESS FOR ONE YEAR

Regularly Six Dollars

Bound Volumes of American Homes and Gardens

Volume for 1905 \$3.50
Volume for 1906 \$5.00
Volume for 1907 \$5.00

MUNN & CO., Publishers

361 Broadway, New York

"To have your roof last — Use Ruberoid Roofing First."

RUBEROID

TRADE MARK. REG. U.S. PAT. OFFICE



The only permanent Roofing with permanent colors

Made in Red, Brown, Green and Slate color

ROOFING

has none of the defects common to other roofing materials, as the following comparison shows:

Metal Roofs rust and leak unless frequently painted. A metal roofed house is always hot in summer.

RUBEROID never rusts, needs no painting when laid and insures a cool interior.

Shingles warp, split and rot, are very expensive and require frequent repair.

RUBEROID does not warp, split or rot, is less expensive than metal or shingles and lasts longer.

Tar and Low-Priced Roofings, even when covered with sand or gravel, are quickly affected by changes of temperature. They melt and run under summer heat, leaving their felt or paper base unprotected. They are also more or less inflammable.

RUBEROID is not affected by changes of temperature and never melts or runs under the hottest sun. It is weather-proof, water-proof and so highly fire resistant that sparks or burning brands will not ignite it.

RUBEROID has an unequalled record of over 16 years' satisfactory service and is proven the most economical roofing made. Any handy man can lay it. No skilled labor required.

For further particulars write for Booklet No. 15

THE STANDARD PAINT COMPANY
Manufacturers of Ruberoid Roofing, Building and Sheathing Papers, etc.
100 William St., New York

Chicago, St. Louis, Kansas City, Boston, Philadelphia, New Orleans
THE STANDARD PAINT CO. OF CANADA, LTD., Imperial Bank Bldg., Montreal
THE RUBEROID CO., LTD., 81-83 Knightbridge St., London, England
CIE. FRANCAISE DU RUBEROID, 83 Boulevard Richard Lenoir, Paris, France



Running A Car By Ear

The trained ear of the experienced automobilist instantly detects the superiority of MOBILOIL in the even, contented "pur-r" of the engine that tells the story of perfect lubrication. No matter what the type of gasoline engine or season of the year, MOBILOIL invariably gives perfect lubrication under all conditions.

VACUUM MOBILOIL

is made in five different grades, each grade meeting the particular requirements of certain automobiles.

A valuable booklet on motor lubrication will be sent free on application. Lists every automobile made, and shows grade of MOBILOIL necessary for its perfect lubrication. Contains track records and other useful information.

MOBILOIL in barrels, and in cans with patent pouring spout, is sold by all dealers. Manufactured by

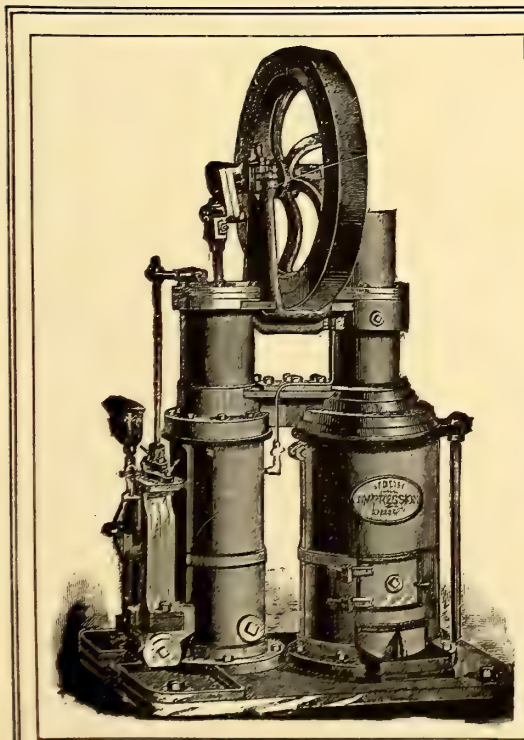
VACUUM OIL COMPANY,
ROCHESTER, N. Y.



Take a few minutes right now and get real facts on **steel ceilings and side walls.**

Call in your stenographer and simply say "Eller Manufacturing Company, Canton, Ohio. Send for catalogue." You will be more than repaid. We take such an interest—are glad to serve you, and for years everybody knows "Eller" has stood for the **highest in quality.**

ELLER MFG. CO.
CANTON, OHIO



Improved "Reeco" Rider Hot Air Pumping Engine

And

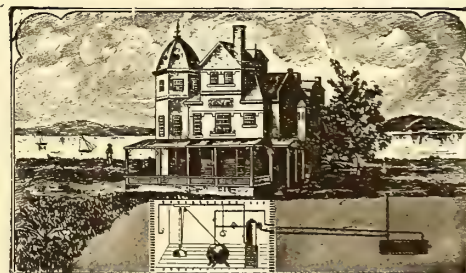
Improved "Reeco" Ericsson Hot Air Pumping Engine

* *Prices Greatly Reduced*

Send for Catalog "E" to nearest office.

Rider-Ericsson Engine Co.

39 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



THE most modern, and best illuminating and cooking service for isolated homes and institutions, is furnished by the **CLIMAX GAS MACHINE.**

Apparatus furnished on **TRIAL** under a guarantee to be satisfactory and in advance of all other methods.

Cooks, heats water for bath and culinary purposes, heats individual rooms between seasons—drives pumping or power engine in most efficient and economical manner—also makes brilliant illumination. **IF MACHINE DOES NOT MEET YOUR EXPECTATIONS, FIRE IT BACK.**

Send for Catalogue and Proposition.

Low Price Liberal Terms Better than City Gas or Electricity and at Less Cost.

C. M. KEMP MFG. CO.
405 to 413 E. Oliver Street, Baltimore, Md.

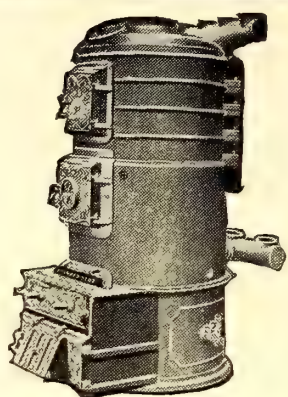
GURNEY HEATERS—GURNEY HEATERS

Gurney HEATERS

GURNEY HEATERS, measured by quality, economy and efficiency, are the standard of value.

- ☐ They are made of the best materials and by the highest grade of mechanical and engineering skill; constructed under these conditions, they are unequalled in durability.
- ☐ There is also complete combustion of fuel and no waste of heat units, thus insuring great economy.
- ☐ The **GURNEY HEATER**, made either for hot water or steam, distributes the heat evenly and with a certainty that gives complete satisfaction to the user.
- ☐ Easily installed in old or new buildings they appeal to those who want to eliminate extra care and waste, or who want greatest value for amount expended.
- ☐ Send for illustrated catalogue.

GURNEY HEATER MFG. CO.
188-200 Franklin St., Corner Pearl St., BOSTON, MASS.
NEW YORK BRANCH, 12 East 42d Street



GURNEY HEATERS—GURNEY HEATERS



ROUGHING-IN HOUSE DRAINS. Edited by Jno. K. Allen. Chicago: Domestic Engineering. Pp. 184.

The purpose of this useful little book is concisely stated on its title page as a complete guide, from the digging of the sewer to the finishing length of the house drain, giving each step to be taken and telling how and why it is done. This programme is followed out in careful detail in a clear and concise manner, and the book will not only be found of value to those engaged in this kind of work, but will also be useful to property owners and tenants. The general scope is expressed in the titles of the principal subjects. These are constructing the house drain, the house drain, materials for the house drain, installing the house drain, and the installation of rain leaders.

THE STATE AND THE FARMER. By L. H. Bailey. New York: The Macmillan Co. Pp. 12+177. Price, \$1.25.

This agreeably written book is a direct appeal to the higher life on the farm. Professor Bailey modestly designates it as a mere budget of opinions, but this, as those who have followed this distinguished scientist's views believe, only the more entitles it to a favorable reception. He discusses at some length the changes in the conditions of agriculture and country life that have transpired of late in North America, and finds they have been modified by three great shifts—the shift in geographical location, in methods of practise, and in institutions. The more difficult subject of society and the farmer is then taken up and the larger part of the book is filled with discussions under this head. Professor Bailey's observations and opinions are those of a trained scientist and agriculturist, and his views and conclusions on the very weighty subjects treated in this book are worthy of wide circulation and discussion.

THE FURNISHINGS OF A MODEST HOME. By Fred Hamilton Daniels. Worcester: The Davis Press. Pp. 114. Price, \$1.00.

The need for this book has long been apparent. Books on the home are likely to deal with its expensive aspects. It is natural that this should be so, for there is often attractiveness in a rich interior, and the support of such publications is more apt to come from the people who own such residences than those who do not. But it is a well-known fact that there are more modest homes than expensive ones, and it is also well known to those who have tried to furnish such modest establishments that, while much has been published on this difficult subject, there is a wonderful dearth of practical information.

Mr. Daniels' book is, therefore, entitled to a hearty welcome and well deserves it. Itself unpretentious and modest, it deals with a modest subject in a modest way. He admits that furnishings are expensive, and then proceeds to show how good results may be obtained from small expenditures. This is precisely the kind of advice everyone has been looking for. He tells his story simply, leaving the illustrations, in many instances, to speak for themselves; but his lessons are well drawn and the advice he offers sound and helpful. He has put forth an interesting little book that should help many housekeepers.



Running Water in Zero Weather

THERE is no longer any necessity for inconvenience and repairs due to frozen tanks and pipes. No matter how cold it may be, you can have a constant supply of fresh running water delivered at a usable temperature to all fixtures. This satisfactory water supply service will be yours, if you install the

Kewanee System of Water Supply

With the Kewanee System, there is no elevated tank exposed to all extremes in weather conditions. No freeze-ups in winter and no warm stagnant water in summer. Instead, a **Kewanee Pneumatic Tank** is located in the cellar, or buried in the ground. It cannot leak, freeze, overflow or collapse.

Pump the water from your well, cistern or other source, into this tank; and it will be delivered to the fixtures and hydrants under **air pressure**. Water will always be on tap at the plumbing fixtures. Horses and stock can be watered in the barn. First-class fire protection assured for your buildings.

Over 9000 Kewanee Systems in operation, supplying water for country and suburban homes, farms, schools, public and private institutions, etc. Every Kewanee System a success and every user a friend.

The Kewanee System is the **original** water supply system, involving the use of **air pressure** instead of gravity pressure. There are imitations now—avoid them. Get the genuine and you will take no chances—we guarantee that. Look for our trade-mark **(KEWANE)** and name plates on tank and pumping machinery.

No charge for expert engineering service. Let us help you solve your water supply problem. Write for our 64-page illustrated catalog No. 36. It is free.

Kewanee Water Supply Company, Kewanee, Illinois.

1566 Hudson-Terminal Bldg.
50 Church St.
New York City, N. Y.

1212 Marquette Bldg.
Chicago,
Ill.

710 Diamond Bank Bldg.
Pittsburg,
Pa.

"YE PLANRY" BUNGALOWS. Los Angeles: Ye Planry Co. Pp. 82.

This pamphlet is a simple book of California bungalows, illustrated chiefly in plan and elevation, with some interiors and details thrown in for good measure. The text is limited to a very brief description of the plan and structure, but is sufficient to explain the illustrations, which constitute the chief part of the book. There are a number of attractive designs in this collection, and while it is composed solely of California examples and of bungalows intended for California, everyone interested in this type of dwelling may gather some useful hints from its pages.

EXAMPLES OF SWEDISH ARCHITECTURE OF THE PRESENT TIME. New York: Bruno Hessling Co. Pp. 5+95. Price, \$5.00.

Swedish architecture of the present day is almost completely unknown in America, even among architects who aim to keep themselves posted on the work of their contemporaries. The present volume, ninety-five pages of which are devoted to illustrations, affords, therefore, an unusual opportunity to make the acquaintance of the work of architects in the north of Europe. The illustrations are drawn from the architectural exhibition held in Vienna in the early part of 1908, and includes half-tones and some admirable plates in color. There is much interesting work shown here that will well repay careful study.

THE STUDIO YEAR BOOK OF DECORATIVE ART. 1908. New York: John Lane Co. Price, \$5.00 net.

This beautifully illustrated volume opens with a strong paper on the designing of gardens by Thomas H. Mawson. It is followed by a review of some recent British designs for country houses, by E. Guy Dawber, himself a designer of rare skill and whose country houses take high rank among the best work of its class being done anywhere. There are other chapters on interior decoration, on British furniture, on British firegrates and mantelpieces, on British wall and ceiling decorations, on British embroidery and textile fabrics, and on British stained glass, pottery and metal work. The foreign sections consist of chapters on German, French and Austrian architecture and decoration. Every page is lavishly illustrated, and the color plates are of the highest interest and as well as numerous. The book, as a whole, is an impressive annual summary of architecture and the arts most closely associated with it. While most interest will doubtless be taken in the superb illustrations, it is well to note that the text has been assigned to competent hands and is itself noteworthy and thoughtful. These annual volumes are veritable treasure houses of decorative art.

BULBS FOR WINTER BLOOMING

By Ida D. Bennett

THERE is no more reliable class of plants for winter blooming than the hardy bulbs. House-plants, even the old, reliable geraniums, often refuse to bloom or defer the operation until well into the winter months or early spring, but by judicious management one may have bulbs in bloom when you will.

The best bulbs for forcing are the hyacinths and narcissus. Tulips are more or less unsatisfactory in the hands of the amateur, but are very satisfactory when they do bloom. Lilies of the valley will do well if the specially prepared pips are procured of the florists, and crocus and scillas are dependable bulbs for the purpose.

The time for potting bulbs for winter blooming is any time from early September,



THE first essential to a healthful, clean and sanitary home is the bathroom equipped throughout with snowy

"Standard"

PORCELAIN ENAMELED PLUMBING FIXTURES

If you are building a new home or remodelling the old, you should make the equipment of your bathroom your first and most important care. The disposal of this question means more to you than a mere matter of comfort and appearance, for it has to do with *Health—your health*, and the health of all your household. When you buy a genuine "Standard" equipment you buy first-class health-protection and you get greater value for your money than you would with any other sanitary equipment made.



CAUTION: Every genuine "Standard" fixture bears the "Standard" Green and Gold Guarantee Label. Look for this label on every fixture you purchase, as none are genuine without it. The "Standard" Guarantee Label gives a protection you cannot afford to be without.

Send for Our Book Let us send you our new book, "Modern Bathrooms." This is beautifully illustrated. It describes in detail a series of up-to-date bathrooms and tells you just how to secure the best possible equipment at the least possible cost. When you buy new bathroom fixtures you'll need this book. Send for it now. Enclose 6c. postage and give us name of your architect and plumber if selected.

Address, Standard Sanitary Mfg. Co. Dept. 23, Pittsburgh, Pa., U. S. A.

Offices and Showrooms in New York: "Standard" Building, 35-37 West 31st Street.

Louisville: 325-329 West Main Street.
London, Eng.: 22 Holborn Viaduct, E. C.

Pittsburgh:
949 Penn Avenue

New Orleans: Cor. Baronne & St. Joseph Sts.
Cleveland: 648-652 Huron Road, S. E.

CEMENT

Its Chemistry, Manufacture & Use

Scientific American Supplement 1372 contains an article by A. D. Elbers on tests and constitution of Portland cement.

Scientific American Supplement 1396 discusses the testing of cement.

Scientific American Supplement 1325 contains an article by Prof. William K. Hatt giving an historical sketch of slag cement.

Scientific American Supplements 955 and 1042 give good accounts of cement testing and composition, by the well-known authority, Spencer B. Newberry.

Scientific American Supplements 1510 and 1511 present a discussion by Clifford Richardson on the constitution of Portland cement from a physico-chemical standpoint.

Scientific American Supplement 1491 gives some fallacies of tests ordinarily applied to Portland cement.

Scientific American Supplements 1465 and 1466 publish an exhaustive illustrated account of the Edison Portland cement works, describing the machinery used.

Scientific American Supplement 1519 contains an essay by R. C. Carpenter on experiments with materials which retard the activity of Portland cement.

Scientific American Supplement 1561 presents an excellent review by Brysson Cunningham of mortars and cements.

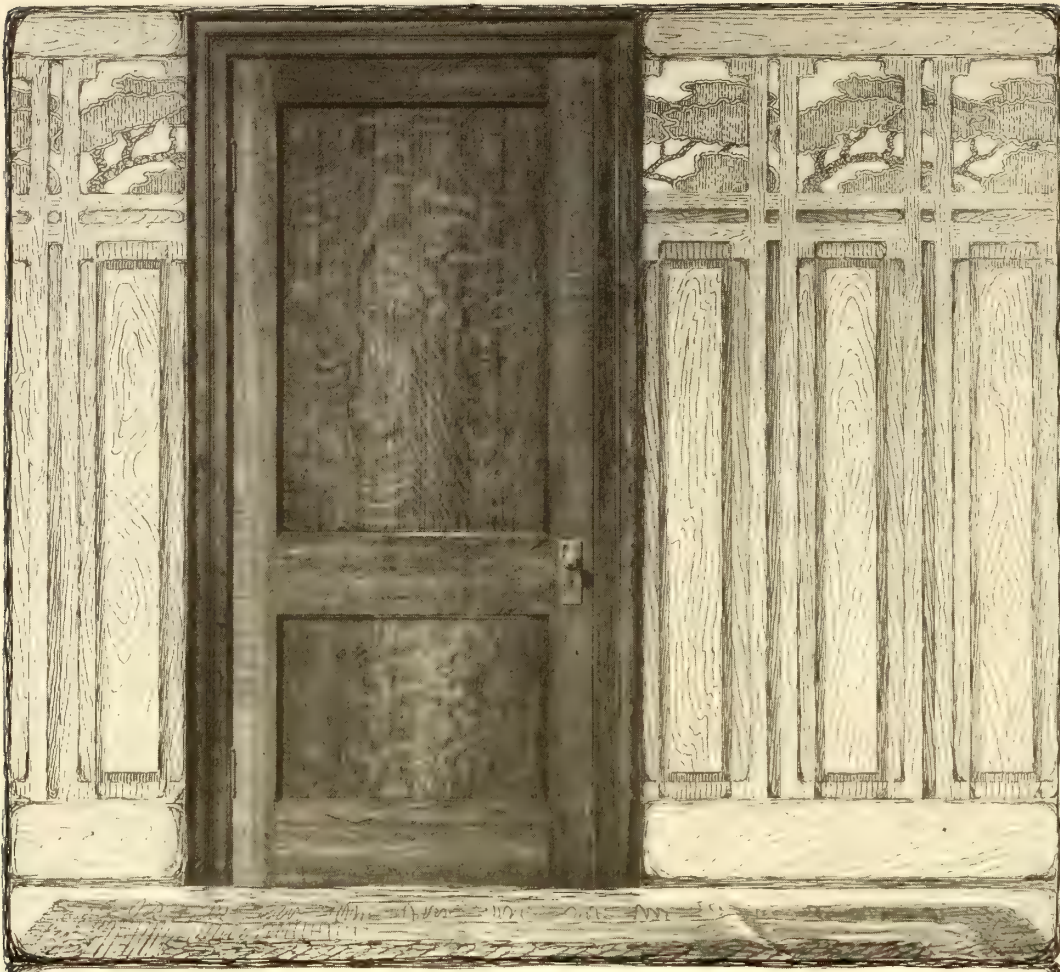
Scientific American Supplement 1533 contains a resumé of the cement industry and gives some valuable formulae.

Scientific American Supplement 1575 discusses the manufacture of hydraulic cement. L. L. Stone is the author.

Scientific American Supplements 1587 and 1588 contain an able paper by Edwin C. Eckel on cement material and industry of the U. S.

Any one of these Supplements will be sent for 10 cents. The entire set costs \$1.60, and constitutes an invaluable text book on the subject. Order from your Newsdealer or from

MUNN & COMPANY, 361 Broadway, New York



Substantial Refinement

Is reflected from every room where **Morgan Doors** are used. Their dignified designs harmonize with interior wood-work, decoration, and furnishings and their solid, honest construction gives the interior a sense of balance and permanence besides increasing the real value of the property.

Morgan Doors

are the most perfect doors manufactured. They are made of several layers with the grain running crosswise making shrinking, warping, or swelling impossible. They are veneered in all varieties of hard-wood, birch, plain or quarter-sawn red or white oak, and brown ash, mahogany, etc., and the delicate grain and coloring of each particular wood is brought out to the highest degree.

Morgan Doors are correctly designed by experts in all styles of architecture—Colonial, Empire, Mission, etc., and each **Morgan Door** is stamped with the name "**Morgan**" as a guarantee of quality, style, durability and satisfaction.

Write today for our handsome illustrated book "*The Door Beautiful*" which shows you more of the detailed beauty of **Morgan Doors** and why they are the only doors you should use in your building.

Morgan Company, Dept. A, Oshkosh, Wisconsin

Distributed by Morgan Sash & Door Co., Chicago, Ill. Morgan Company, Oshkosh, Wis. Morgan Company, Baltimore, Md.

Wall Papers and Wall Coverings

A PRACTICAL HANDBOOK

for Decorators, Paperhangers, Architects, Builders and House Owners, with many half-tone and other illustrations showing the latest designs

By **ARTHUR SEYMOUR JENNINGS**

EXTRACT FROM PREFACE

THE author has endeavored to include characteristic designs in vogue today, and to give reliable information as to the choice of wall papers as well as to describe the practical methods of applying them. In dealing with matters concerning decoration there is always the danger of leaning too much toward an ideal and of overlooking the practical requirements of commercial life. The author hopes that he has been successful in avoiding this fault, and that his book will be regarded as both practical and useful.

One Large 8vo Volume, Cloth. \$2

MUNN & CO., 361 Broadway, NEW YORK

Study Architecture

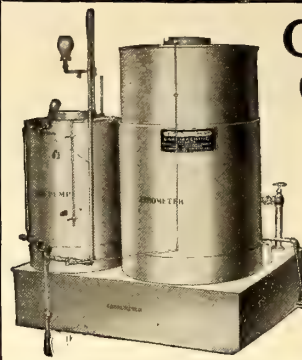
EASY LESSONS OR, STEPPING STONE TO ARCHITECTURE

By **THOMAS MITCHELL**

A SIMPLE TEXT-BOOK telling in a series of plain and simple answers to questions all about the various orders as well as the general principles of construction. The book contains 92 pages, printed on heavy cream plate paper and illustrated by 150 engravings, amongst which are illustrations of various historic buildings. The book is 12mo in size, and is attractively bound in cloth.

PRICE FIFTY CENTS, POSTPAID

Munn & Co., 361 Broadway, New York



Gas for Country Homes

Clubs, Hotels, Churches, Laboratories.

ECONOMY GAS MACHINE

gives a clear, steady, brilliant light and supplies gas for cooking, water heating, etc. Cheaper, cleaner and more satisfactory than acetylene, kerosene or electric light.

ECONOMY GAS MACHINE

automatically generates gas as consumed. None stored, so no danger. Self operating. Lighted the same as electric light, but without batteries. Eleven years success proves its merit. Write for booklet "THE ECONOMY WAY."

ECONOMY GAS MACHINE COMPANY
Stationary Gas Engines for Every Purpose
437 EAST MAIN ST. ROCHESTER, N.Y.

"You do the designing—we'll make the rug."

Thread & Thrum Rugs

are different from all other rugs, as you can have the color scheme made to harmonize with your requirements. Wool or camel's hair weft, heavy and durable. If your dealer does not sell them, write for color card and price list to

Arnold, Constable & Co., Distributing Agents, New York
The Thread & Thrum Workshop, Auburn, N. Y.

FINE HARDWOOD FLOORS

Most economical, healthful and satisfactory—for old or new houses, different patterns to match furnishings. Outwear carpets. Stocks carried in the leading cities. THICK OR THIN.

Write for Pattern

THE INTERIOR HARDWOOD CO. INC. INDIANAPOLIS

St. Louis, Mo.

Baltimore, Md.

F. Weber & Co.

1125 Chestnut St., Philadelphia, Pa.

Architects' and Engineers' Supplies



"FABRIANO" Hand-Made Drawing Papers
Superior to any other hand-made paper
F. Weber & Co.'s Illustration Boards, Air Brushes and Materials

This Pagoda Model

\$3.00

VENETIAN, DUTCH, ITALIAN & TURKISH

LANTERNS



Made of Heavy Wrought Iron with ruby, green, amber or white glass panels, which when lighted create an effect both artistic and beautiful. Fitted for oil ready to light, or can be adapted to gas or electricity. Absolutely unique for Porch, Hall, Den or Mission Room in the city or country home and for the Bungalow. Catalogue illustrates above; also Hanging Fixtures and Table Lamps for Library or Dining Room. Send stamp for catalogue and "Lamp Information"—knowledge acquired through years of experience.

The Rochester Lamp Co., Dept. C, Rochester, N. Y.



BRISTOL'S RECORDING THERMOMETERS

make continuous records of atmospheric temperatures, and are designed for both indoor and outdoor temperatures. Send for new catalogues.

THE BRISTOL COMPANY, WATERBURY, CONN.
NEW YORK Branches CHICAGO

or whenever they may be had of the florist, until late December. As it takes six weeks to two months to bring the bulbs into bloom one can easily decide when they must be potted to bring them into bloom at a special time. Usually one will wish them for Thanksgiving, Christmas and Easter, and any social or anniversary event between whiles. The graceful custom of giving gifts of flowers on Thanksgiving is one to be encouraged, and there is nothing better for the purpose than a pot of hyacinths or narcissus, enveloped in dainty crepe paper or an inexpensive jardiniere, but no hint of costliness should accompany such a gift.

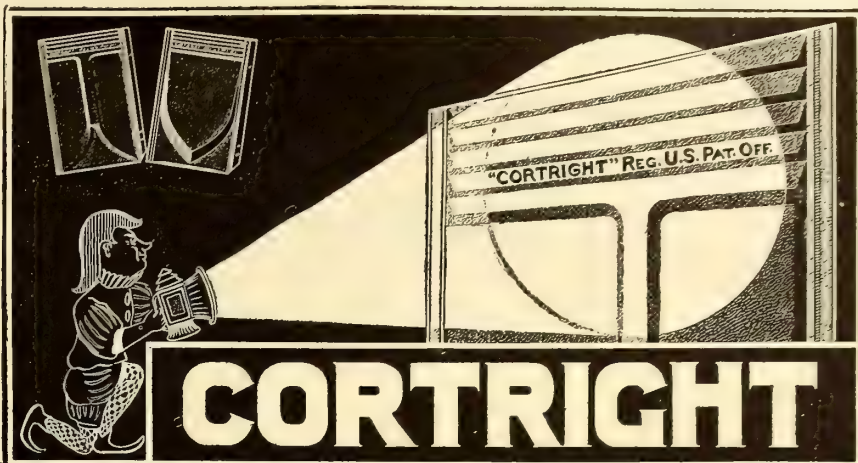
For the invalid or shut-in, the mother burdened with many cares or the professional woman who has no time to cultivate flowers for herself, but will greatly enjoy the pot of fragrant blossoms on her desk, and most of all the kindly thought which sent it, there is nothing more desirable.

Any good garden soil may be used, but a compost of leaf mold, fibrous loam and sand is, perhaps, the most congenial to this class of bulbs, but after all the soil is of secondary importance, as it is heat and moisture which forces the flower bud, which is already stored away in the bulb and only waiting to be forced upward by the roots, that counts.

In potting bulbs single bulbs of narcissus or hyacinth may be planted in four-inch pots, or three bulbs in an eight-inch pot. This gives more results, but the smaller pots are easier to handle. Two inches of broken charcoal should be placed in the bottom of the pots and a little sphagnum moss on top of this to prevent the earth sifting down in the drainage material (the charcoal) and clogging it. The pot should then be filled to within an inch of the top with the soil and jarred down by tapping the bottom on the hand. It should not be packed with the hand, and a hole should be made for the bulb deep enough to allow just the tip to appear above ground. The bulb should not be pushed down into the soil, as this would pack the earth hard beneath it, and the roots in starting would push the bulb up out of the ground, but with the earth loose and soft beneath them they can enter it without disturbing the bulb. After potting, the pots should be thoroughly soaked with water and all surplus water allowed to drain off. Each pot should be plainly and indelibly marked with the name of bulb and date of potting, and set away in a dark place in the cellar to make roots. If the cellar is infested with rats it will be well to place a box on a hanging shelf or other safe place, otherwise they may go anywhere that is convenient.

They should be examined occasionally to see that they are not becoming dry. They should be kept moist, not wet, and at the end of six weeks the roots should be examined by turning the pot upside down on the hand and tapping it against the edge of a table, box or similar object. If the ball of earth is found well covered with roots and a flower bud has made its appearance above ground or healthy looking leaf growth, the pot may be brought up to the warmth and light above stairs to be forced into bloom. But if little or no root growth has been made the bulb must be returned to its place until sufficient root development has been made, examining it from time to time to note progress.

When brought upstairs, a warm, sunny window will usually bring them forward quickly. Occasionally they will need more heat and may be placed, for a time, over a register or radiator, or on top of the warming oven of the kitchen range. I have sometimes forced forward buds which seemed inclined to blast by setting them directly on top of the furnace and keeping them very wet. As the



Suppose a client should ask you why you had not put

CORTRIGHT METAL SHINGLES

on his new building—a home, for instance. What answer would you give, supposing you had used slate? You couldn't say slate was more handsome; you couldn't say it would last longer, for Cortright Metal Shingles will last as long as the building itself. You couldn't say slate was more fireproof—it isn't half as much so as Cortright Metal Shingles. Frost will crack slate, so will heat; neither affect Cortright Metal Shingles. You couldn't say slate was cheaper unless you were right in the heart of the slate district.

Now we're not trying to tell you how to run your business—not a bit of it. But we know the roofing business; we've studied all kinds of roofing; and, aside from being the manufacturers of Cortright Roofing, if we were architects we would specify it. 56-page book, "Rightly Roofed Buildings," will tell you why.

CORTRIGHT METAL ROOFING CO.

Philadelphia and Chicago



A GREENHOUSE FOR EVERY NEED

You will be interested to know that this particular house, with its curvilinear palm house, and wings each 16¾ feet long, is located right in the very midst of a crowded city.

Whether it be a small greenhouse for the amateur or the more extensive range in all its completeness, we can build to your especial advantage. Send for numerous examples of houses erected on country estates.

HITCHINGS & COMPANY

1170 BROADWAY, NEW YORK CITY

You can keep your home at an even, healthful temperature day and night all the winter through—with reduced coal bills—if you install a

HOWARD THERMOSTAT

(Damper and Valve Regulator)

Easily applied to all heating plants. Every one that is installed demonstrates to the entire satisfaction of its owner that it is a most wonderful fuel saver.

WITH CLOCK ATTACHMENT

it still further reduces the coal bills by permitting a lower temperature throughout the house at night, and at a predetermined hour automatically adjusting the draft and damper, so that by rising time the temperature of the house is at the degree desired for the day. To accomplish all this, it is but necessary to wind the clock, set the alarm hand and adjust the pointer before retiring.

Guaranteed for 10 years. Thousands in use 25 years.

The most perfect and most reliable heat controlling device ever placed on the market. Coal saved pays for it; therefore it costs you nothing.

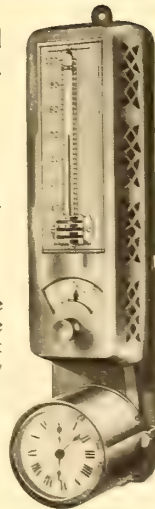
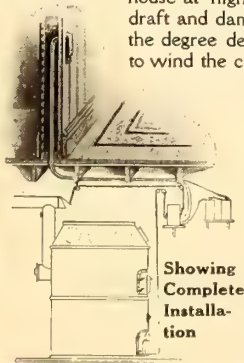
TRIAL OFFER

If, after 30 days' trial, you are not satisfied that the Howard Thermostat (Damper and Valve Regulator) will do all we claim for it, send it right back at our expense and your money will be promptly refunded.

Howard Thermostats are sold by heating appliance men all over the country.

If you will kindly send us the name and address of your furnace man or steam fitter, we will send you our Booklet No. 17, which gives complete details about the Howard Thermostat. It is intensely interesting to any one who values his own health and that of those near and dear to him. Write to-day.

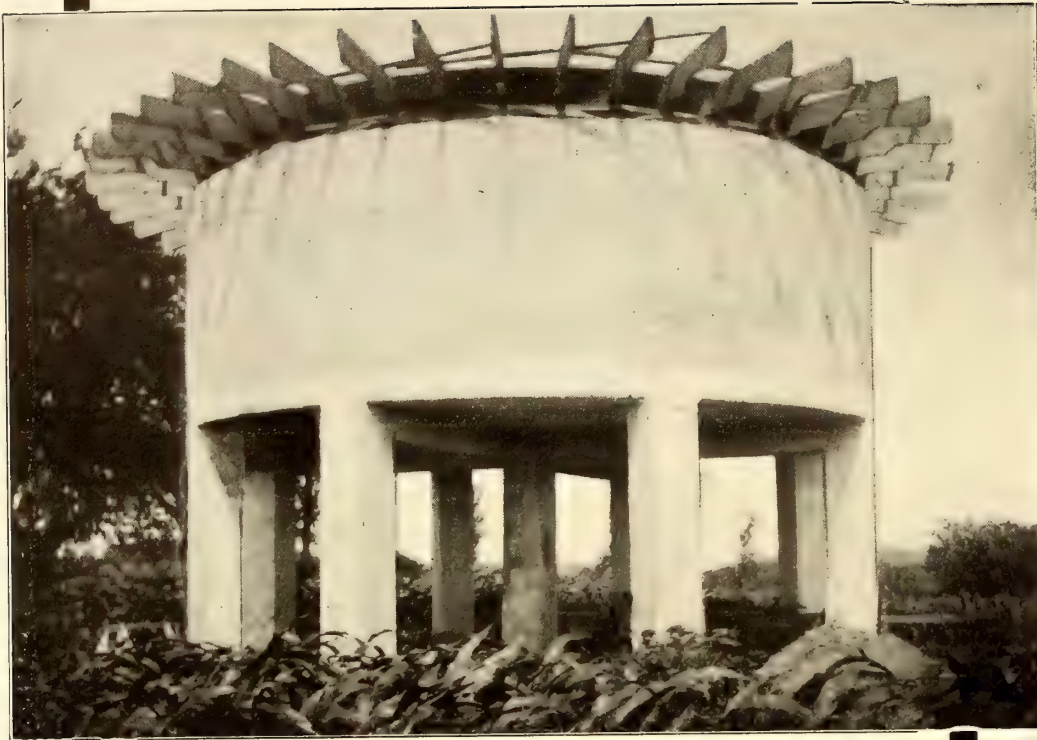
Howard Thermostat Co., 43 West First Street, Oswego, N. Y.



FLOORS



ROOFS



**A concrete tank erected on estate of Edmund Tatham,
Katonah, New York**

Frederick J. Sterner, Architect - - New York
De Lancey A. Cameron, Builder - - New York

Tank designed for storage supply of 15,000 gallons, built entirely of concrete reinforced with Clinton welded wire. Before roof was placed over tank, and during winter months, ice 10 inches thick formed on water stored therein. No cracks or leakage have developed.

Clinton Wire Cloth Company
 CLINTON, MASS.

Cellings

FIREPROOFING DEPARTMENT
ALBERT OLIVER
 1 MADISON AVE., NEW YORK

WASHINGTON: ROSSLYN SUPPLY CO., COLORADO BUILDING
 SYRACUSE, N. Y.: PARAGON PLASTER CO.
 ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
 SAN FRANCISCO: L. A. NORRIS, 835 MONADNOCK BUILDING
 SEATTLE: L. A. NORRIS, 509 ALASKA BUILDING

Partitions

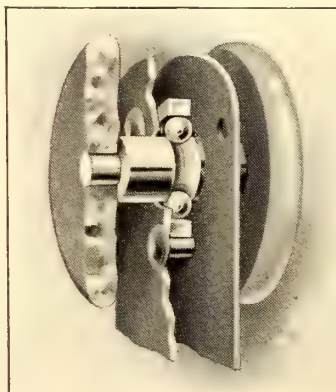
Lane's Trolley Parlor Door Hangers and Track

THE particularly distinguishing features of the Lane Trolley Door Hanger equipment are the excellence of the ball bearing and the lateral as well as vertical adjustment of the track.

Lane Trolley Hangers are made in both the rigid and adjustable pendant styles and with both single and double trucks. All are fitted with machined and hardened ball bearings as shown and in all the various details the quality of Lane products is maintained, thus virtually placing them in a class by themselves.

Send for Complete Catalog.

LANE BROTHERS COMPANY, (The Door Hanger Manufacturers)
 434-466 Prospect Street, Poughkeepsie, N. Y.



SECTION BALL BEARING IN LANE
TROLLEY HANGERS

buds form more water will be needed; indeed, they will want to be kept quite wet, and in the case of anemones, water should stand in the saucers all the time.

After the blossoms have fully developed a cooler place and less sun will retain them in perfection much longer than if a warm sunny place were given them, and removing them to a cooler, well-aired room at night will also retard their fading.

Of the various varieties of bulbs to be selected for winter blooming one must consult their individual taste, but among hyacinths it is usually found that the single flowers give rather better results than the double, and the whites and shell pinks are more effective and pleasing, to my mind, than the reds and blue and rose colors. Of the white hyacinths probably *Grandeur a Merville*, *L'Innocence* and *La Grandesse* are most satisfactory, while *Gertrude*, *Norma*, *Roi des Belges* are some of the best reds; *Ida* and *Obelisque* the best yellows, and *Grand Maitre*, *King of the Blues*, *Queen of the Blues* of the best of these shades.

In selecting narcissi for potting one can not go far astray in selecting any of the trumpet varieties, but *Sir Watkins*, *Horsfieldi*, *Emperor* and *Empress* are the best of their class, and nothing can be more exquisitely beautiful than the great, deep-chaliced blossoms held aloft on their graceful stems.

The paper white is another beautiful blossom showing many flowers of snowy white on a single stem. One should plant freely of these, and in planting this class of bulbs one should not forget the old garden favorite *Von Sion*, with its double flowers of purest gold. They bring a bit of sunshine into the dull days of winter unattainable by any other flower, and are a most welcome and cheerful flower for the sickroom. These should be planted several in a pot for best results.

The anemones are a very desirable class of bulbs for winter forcing. The treatment is the same as for hyacinths, potting the roots, which are queer little brown, shriveled things, in pots of leaf mold in September, and bringing up when growth begins. Unlike the hyacinth and narcissus, which give but a single flower spike to a bulb, the anemone continues to send up a succession of flowers for several weeks, and should be given a place in a warm, sunny window and abundance of water. Even a weekly dose of weak manure water may be indulged in. Several colors are found among the anemones—white, pink, blue, scarlet and the like, and all are attractive and worth cultivating.

Where tulips are to be forced it is better to leave the pots in an unused cold frame covered with coal ashes until after freezing weather, when they may be taken to the cellar to complete their root growth, which takes something like three months.

The *Duc von Tholl* are the best for forcing, but the double are so handsome as to merit special effort to bring into bloom. *Duc von Tholl*, *Murrillo*, *Titian*, *Imperator Rubrorum* and the *Turnesols* force well, but the most beautiful for lot culture is *Duke of York* and *Salvator Rosa*.

Among the smaller bulbs which may be readily flowered in the house are the crocus



Cattle Manure
in Bags Shredded or Pulverized

Best and safest manure for florists and greenhouse use, absolutely pure, no waste, no danger. Write for circular and prices.

The Pulverized Manure Co.
 21 Union Stock Yards, Chicago.



AMERICAN HOMES AND GARDENS



Price, 25 Cents. \$3.00 a Year

CONTENTS FOR NOVEMBER, 1908

	PAGE
WHERE PEACE AND SUNSHINE REIGN.....	416
MONTHLY COMMENT.....	418
NOTABLE AMERICAN HOMES—A Twelve-hundred Acre Estate at Greenwich, Connecticut, the Home of E. C. Converse, Esq.....	By Barr Ferree 419
A MINNESOTA FLOWER GARDEN.....	By Henrietta P. Keith 427
A HOUSE AT WYNNEWOOD, PENNSYLVANIA.....	By Charles Chauncy 430
THE FARMING EXPERIMENT OF A WOMAN.....	By Annette Bradshaw 432
"TANRACKIN"—The Country Seat of Thomas E. Kirby, Esq., Mount Kisco, New York. By Ralph de Martin	437
MAKING RUGS FROM THE SCRAP BAG.....	By Mabel Tuke Priestman 442
WATER PARKS.....	By Charles Downing Lay 444
THE SUMMER HOME OF B. B. CROWNINSHIELD, ESQ., Marblehead, Massachusetts. By Francis Durando Nichols	447
OLD-TIME LIGHTS.....	By Mary H. Northend 450
CORRESPONDENCE:	
PROBLEMS IN HOME FURNISHING.....	By Alice M. Kellogg 454
GARDEN WORK ABOUT THE HOME.....	By Charles Downing Lay 454

Bulbs for Winter Blooming

New Books

Getting Ready for Winter

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada, \$3.50 a year

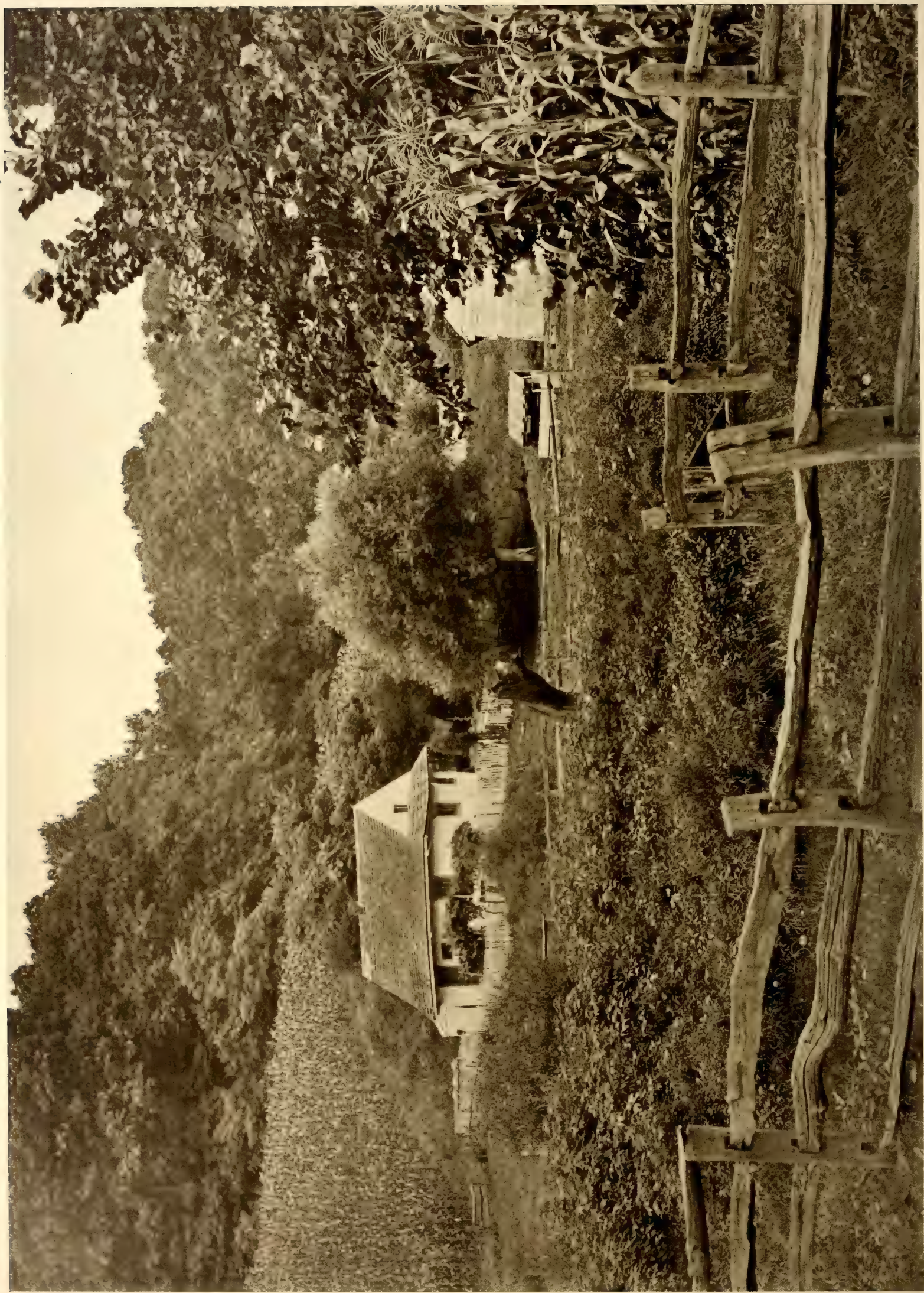
Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

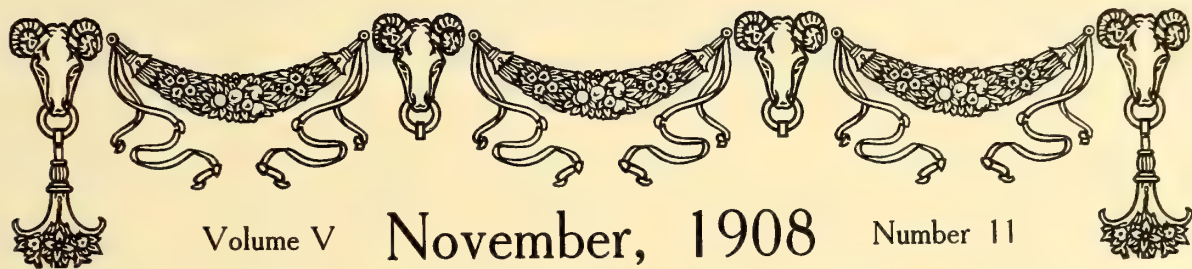
[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



Where Peace and Sunshine Reign

AMERICAN HOMES AND GARDENS



Volume V

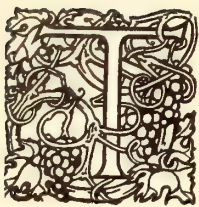
November, 1908

Number 11



"Conyers Manor": The Manor House and Its Garden

Monthly Comment



THE Costly Life is, of all forms of existence, the one most on public view in America. Its practitioners and apostles abound on every side. They are as conspicuous in the cities as they are abundant in the country. Their doings fill pages of the daily press, and their portraits, and those of their families, are the most charming embellishments of the illustrated supplements. Evidences of this splendid existence abounds everywhere. Our most sumptuous amusements are devised for the delectation of its devotees. Our most expensive hotels are conducted solely for their benefit. Our finest private residences are erected for their personal use; and so far-reaching is their influence that it often seems as though prices in general were raised everywhere that the owners of wealth might have more numerous opportunities through which to disburse it.

THAT the Costly Life is the most expensive life goes without saying. It is a form of existence that depends entirely on the expenditure of money. It does not matter whether this expenditure be good or wise, beneficial or desirable; all that one need do is to spend abundantly, lavishly, ostentatiously and copiously, and one is immediately admitted within the high-priced portals behind which the Costly Life is cultivated and developed. The Costly Life is not only vastly expensive, but overwhelmingly ostentatious. Its corner-stone is publicity and its crowning pinnacle is notoriety. Everything done under its aspiring influence must be done either in public or in such a way that the public immediately is favored with full details. Even when it descends to murder it selects a most public place as the scene of the slaughter, and for years thereafter the public is kept advised through the newspapers of the subsequent life of the murderer and his daily doings.

BEING expensive, the Costly Life is chiefly concerned with the disbursement of money. There is no limit and no stopping. The money is poured out in a continuous golden stream. It can not stop for a single day nor even so much as a single hour. And it is used for but two purposes: the personal enjoyment of the spender and his exploitation. The personal enjoyment may come first, but the public aspects of the Costly Life are quite as essential to its successful cultivation as fine houses or boxes at the opera. And those outside the costly pale look on agape at these modern splendors, read about them, talk about them, and, when occasion permits, pay the highest possible prices for the privilege of sitting in the same room with these marvelous dispensers of money and for gazing at them at close hand. Their names are familiar to everyone, and thousands of persons who would not know any of them, should they be fortunate enough to meet them on the street, have their full histories at their finger tips and talk as familiarly of their millions as though they had personal knowledge of what they are speaking. This, no doubt, is highly gratifying to the Costly Livers and is a valuable asset in the promotion of their magnificence.

YET the Costly Life is not new; it is something that has existed since one man managed to accumulate a little more money than another; it has thriven in other ages and in other lands than ours; and, until within a very few years, most of the written history of the world has been concerned with its apostles; that is to say, with the kings and princes, rather

than with the masses of people, conveniently termed the Common Public. But the Costly Life as practised in America is something quite new. It has developed by leaps and bounds. It has swept over the country with the velocity of a cyclone. Scarce a generation has sufficed to fasten its grip on our national life in a new and unheard-of way. It has not only become conspicuous, but it is all-absorbing, and its devotees are not only to be found among those who can afford its ostentatious luxury, but its ways and doings are too frequently aped by those who cannot meet its demands on the personal exchequer and who, after a brief sojourn within what are imagined to be the portals of the elect, are cast out suddenly into that frightful pit in which the Unsuccessful and the Failures are everlastingly engulfed.

THE Costly Life is everything the Simple Life is not, yet it is very much easier to live. The apostles of the Simple Life have somehow created the impression that it is necessary to hunt up ways of living simply in order to be completely consistent and completely happy. It is never necessary to hunt up anything to live the Costly Life but money, and, of course, if you do not have enough of that there is no sense at all in trying to live the pace. There is nothing easier in the world than to spend money, and as you do not have to spend it wisely in the Costly Life, it is of all forms of existence the easiest. It is so easy it is slippery, and if your bank account runs out you are likely to find yourself at the bottom of the heap before you realize how you got there. But in the Simple Life you are all the time trying to be simple; you do things yourself that, in a more complicated existence, you would employ others to do for you. Moreover, you are trying to live simply all the time, whereas in the Costly Life you don't have to try at all, but plunge gaily on, throwing money to the right and left, and bawling at the top of your voice that attention may be more directly drawn to you. For some people this is not only intensely enjoyable, but it is the single contribution they are able to make to the progress of civilization.

THE audience is quite as essential to the successful performance of a play as the play itself or the actors. No way has yet been devised whereby everyone may live the Costly Life. Only a few can reach the golden goal of ultimate success in this direction, and while a goodly number may strive for the same end, the larger part of the population can only look on. This, of course, lends a fine zest to the game. Some people think it gives distinction to be observed in their efforts to climb the social tree, while others again have no greater pleasure than to watch their fellowmen undertake impossible tasks, and make essays to achievement they would never dream of doing. But those outside help those inside, even if but in a quiet, passive way; for they are the foil and background, the neutral tint on which the splendors of their disbursements appear with the brilliance of the noonday sun.

MODERN life is essentially ingenious, and we can all have not only our glimpses of the Costly Life, but our personal experience of it. The modern hotel, with its wealth of ostentatious luxury, meets this condition and amply fulfils it. There we can spend as much for our rooms, our foods and our drinks as the real exponents of the Costly Life. We can eat in the rooms they eat in, and perhaps brush against them in the halls. It is very splendid and very costly. Whether it is worth the price each must decide for himself.



The Casino, Manor House and Dining-room

Notable American Homes

By Barr Ferree

"CONYERS MANOR"

A Twelve-hundred Acre Estate at Greenwich, Connecticut, the Home of E. C. Converse, Esq.

THE reclaiming of twelve hundred acres from barrenness and waste is the problem Mr. E. C. Converse has set himself on his great property at Greenwich, Conn. It is a task of unusual magnitude, and while the work was begun as recently as 1903, the progress thus far made is more than substantial, and the estate already ranks among the great estates of America. It is easily that, not only because of its area, but because of the vast labor necessary to bring it under cultivation and the notable results already secured.

The first problem here was the reclaiming of the land, meaning by that bringing it into a state suitable for cultivation. Originally much of the soil was poor and had run to waste; there were great fields of boulders and loose stones and immense stretches of soft land or marshy meadows. Moreover, while most of the land is high and hilly, the top soil rests on a stratum of hard pan only a few inches below the surface. An elaborate and costly system of sub-surface drainage was found necessary, and while the estate includes many acres of woodland, it is only possible to plant trees on the treeless uplands by inserting drainage pipes for the removal of the water that will collect around their roots in the course of a single night. Operations looking for the correction of such defects in a small area would be difficult enough; but when extended to twelve hundred acres the work becomes colossal and ranks as a notable engineering achievement quite as much as a brilliantly successful farming experiment.

But the work had to be done, and an army of men was put at it. At one time as many as a thousand men were employed for months in setting this great property in order, and even now more than two hundred are necessary for its maintenance and the continuance of the work of restoration. The fields were cleared of loose stones, while the larger

boulders were sunk far below the surface. Ditches and drains were prepared for the wet lands and the waste water collected and carried away, taking with it, among other plagues, the native mosquito, which has practically disappeared. Land which had never before been plowed, or which had never been cultivated for more than a generation, was quickly brought under cultivation and put immediately to farming use, for "Conyers Manor" is not an ornamental property, but a great farm, conducted as a commercial proposition, the surplus products sold and a strict watch kept over income and expenditures. The latter have, of course, far outbalanced the other as yet, but with the continued application of scientific principles and the completion of the preliminary work of land restoration, much may still be looked for in reaching a self-supporting end. This, it is but just to add, is not Mr. Converse's end and aim, but that these questions should be considered thus early in the life of the estate, and substantial results actually obtained, give a special interest to it that may, in time, be its most notable feature.

Wherever possible anything existing that was available for future use was retained and restored. Great old apple orchards that seemed hopelessly lost from the ravages of scale and old age were given a fresh lease of life and the trees brought back into perfect condition. Farmhouses and other buildings that were capable of renewed use were repaired and utilized, but the larger part of the old structures were removed and the splendid new buildings of the new estate took their place. Miles of roadway were laid out, certainly as many as ten miles within the boundary lines. Except the main drive from the gate lodge to the house, which is macadam, these are earth roads with stone foundations, thoroughly made and admirably adapted to their use. The stones gathered up from the fields were quickly put into boundary walls, some laid up with cement, some dry-laid

without it. The old stone fences that originally divided the fields were removed as rapidly as possible, and great open, unbroken stretches created.

Large as the estate is, its true magnitude is only realized from an attentive study of the great work that has been carried out on it. The making of roads, the creation of fields, the betterment and improvement of the land, have been conducted on a colossal scale, and in their thoroughness and completeness merit the warmest praise; yet all this had been done for the realization of results, and constitutes but a fraction, albeit a notable one, of the great works done here in the creation of a great estate.

The building operations here have been quite as extensive as the work upon the land. The Manor House, Mr. Converse's residence, stands on high ground, and practically commands the whole estate. But the residential buildings include two other houses of almost equal importance, one occupied by Mrs. James B. Converse, and the other by Mr. Converse's daughter, Mrs. Benjamin Strong, Jr. The home

shingled roof, whose enormous height is agreeably broken by the doubling of the shingles at stated intervals; the louvres on the summit form part of the ventilation system. One wing is reserved for the cattle, a splendid herd of imported Guernseys, and the other for the workhorses, accommodation being had here for thirty-five, while from sixty-five to eighty-five horses are stabled in the various barns. The main portion is used for the storage of feed and hay. There is a cement floor and a copious water supply, fed by an elaborate system of piping. It is lighted by electricity. In addition to the inclosed structure, there is, on each side, an open shed, used for the storage of wagons and the like. When this barn was built it was supposed that it would be ample for any demands that might be made for it for many years to come; but so successful has been the working of the ground and so abundant the crops that a huge overflow barn has been necessitated, and has been erected at some distance from it. Two silos are connected with the latter structure.

Below the farm barn are the buildings of the poultry



The Gardener's Cottage and Entrance Gate



Clock

grounds of the first of these are maintained under separate management, but the other is cared for by the employees of the main estate. There are, in addition, a number of fine houses for the heads of departments, for the superintendent, for the head gardener, and other responsible employees. They are built in a style and of materials harmonious with the prevailing type of the larger structures.

Very notable indeed is the group consisting of the farm barns, the chicken houses, water tower, dairy and garage. Their walls and roofs form a picturesque pile at some distance below the Manor House, but within sight of it, and are eloquent testimony of the great scale on which the estate has been planned and developed. There is immense dignity in these structures, plain, straightforward, undecorated construction, depending—and very successfully—on their size and the disposition of their parts for their effect. The great farm barn is typical of the whole group. It is an immense building, U-shaped in plan, with two vast wings that form two sides of an enormous open court, closed by the main structure of the barn at the back, but entirely open on the fourth side. It is built of stone, and is covered with a

plant, which are equally colossal in extent. They are built of stone, with shingled roofs. The first building is the hatching house. It contains a mixing room for feed, an egg testing room, and a refrigerating room for the preservation of killed chickens. Below is the incubator room with a capacity of about eight thousand broilers. All fowls raised on the estate are hatched by the incubator process. The brooder houses contain brooders heated by steam heat, and have inside and outside runs, arranged in comparatively small divisions, for the better care of the birds. There are two breeding houses, built of wood and shingled, each containing fourteen pens. Three breeds of chickens are cared for: Black Langshans, which are good layers and are used for large capons; Rhode Island Reds, for young roasters and large broilers; and White Leghorns, for laying and squab broilers.

Up behind the farm barn is the dairy; it is built of stone with a shingled roof, and contains a number of rooms, all devoted to the care of milk and butter. The interior walls and floors are lined with white tile. The boilers are in the cellar, and the motors needed for working the machinery are

in the second story. It is very elaborately equipped with the most approved devices. The superintendent's cottage is off to one side beyond this building, and hence is in the very center of the farm activity.

The next conspicuous building in the group is the water tower, a twelve-sided structure with a stone base and shingled superstructure. A clock is inserted at the summit, and the whole is crowned with a bell turret. The woodwork of this building, as is that of the other structures on the estate, is stained a dark brown.

Beyond is the garage, built of stone, with a shingled upper story and roof. The main portion contains a workshop, which is most elaborately fitted up with every possible device needed in the repair of automobiles, while the long wing contains the storehouse for the cars.

This completes the buildings of this great group, which impressively serve as an introduction to the many interests of this vast estate. Only an automobile is available for a rapid survey, and while some of the roads that are neces-

sary to travel on are public roads, they are, for long distances, bordered on both sides by Mr. Converse's lands. One passes presently through the fruit and vegetable gardens, each occupying its own side of the road. A sod plot is noted next, so that if some pieces of sod are needed for patching or other purposes, it may be had at once and in good order. Beyond is a private nursery, maintained for the raising of trees. Further on, quite hidden behind trees, are immense concrete manure pits.

Another great group of buildings consists of the conservatories, fruit houses and allied structures. These are all situated near the Manor House and are of glass, with foundations of stone. The conservatory is divided into sections, for the maintenance of various temperatures, and includes a domed exhibition hall, in which special plants are displayed from time to time. The orchid house is a separate structure, as are the fruit houses, which are chiefly used for raising hothouse grapes and peaches. An individual heating plant is needed for these buildings in which, it need hardly be said,



Water Tower



Superintendent's Cottage and Office

some of the most interesting and certainly most beautiful products of the estate are reared. One other separate building may be noted, and that is the house stable. It is located in the woods behind the house, and while following the general lines of the other structures it has a more picturesque quality from its varied roof.

A word on the management. The whole estate is under the immediate direction of a superintendent, Mr. G. A. Drew, a graduate of the Massachusetts Agricultural College, at Amherst, who is responsible for the commercial aspect of the property. Under him are a series of head men, the head gardener, the constructive foreman, the head poultryman, the head of the livestock department. All these men have their assistants and laborers and each is responsible for the work in his own department. In addition there are special men engaged in special work. The head chauffeur and the coachman at the private stables are separate functionaries of high rank, who are directly responsible to Mr. Converse himself.

Notwithstanding the real and actual importance of the Manor House, it is scarce more than an incident in the vast

A twist and a turn or two bring you to Conyers Lake. To one side is the pump house, by which water is pumped to the two water towers of 22,500 and 35,000 gallons capacity each. A drive of three miles through Mr. Converse's own woods begins here, affording a charming and delicious excursion into the depths of nature. Across the road is Conyers Lake, or rather an outlet from it, for the waters of the lake are upheld by a massive masonry dam and only the overflow is here visible. An old grist and saw mill stood for many years at this point; it has now been completely modernized and remade over and is again used for the purposes for which it was built. Close by is a com-

bination building, containing some of the most utilitarian departments of the estate. Here is the coal storage, a department devoted to implement storage, blacksmith and wheelwright shop and paint shop. It also is of stone, with a shingled roof. The lake is a lovely body of water, more than a mile long, that twists and turns through grassed and wooded borders, and thrusts about a third of its length into New York State. An electric launch is conveniently at hand for the exploring of its beauties.

without it. The old stone fences that originally divided the fields were removed as rapidly as possible, and great open, unbroken stretches created.

Large as the estate is, its true magnitude is only realized from an attentive study of the great work that has been carried out on it. The making of roads, the creation of fields, the betterment and improvement of the land, have been conducted on a colossal scale, and in their thoroughness and completeness merit the warmest praise; yet all this had been done for the realization of results, and constitutes but a fraction, albeit a notable one, of the great works done here in the creation of a great estate.

The building operations here have been quite as extensive as the work upon the land. The Manor House, Mr. Converse's residence, stands on high ground, and practically commands the whole estate. But the residential buildings include two other houses of almost equal importance, one occupied by Mrs. James B. Converse, and the other by Mr. Converse's daughter, Mrs. Benjamin Strong, Jr. The home

shingled roof, whose enormous height is agreeably broken by the doubling of the shingles at stated intervals; the louvres on the summit form part of the ventilation system. One wing is reserved for the cattle, a splendid herd of imported Guernseys, and the other for the workhorses, accommodation being had here for thirty-five, while from sixty-five to eighty-five horses are stabled in the various barns. The main portion is used for the storage of feed and hay. There is a cement floor and a copious water supply, fed by an elaborate system of piping. It is lighted by electricity. In addition to the inclosed structure, there is, on each side, an open shed, used for the storage of wagons and the like. When this barn was built it was supposed that it would be ample for any demands that might be made for it for many years to come; but so successful has been the working of the ground and so abundant the crops that a huge overflow barn has been necessitated, and has been erected at some distance from it. Two silos are connected with the latter structure.

Below the farm barn are the buildings of the poultry



The Gardener's Cottage and Entrance Gate

grounds of the first of these are maintained under separate management, but the other is cared for by the employees of the main estate. There are, in addition, a number of fine houses for the heads of departments, for the superintendent, for the head gardener, and other responsible employees. They are built in a style and of materials harmonious with the prevailing type of the larger structures.

Very notable indeed is the group consisting of the farm barns, the chicken houses, water tower, dairy and garage. Their walls and roofs form a picturesque pile at some distance below the Manor House, but within sight of it, and are eloquent testimony of the great scale on which the estate has been planned and developed. There is immense dignity in these structures, plain, straightforward, undecorated construction, depending—and very successfully—on their size and the disposition of their parts for their effect. The great farm barn is typical of the whole group. It is an immense building, U-shaped in plan, with two vast wings that form two sides of an enormous open court, closed by the main structure of the barn at the back, but entirely open on the fourth side. It is built of stone, and is covered with a

plant, which are equally colossal in extent. They are built of stone, with shingled roofs. The first building is the hatching house. It contains a mixing room for feed, an egg testing room, and a refrigerating room for the preservation of killed chickens. Below is the incubator room with a capacity of about eight thousand broilers. All fowls raised on the estate are hatched by the incubator process. The brooder houses contain brooders heated by steam heat, and have inside and outside runs, arranged in comparatively small divisions, for the better care of the birds. There are two breeding houses, built of wood and shingled, each containing fourteen pens. Three breeds of chickens are cared for: Black Langshans, which are good layers and are used for large capons; Rhode Island Reds, for young roasters and large broilers; and White Leghorns, for laying and squab broilers.

Up behind the farm barn is the dairy; it is built of stone with a shingled roof, and contains a number of rooms, all devoted to the care of milk and butter. The interior walls and floors are lined with white tile. The boilers are in the cellar, and the motors needed for working the machinery are



Clock and Water Tower

in the second story. It is very elaborately equipped with the most approved devices. The superintendent's cottage is off to one side beyond this building, and hence is in the very center of the farm activity.

The next conspicuous building in the group is the water tower, a twelve-sided structure with a stone base and shingled superstructure. A clock is inserted at the summit, and the whole is crowned with a bell turret. The woodwork of this building, as is that of the other structures on the estate, is stained a dark brown.

Beyond is the garage, built of stone, with a shingled upper story and roof. The main portion contains a workshop, which is most elaborately fitted up with every possible device needed in the repair of automobiles, while the long wing contains the storehouse for the cars.

This completes the buildings of this great group, which impressively serve as an introduction to the many interests of this vast estate. Only an automobile is available for a rapid survey, and while some of the roads that are neces-

sary to travel on are public roads, they are, for long distances, bordered on both sides by Mr. Converse's lands. One passes presently through the fruit and vegetable gardens, each occupying its own side of the road. A sod plot is noted next, so that if some pieces of sod are needed for patching or other purposes, it may be had at once and in good order. Beyond is a private nursery, maintained for the raising of trees. Further on, quite hidden behind trees, are immense concrete manure pits.

Another great group of buildings consists of the conservatories, fruit houses and allied structures. These are all situated near the Manor House and are of glass, with foundations of stone. The conservatory is divided into sections, for the maintenance of various temperatures, and includes a domed exhibition hall, in which special plants are displayed from time to time. The orchid house is a separate structure, as are the fruit houses, which are chiefly used for raising hothouse grapes and peaches. An individual heating plant is needed for these buildings in which, it need hardly be said

some of the most interesting and certainly most beautiful products of the estate are reared. One other separate building may be noted, and that is the house stable. It is located in the woods behind the house, and while following the general lines of the other structures it has a more picturesque quality from its varied roof.

A word on the management. The whole estate is under the immediate direction of a superintendent, Mr. G. A. Drew, a graduate of the Massachusetts Agricultural College, at Amherst, who is responsible for the commercial aspect of the property. Under him are a series of head men, the head gardener, the constructive foreman, the head poultryman, the head of the livestock department. All these men have their assistants and laborers and each is responsible for the work in his own department. In addition there are special men engaged in special work. The head chauffeur and the coachman at the private stables are separate functionaries of high rank, who are directly responsible to Mr. Converse himself.



Superintendent's Cottage and Office

A twist and a turn or two bring you to Conyers Lake. To one side is the pump house, by which water is pumped to the two water towers of 22,500 and 35,000 gallons capacity each. A drive of three miles through Mr. Converse's own woods begins here, affording a charming and delicious excursion into the depths of nature. Across the road is Conyers Lake, or rather an outlet from it, for the waters of the lake are upheld by a massive masonry dam and only the overflow is here visible. An old grist and saw mill stood for many years at this point; it has now been completely modernized and remade over and is again used for the purposes for which it was built. Close by is a com-

pletely modernized and remade over and is again used for the purposes for which it was built. Close by is a com-

Notwithstanding the real and actual importance of the Manor House, it is scarce more than an incident in the vast



The Garage Includes Storage Room and a Complete Repair Shop

development of the estate. Like the other buildings it was designed by Mr. Donn Barber, architect, of New York. Like them, also, it is of stone, but the roof is of green Spanish tile, and is very amply and most impressively developed. It is the roof which gives this great house its chief distinction, rising to a grand height, broken by stone dormers, supported on projecting eaves, and fine in color. The plan of the house is H-shaped, with projecting wings front and back. The carriage porch abuts against a similar wing on one side, and on the opposite end a large rectangular extension, one story in height, contains the dining-room. On the terrace front this is faced with a porch, which is extended pergola-like beyond the house; it is covered with a closed

roof with open rafters beyond the stone piers. The house is built of gray stone, with outside blinds painted dark green and sash and window frames white. The wood balcony of the terrace front, the parapets and the eaves are stained brown. These quiet tones admirably harmonize with the green tile of the roof, which is beautifully uneven in color.

The plan is devoid of complications and is simple and direct. A corridor runs from the entrance doorway straight through the house; in the center it is merged in the great hall, but is renewed beyond and ends at the dining-room. On the left, beginning at the entrance, is the drawing-room; on the right is Mr. Converse's study. The billiard-room is behind the great hall; the library beyond it on the left, and



The Farm Barn Is Built of Stone with an Immense Shingled Roof



The Porch and Pergola of the Dining-room

the dining-room at the extreme end. The kitchen and service-rooms are in the basement, and have their own entrance and sunken yard.

The vestibule has a door frame of oak and a floor of glazed brick. There is a wrought-iron electrolier on each side of the inner door. The latter has, within, curtains of red velvet lined with silk. The corridor walls are faced with Caen stone blocks and the floor is of Hauteville marble, covered with a fine rug. The walls are hung with tapestry and the door curtains are of red velvet with gold embroidery. A passage on the right has a toilet-room on one side and a door to the service-rooms on the other; at the end is Mr. Converse's study.

It is a square room, wainscoted in quartered American oak, above which the walls are hung with Spanish hand-tooled leather in tones of brown and gold. There is a richly detailed plaster cornice, and a plaster ceiling in low relief tracery. On the floor is a hand-tufted rug, red, with colored center and border. The furniture is quartered oak, covered with red Morocco leather, very beautiful in color and quality. The window curtains are arranged with valances and are of olive green flax velour with gold braid. The light fixtures are bronze. The fireplace facing is richly veined in green and red; the lining is of red brick, and the andirons are of iron dipped in boiled oil. The room is distinctly Spanish in effect and the paintings on the walls are



The Carriage Stable Under the Trees



The Dining-room Is Paneled with Circassian Walnut



The Louis XIV Drawing-room

of the Spanish school. A vestibule opposite the entrance door leads to a pergola that connects the house with the casino. This is a two-story structure containing a bowling alley below and a squash court above.

The drawing-room is designed in a robust type of Louis XIV. The wainscot, woodwork and cornice are of wood,

gilded in gold leaf; the walls are covered with rose-colored corded silk and the hangings are of rose damask. The ceiling is painted with clouds in color, light in tone. The furniture is Louis XV, and is gilded with coverings of Beauvais tapestry. The fireplace facings are black and gold, the lining is heavily modeled iron, and the fire-screen and



The Great Hall Is a Magnificent Room, Two Stories in Height



The Stair Hall Opens



Is in Rose and Gold



The Library Is Finished in Oak with a Beamed Ceiling

andirons are gilded. The hardwood floor is almost completely covered with an immense and very beautiful Oriental rug. The cornice contains a concealed lighting system for the illumination of the superb collection of paintings with which the walls are crowded, and which cover practically all the available space.

The magnificent great hall is the largest room in the house and is, perhaps, twenty-five feet wide and sixty feet long. It is lighted by three great windows overlooking the principal terrace, and is two stories in height, with an overhanging balcony, supported on carved brackets, entirely around it. The walls are paneled to the balcony in American quartered



om the Great Hall



Mr. Converse's Study Is Hung with Spanish Leather Above an Oak Wainscot



The Dining-room Is Paneled with Circassian Walnut



The Louis XIV Drawing-room Is in Rose and Gold



The Library Is Finished in Oak with a Beamed Ceiling

of the Spanish school. A vestibule opposite the entrance door leads to a pergola that connects the house with the casino. This is a two-story structure containing a bowling alley below and a squash court above.

The drawing-room is designed in a robust type of Louis XIV. The wainscot, woodwork and cornice are of wood,

gilded in gold leaf; the walls are covered with rose-colored corded silk and the hangings are of rose damask. The ceiling is painted with clouds in color, light in tone. The furniture is Louis XV, and is gilded with coverings of Beauvais tapestry. The fireplace facings are black and gold, the lining is heavily modeled iron, and the fire-screen and

andirons are gilded. The hardwood floor is almost completely covered with an immense and very beautiful Oriental rug. The cornice contains a concealed lighting system for the illumination of the superb collection of paintings with which the walls are crowded, and which cover practically all the available space.

The magnificent great hall is the largest room in the house and is, perhaps, twenty-five feet wide and sixty feet long. It is lighted by three great windows overlooking the principal terrace, and is two stories in height, with an overhanging balcony, supported on carved brackets, entirely around it. The walls are paneled to the balcony in American quartered



The Great Hall Is a Magnificent Room, Two Stories in Height



The Stair Hall Opens from the Great Hall



Mr. Converse's Study Is Hung with Spanish Leather Above an Oak Wainscot

oak, while the upper walls are lined with a toned fabric in green. Almost the whole of one end of the balcony is occupied by a pipe organ, the console for which is on the main floor beside the fireplace. The ceiling is beamed, with bold, conventional tracery in panels, given an ivory tone. The massive fireplace and overmantel is in Caen stone, with facings of Hauteville marble, the fender and fire irons are bronze. On the floor are handsome Oriental rugs, so large that two suffice to cover the whole room. The furniture is quartered oak with coverings in green tones. The window curtains are of cut velvet, green on a gold ground. While put to everyday use as the living-room of the house, the hall is thronged with works of art and many objects of interest. There are magnificent cloisonné vases, a cabinet of exquisite Japanese ivories, fine bronzes and many other interesting and beautiful things.

An opening on the right of the fireplace admits one to the staircase hall, containing the stairs to the upper floors. The general design is identical with that of the great hall. The stairs, covered with an Oriental rug, are contained within a superb ramp carved out of the solid wood, a splendid piece of structural furnishing, as rare as it is fine. There is an Oriental rug on the floor, and a couple of exquisite rugs—gems of Mr. Converse's remarkable collection—are hung on the walls. Two suits of armor



The Carriage Porch

stand beside the outer door, and from the upper ceiling depends a bronze lamp, with a globe of blown amber glass.

The corresponding space on the other side of the fireplace admits to the billiard-room, which extends behind the hall to the stair hall. It has a high wainscot of linen panel design of oiled wood that retains its natural color; above are blocks of Caen stone. There is a closely beamed ceiling, with narrow white panels and a Caen stone mantel with fireplace lining of mottled brick and wrought-iron fire irons. The rug is red, with a darker border. The room is lighted by two windows, with curtains of crimson mohair in stripes. The furniture is mahogany with maroon velvet covering. There are two billiard tables, each lighted by massive bronze electro-

liers. The general character of the room is transitional Gothic, which is worked out in admirable taste.

The library is trimmed with oak. The walls are lined with bookcases, with glazed doors and perforated carved wood upper panels. Above is a wall hanging of iridescent tapestry whose prevailing tones are green and yellow, and Italian in design. The window draperies are of the same material with mauve borders. The ceiling is beamed. The fireplace has facings of rich green veined marble, and the overmantel is elaborately carved, with a painting of Queen Elizabeth let into the main panel.

(Concluded on page 429)



The Evergreens of the Main Terrace



The Pump House for the Water Supply



Cottage for Employees

A MINNESOTA FLOWER GARDEN

By HENRIETTA P. KEITH



“And flowers which fresh as Lapland roses are,
Lift their bold heads into the North’s frore air,
And bloom most radiantly.”

—Shelley.



MINNESOTA lies north of the forty-fifth parallel, with a mean temperature of forty degrees. It is commonly regarded, by our Eastern friends at least, as a part of the “Frozen North”; a region given up to blizzards and ice palaces, where the mercury seldom rises above zero, and is frequently many degrees below. Who, then, would dream of seeing the flowers and rare plants of the tropics, or at least of our Southern States, in the full glory of a luxuriant growth and magnificent flowering in a Minnesota flower garden?

Perchance you are sceptical as to the reality of such a garden. Well, then, come with me, and I will show it to you, for I know the way. You walk along a woodsy path for about a quarter of a mile from a Minnetonka Railroad station, beneath fine old trees, survivals of the primeval forest, and presently there is a “clearing,” and you come upon the summer home of Mr. W. O. Winston, a native Virginian; hence the Southern garden at the North.

The grounds embrace fifty-odd acres, but the garden occupies only half of one. Groups of the fine old trees still stand about it, like towering sentinels to guard the loveliness



The Duck Pond at the Foot of the Garden



Foxglove and Canterbury Bells

within. The arched entrance is a mass of blooming creepers, vines that are found generally only in more southern latitudes. There is the real Southern sweet honeysuckle—such as runs riot over Virginia fences and which nearly covers Mount Vernon—and the jasmine of Virginia woods. These mingle their white and yellow spikes with the delicate bloom and foliage of the moonflower vine, and load the air with their honey-breath. The *Cobæa scandens* strives valiantly for first place, its blue, bell-shaped flowers peeping through the leaves, and its long, graceful tendrils waving in every direction. A crimson rambler rambles with such abandon that its long shoots trail for yards on the ground beside the gate.

Near the gate is a tall tree, and up its trunk runs a Hercules gourd vine, bearing gourds that weigh fifteen pounds when green, hanging from stems forty-five inches long. Seven of these lusty children are all the great vine can bring to maturity. A distinctly Southern plant is the calycanthus, or sweet shrub, never found blooming farther north than Ohio. But it blooms here, in the soft air, tempered by the waters of Minnesota's famous lake, its delicious, fruity fragrance reminding one both of pineapples and strawberries—it is hard to say which. It has a purplish bloom somewhat like a clover blossom and flowers in lilac-time.

Hard by is a clump of yucca in full bloom—the delicate flower stalks springing from their bristling guard—as if in its native desert sands. Of course, it has a specially prepared, stony bed, so that it may feel entirely at home.

And here is another rare plant—*nicotiana*, or tobacco-plant, whose tall, graceful racemes of white flowers and base of broad, luxuriant leaves look as if just transplanted from some South American jungle. Where, in any Pasadena garden, can you find a braver display of hibiscus, or rose of Sharon, than in these luxuriant bushes that are away above the children's heads? In truth these are new and rare varieties, delicate rose-pink petals tipped with white, and

not the common red ones. The bushes die down and are covered through the winter, but come up luxuriantly each spring. Those distant cousins of the hibiscus—the hollyhocks of New England gardens, make a wonderful display in this garden, that tall stalk in the center measuring fifteen feet in height, while the blossoms are five inches across their glorious petals. The rich, black woodsy soil makes this hollyhock corner a regular flower-show in August, the color-tones ranging from maroon, so deep and velvety as to be almost black, up through rose and shell-pink to white.

In another corner is a round bed of elephant's-ears, and further along a perfect thicket of sweet william. There is a peony path, a gorgeous sight, and spicy as the winds from Cashmere's Vale. Of course there are roses—rare and common; dear little button-roses keep company with crimson "Jacks," and one American Beauty bush, with thirty fine roses in bloom at one time last summer.

In its own country the Japanese iris grows almost standing in water, and it has been thought it could not be raised in outdoor gardens; but a ditch dug around the bed and plenty of water seems to serve them just as well, for here are nearly forty varieties, in every shade of blue, with blossoms four and five inches across.

Blue seems a favorite hue with this gardener, for there is a great bed of Canterbury bells, such big ones, holding up their blue cups. Among them is the "cup and saucer," a rare variety. All tangled in together, they are, with foxgloves, sending up tall blue spikes four feet high. There are pink and white foxgloves, too, some of the double ones forming tufted bunches at the top—as in the picture. They have been known to bloom twice the same summer, when the buds have been pinched off. A favorite sport of the children is to deftly imprison a "busy bee" in the cup of the foxgloves. Another is to insert an end of garden hose in one of the gopher-holes and see the wet and frightened tenant emerge from the other.



The Bed of Ferns and Wild Moccasins

Most loyal are these gardeners to their "Gopher State," and where the garden dips down in one low corner, with the forest trees hanging friendly green shadows over them, is a tangle of wood-ferns and moccasin flower—the Minnesota State flower. No orchid of the hothouse could exceed the delicate grace and exquisite coloring of this pink and white beauty, swaying on its slender stem above broad, curving leaves.

From this corner the garden gives upon the "duck pond," where the wild blue flag blooms serenely unconscious of its aristocratic relations, the Japanese iris up the bank, in the garden.

One could talk a week of all the "green things growing" in this Minnesota garden, but how can we leave it without a word of the herb garden? "All the herbs of the garden" truly are there—oldman and sweet rosemary, thyme and ambrosia, sweet marjoram and lavender dear to our hearts from the "strewings" and "lavendered linen" of song and story. Not often does one see its tall, straight stalks growing, nor rue, nor caraway, nor fennel, redolent of good old Puritan days. Sweet hazel, too, and one distinctly new herb, the okra, its pretty bell-shaped blossom, the color of a canary's breast, tipped with brown. There are



Hollyhocks Tall as Trees

days. These new columbines unfold their three-inch blue wings and curve their purple horns with large and stately mien, quite unlike their little grandmothers of the hedges, and are five times their size. Is it not a famous garden for the "Frozen North"? And do not many wonderful things flourish here as valiantly as in the South?

many more; but really wonderful in this Northern garden is a lemon verbena tree four years old, five feet high and with a bore four inches through. This unusual result is achieved by taking up the little tree every fall, storing it in a tub in the cellar, and planting it out again in the spring.

From the herb garden to the flaming poppy-bed is like going from prayer-meeting to a ball, nor can we dwell upon all the color and splendor of these other more familiar flowers. For this is a large garden, with many paths—"alleys green, that lead where none may guess"—and the gardener is an enthusiast whom seedsmen and nurserymen love. We can not even glance at the passion flower vines and ascension lilies, nor at the new cultivated columbines, whose large, rich blue and showy flowers one would never guess to have developed from the swinging red and yellow bit of aerial grace of our childhood

"Conyers Manor": A Twelve-hundred Acre Estate at Greenwich, Connecticut

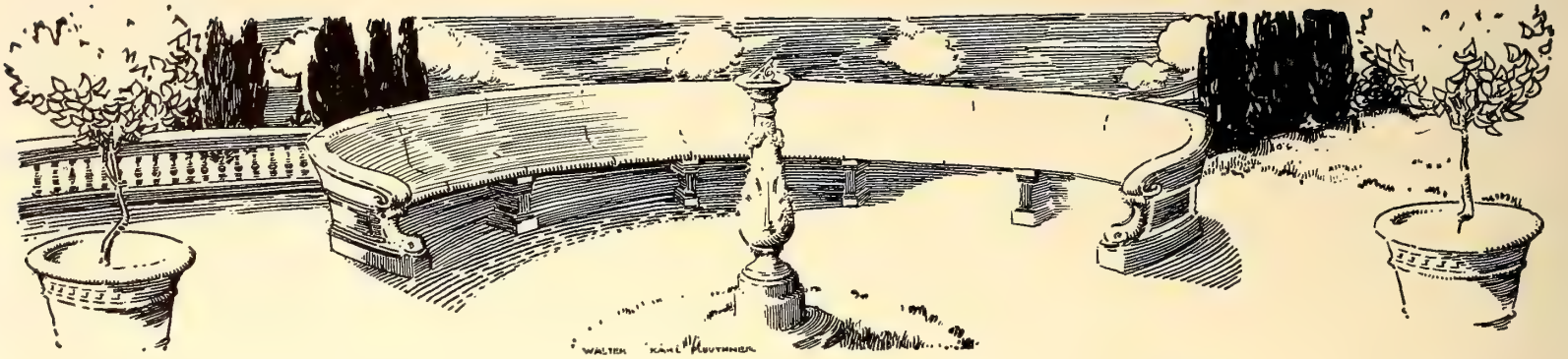
(Concluded from page 426)

There are panels of carved wood over the doorways, the curtains at which are identical with those of the windows. The side lights are of carved wood, gilded, and the furniture is covered with olive green mohair. The rug is Oriental.

The dining-room completes the main apartments of the house. It is paneled to the ceiling in Circassian walnut, with ceiling beams of the same wood, between which are narrow white panels. It is brilliantly lighted by windows on three sides, those of the terrace front and further end reaching to the floor, while those on the inner side have shorter windows, which are filled with leaded glass. The long windows have curtains of figured silk velvet in plum red; the rugs are Oriental; the furniture is black oak with brown Spanish leather coverings. The mantel facing is in green and red marble, and the andirons are of wrought iron. A painting by Benjamin Constant is let into the overmantel. On each side of the fireplace is a superb Japanese incense burner and the service door is concealed behind a magnificent lacquered Japanese screen, with black ground, to which are applied large figures of warriors in carved ivory and pearl; the frame is teakwood. The side lights are of carved wood, horn of plenty design, gilded. The windows at the far end open upon

a small balcony overlooking a walled flower garden, which has been arranged beyond the portico extension.

A final word, and but a word, may be permitted on the flower gardens by the house. The chief of these is seen from the terrace of the main front. Immediately below the house terrace is an upper terrace, grassed and pathed, with evergreens against the terrace wall, and single trees in important points. A flight of steps descends to the lower level, the center of which is filled with a great pool, formal in shape, with borders of lawn. A path entirely encircles it, with more lawn beyond, and then a final and brilliant flower border, veritably alive with bloom, inclosed within a hedge of evergreen. The side below the house is devoid of flowers, but here is planted a rich collection of evergreens, of extraordinary beauty and wonderfully successful in their growth. But this is not all. There is a "sprawling garden" on the slope below the dining-room, a half-wild garden, where plants are invited to sprawl and grow as they will, yet all under the skilful hand of the gardener. Further down, before the conservatory are rose beds and rose arches, and around are green fields and beautiful overlooks, extending, on clear days, to Long Island Sound, quite five miles to the south.



A House at Wynnewood, Pennsylvania

By Charles Chauncy



THE house built for Stephen P. M. Tasker, Esq., at Wynnewood, Pa., is representative of a very excellent type of a dwelling for a small family. The first story is constructed of rock-faced stone, laid with wide white mortar joints. The second and third stories are inclosed in a gambrel roof of Dutch character, with shingled sides and cover. This feature adds much to the already charming structural effect of the house by the contrast between the stone walls of gray color and the white cedar shingles, which are oiled and left to weather finish. A much needed note of color is given by the exterior trim and sash, which are painted an ivory white.

The entrance to the house is directly into the living-room, which is the principal room, and occupies the full depth of the building. It is designed to give the greatest amount of space and freedom, and is a most interesting structural feature. This living-room is trimmed with oak, finished in a Flemish brown. The walls are cov-

ered with a two-tone mustard yellow paper, blending well with the soft brown tone of the trim. The ceiling is beamed and ribbed with oak. The fireplace, which is built at one side of the room, is of rock-faced stone from the floor to the ceiling, and is laid with wide white mortar joints. The staircase, of simple design, rises out of the living-room to the second story.

The dining-room, opening from the living-room, is also trimmed with oak, and is provided with a large bay-window



Built of Rock-faced Stone with Gambrel Roof



An Excellent Type for a Small Family

at the front line of the building. The walls are covered with a two-tone bluish-gray paper. The butler's pantry is fitted with drawers, dressers and sink, complete. The kitchen and the laundry are trimmed with North Carolina pine, oiled and varnished, and fitted with all the best modern conveniences, complete.

The second story is divided into three bedrooms and bath. This floor is treated with white enamel paint, while the walls are covered with two-tone wall papers in harmonizing colors. The bathroom is furnished with a tiled floor and



The Fireplace of the Living-room



A Glimpse of the Stairs

wainscoting and porcelain fixtures with exposed nickelplated plumbing. There are two rooms, bathroom, and a tank room on the third floor, and the cellar, with a cemented bottom, contains a heating apparatus, fuel rooms and cold storage.

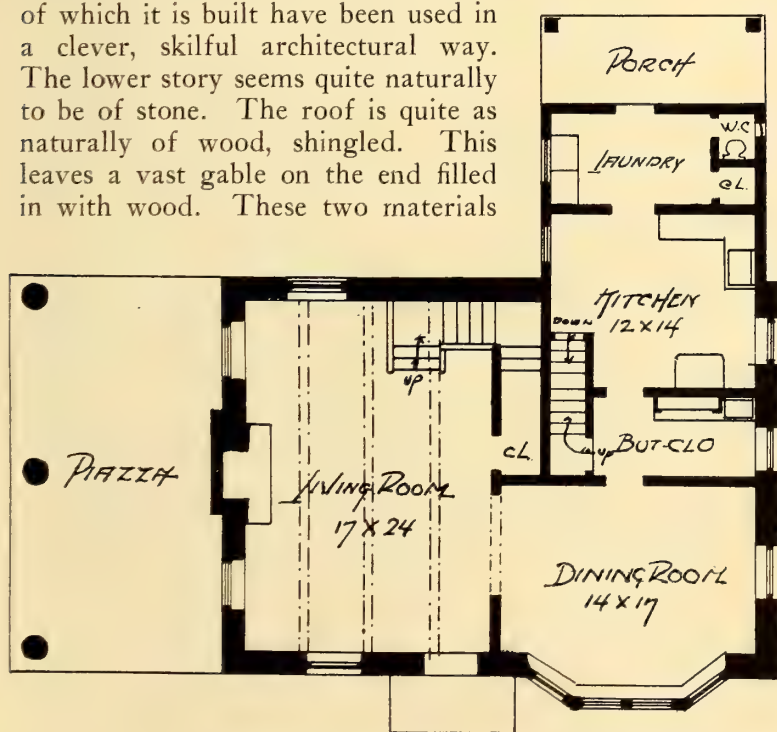
There is a delightful simplicity in this house and very real art, notwithstanding its small size and inherent unobtrusiveness. It is an attractive little dwelling, and the more interesting because of its modesty. More than ordinary art is required in the creation of a small, agreeable house, because such residences are most generally built at small cost, and, often enough, too manifest efforts are made to reduce the cost at the expense of appearance. There is no hint of anything of this in Mr. Tasker's charming little cottage. It is not only well built, but it is well designed, and from every external aspect it presents an agreeable form and a pleasant appearance that is immensely taking.

The house is, therefore, an eminently successful one. It is likewise interesting. The materials of which it is built have been used in a clever, skilful architectural way. The lower story seems quite naturally to be of stone. The roof is quite as naturally of wood, shingled. This leaves a vast gable on the end filled in with wood. These two materials

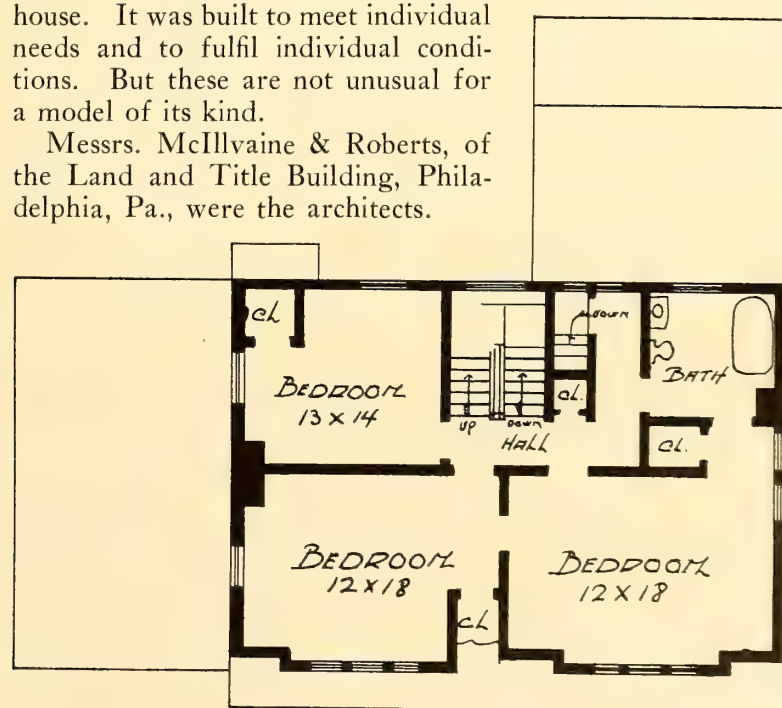
are thus used in an entirely natural way, each has its own work to do and each does it in a thoroughly convincing manner. There is no sudden break in the material lines, as might have happened had the stone first story been surmounted by an upright story of wood. The gambrel roof has been not only the real solution of the problem, but is actually the salvation of this house. It is natural from basement to peak, from cellar to ridge, and more than this it would be difficult to ask of any house, be it great or small, inexpensive or costly.

The interior arrangement is equally good. There are but two chief rooms—the living-room and the kitchen. The porch, on one side, naturally adds to the space of the former apartment, since it is available for every outdoor use in the warm months of the summer. To these two rooms is added a quite extensive service suite, consisting, as the plan shows, of a butler's pantry, kitchen and laundry. It is admirable, complete and compact, and leaves absolutely nothing to be desired. On the whole, then, this little dwelling may well be taken as a type of the good, small house. It was built to meet individual needs and to fulfil individual conditions. But these are not unusual for a model of its kind.

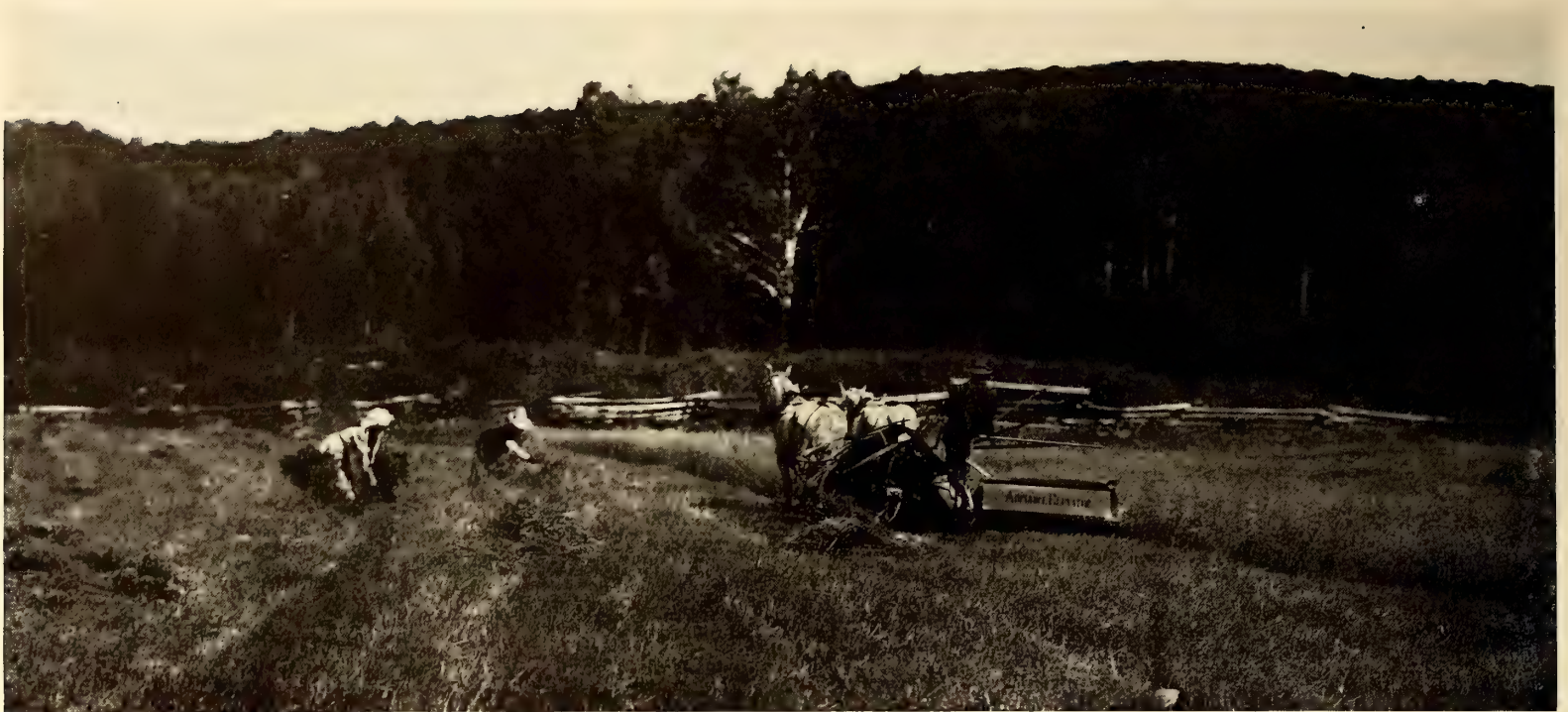
Messrs. McIlvaine & Roberts, of the Land and Title Building, Philadelphia, Pa., were the architects.



FIRST FLOOR



SECOND FLOOR



Harvesting Within the Shadows of the Maine Woods

The Farming Experiment of a Woman

By Annette Bradshaw



TO JOURNEY into the Maine woods for a breath of real air and a chance to "listen to the silence" after being, for an extensive period, one of the atoms that tear through existence in New York, is a recognized method of showing signs of good sense, at any rate to people who enjoy life enough to care about prolonging the number of years they spend being an atom.

But to be a female atom, and to journey into the Maine

woods, for the benefits mentioned, and then to return, having, instead of good gold and silver, a deed to a thousand acres of mountain, was looked upon, when it happened to be my doings, as signs of anything but good sense.

This particular mountain, however, is very beautiful, and between forty and one hundred years ago belonged to a great-grandfather, who expended so much care and labor on it that no one since seems to have considered it necessary to do any more. Of the thousand acres, he had cleared about four hundred, and fenced them into fields and pastures. Brooks



The House and Farm Buildings Nestled on the Hillside Beneath the Mountain



A Three-horse Reaper Is by No Means Beyond a Woman's Control



A Proud Moment in the Woman Farmer's Fieldwork

tinkle down the mountain on every side, winding out of the dense woods, to water a pasture, then turning again to enter woods yet more dense, whose magnificent timbers are gaining in value every day.

Since the farm has passed out of his hands, the holders have been content to cut what hay the land yielded, and plant a few potatoes. Year by year the fertility, once in such a

and meadow, the magnificent view with the lake in a forest-encircled basin, the advantage of the southern slope of the land which was always last to receive the frosts. At first I planned to keep the old place as a summer home, but its possibilities were too alluring, and with all the enthusiasm and theories of a novice, I decided to farm it and see if it could not produce an income.

In the first place I made up my mind, and still hold to it, that no owner can live in a city and hire someone to run his farm for him with any great satisfaction or profit. Of course, in this I treat a farm merely as a business proposition. So during the first winter of ownership farming periodicals and government reports were pored over assiduously, sometimes to my profit, sometimes to my confusion.

By early spring I had mapped out two or three courses in stock raising and agriculture that were to have a fair trial. First, sheep were to be raised, both for their profit and to bring back the fertility to the worn-out soil. With hundreds of acres of brook-watered pastures there was summer feed aplenty for a large flock. The wool should pay for the winter's feed, leaving the lambs for profit. The fact that farmers in the neighborhood kept small flocks, if any, and those of poor quality, worried me a little as to the wisdom of my project. But when I found that their sheep were of no nameable breed, but, as they would tell me in surprise when I asked them, "just sheep"; that their rams were of the same stock, with absolutely no pretensions to pure blood of any kind; that their pastures were good, bad or indifferent, as might chance, and that their winter stable room was usually insufficient and badly ventilated, I began to see why they were not enthusiastic over sheep.

Secondly, there was no reason why the horse power should not be supplied by good animals from which stock could be raised, instead of scrub stock which returned only their work for their feed and care. With this end in view, two high-grade Percheron mares were purchased for the heavy work, and a lighter team, express size, for faster work, both on the farm and road. Horses, especially of the draft breeds, are very heavy eaters as compared to other stock, but if they can raise foals of first-class breeding and of recognized types for which there is a steady market, their position on the farm is changed from one of expense to one of profit.

Thirdly, a flock of Angora goats was purchased, to be turned on to land, once cleared and tillable, but now sparsely overgrown with sturdy young trees and brush. Besides their wool, and work in clearing brush, which they eat in preference to grass, the young fat wethers make the best of eat-

ing, being easily mistaken for lamb.

Another thing that struck me as remarkable, was that most of the ready money of surrounding farmers went for corn, oats and other grains, shipped out from the west by the carload. Was it really true, I asked myself, that it was cheaper to buy grain than to raise it, when years ago each farmer raised his own and put money in the bank? At any rate I



One Felt a Real Affection for this Gentle Creature

high state, departed, the woods, little by little, encroached on the fields, small seedlings grew to sturdy trees in the pastures, fences began to sag and then to fall, buildings began to rot away, and by the time I came into possession moss had grown over the sod, which once had yielded ton upon ton of hay.

But no one could take away the natural beauty of woods



Farm Babies Face to Face

was ready to experiment along those lines. Oats were acknowledged a sure crop, but it was claimed that corn could not be depended upon, on account of the short summer. But I knew that even if it should not have time to ripen, the fodder with the partly developed ears is eagerly eaten by

be regarded as failures. The sheep, which were the pick of several flocks, have proven so profitable that this year fifteen thoroughbred Dorsets with a ram of the best breeding have been added—the idea being to raise winter lambs, and in this way occupation is provided for the farmhands in winter, so that I am justified in retaining the best of them throughout the year.

The goats, although most difficult to keep within boundaries, have finally been persuaded to stay by strong woven-wire fencing, and are proving themselves the finest of brush clearers, even killing trees by continually barking them. Their wool finds a ready market and a roast leg and ribs of kid is in great favor on the farm table. The raising of colts, of course, is a slower business, but our first one is a beauty.

Our harvest of great golden ears of corn, with fodder enough to complete the filling of the eighty-foot barn up to the eaves, has proven that Maine, if only for this one year, can raise field corn. The other grains have produced good crops, which in time will be better as the land improves.

Commercial fertilizer has been called into service these first two seasons, but increasing stock reduces this expenditure each year.

The first spring there was not time to plow and plant a large area, especially as all the buildings needed repairs and modernizing, and good labor is none too plentiful. But that fall, as much as possible was plowed of the moss-grown fields, the best hay producers being left until the following year. During the winter lumber was taken out of the woods and hauled to the mills, preparatory to this year's building, giving the horses enough work to keep them in good condition.

The few cows bought to supply the farm table, proved to be so profitable in the surplus butter which was



Wire Fencing Was Needed to Keep the Angora Goats from Straying

every kind of stock. These were the first plans, which were laid out after a considerable amount of study and with absolutely no experience, and they brought in their train many innovations in the customs of the country, which made the natives shake their heads and smile at a woman's following out her fancies in rather an expensive fashion. The methods of their fathers are plenty good enough for them. A better and fuller scale of living does not enter into their calculations. If they make enough to eat and wear from a few cows, chickens and acres of land, they are content to continue to do so to the end of their lives.

Some of the most natural proceedings have been the cause of widespread comment and interest. The advent of a sulky plow and the turning over of about fifty acres of the old sod last fall was almost an unheard of thing in its magnitude. Six acres of corn was a sight that some of the younger men had never seen. Harvesting machinery and large crops, where the custom has been small crops gathered entirely by hand, brought shoals of visitors. Pure-blooded stock with grades of picked quality are already beginning to find ardent supporters.

In the short year and a half that the farm has been run under the present methods, new departures have naturally suggested themselves—but that is according to the original plan, of taking up a few lines until more experience was gained and then branch out.

I feel pride in the fact that none of my experiments can

marketed, that the herd is steadily being increased, to the great benefit of the land. Shorthorns have been chosen as being good milkers whose calves can be raised cheaply on the abundant pasturage, to make fine steers. The natural accompaniment of dairying, even on a small scale, is pigs.



One Must Admit that Pigs Interest One



Our First Colt Was a Beauty



The Broad Acres Contain Many a Quiet Spot



The Sheep Were Raised for Their Wool and to Bring Back Fertility to the Worn-Out Soil

These thrive so on skim milk, specially planted pasture-meal, beets and corn, that there is no doubt that they have come to stay. The demand for pigs has been so great that we have refused buyers for ours from the time they were a few weeks old. Next year we shall raise more than twice as many.

This spring new fruit trees were set out, wire fences largely replaced the sagging rails, corn, potatoes, oats, were put in large fields, while smaller pieces were planted in barley, buckwheat, wheat and peas to supplement the oats and provide for the poultry. Besides the hay which the unplowed land produced, there were fine crops of Hungarian grass for the horses and a mixture of oats and peas cut green as a special treat for the sheep. Then there was an acre of beets, turnips and carrots to be stored for the winter, and eaten with such relish by all the animals when the green feed is gone. I can see a silo looming up in the near future, by the time our cows number a dozen or more.

But all has not been smooth sailing by any means. The question of help has been the greatest problem—that is, good help. We are gradually replacing men by machinery as far as it is possible, and find that it is better to hire reliable men at good wages than to try to keep cheap help. The damage that a careless, ignorant hand can do to valuable stock and machinery will more than pay the wages of a good man.

Then the estimate we made for the last winter's food supply was too low, which is not surprising, for it was our first year in this climate, where the winter lasts until June. By March what hay we could find that was near enough to haul over the roads in their fearful spring condition, was of very poor quality. But it was that or nothing, and had to be used for the sheep.

“Tanrackin”

The Country Seat of Thomas E. Kirby, Esq., Mount Kisco, New York

By Ralph de Martin



THIS is an eternal truth that a house which is set on a hill can not be hid. The more reason, therefore, that it should have goodly form, be adapted to its particular eminence, and be altogether a pleasing object in the landscape. Convenience and suitability for its occupants is, of course, presupposed.

These, however, are matters that appertain to every good house, while if there is ever a house that calls for fine exterior treatment it is the hilltop house, which must be seen, whether one wishes to look at it or not.

Mr. Kirby's house at Mt. Kisco is one obviously designed to give pleasure to every beholder, as well as comfort and delight to its owner. The latter aspects will be discussed presently; meanwhile it is pertinent to observe that the house, being built a-top a hill, is a conspicuous landmark in its vicinity, a very pleasant one to see, and surely a highly agreeable house in which to pass the summer. It is a dwelling that may very well be described as a good, all-around house. Its beauty is that of structure and simplicity. That is to say, it is designed in a simple, straightforward manner, its architect, Mr. Kenneth M. Murchison, of New York, contenting himself with translating his plan into vigorous elevations, restricting his detail to the necessary columns, piers, cornices, and door and window frames, and covering the whole with a roof which, while sufficiently conspicuous, is obviously just ample enough, and no more, to serve its intended purpose.

Situated on the summit of a lofty hill, the house is practically the center of an estate comprising thirty acres. A part of this has already been given a finished form in ample lawns, vege-

table garden, orchard and other cultivated aspects, while other portions still await, in their native dress of trees and brush, the more deliberate touch of the landscape artist. Meanwhile much has been done. Splendid roads have been laid out, connecting the house with the public highway and with the barns and other outbuildings. All the land in the immediate vicinity of the house has been beautifully grassed, and the house itself quite sufficiently edged with shrubbery. The inevitable tennis court is conveniently at hand and an ample vegetable garden is not far off. There has been no deliberate development of any one form of the gardener's art, but the disposition of some fine Japanese garden lanterns has been made with surprisingly beautiful effect. Standing in solitary state on a surface partly grass, partly rock, with a rich background of trees, they seem to bring with them the real atmosphere of their native land, so thoroughly at home, so Japanese is their environment. It is not often that these

garden ornaments are so successfully utilized. Nor should the very novel entrance to the main driveway be forgotten. This consists of two oak posts, surmounted by Japanese bronze post finials, the design a frankly literal translation of those used on the posts of the famous Red or "Sacred Bridge," spanning the Daiyagawa, at Nikko, Japan, erected in 1638 and destroyed by a flood in 1903.

The house is rectangular in plan, perhaps twice as long as wide. It is amply porched. The main front faces the south, with a spacious porch reaching from end to end, and returned across the adjoining west front, where it swells into a semi-circle, or "deck porch," surmounted with a simple railed balustrade. The main doorway, emphasized by doubling the porch columns, and a balustrade



A Typical Garden Decoration : Bronze Japanese Lantern



The Front Overlooking the Lawn



The Porch

above, is on the south front. This porch, however, is wholly reserved for house uses, there being no carriage road, nor even a path here, the entrance front being on the opposite side, where there is a porte cochere before a very simple doorway. The porches, which run along two sides of the house, are broad and spacious; one end on the main front is inclosed with glass as a sun room; the double porch on the south front—double in the sense of double floor space, and not in height—is ample enough for an outdoor sitting-room, and is a place of wondrous comfort and view-gazing over

the surrounding hilltops and valleys. A Japanese bronze fountain stands in the center of the semi-circle, or deck porch, and many Japanese bronzes and vases decorate the porch margins everywhere.

The house is of wood, shingled throughout, and painted a dull pearl-gray drab. The trim, including the porch columns and piers, the cornices, the friezes, window and door frames and shutters are white, a white of a pure and intense quality that forms an admirable foil to the more somber color of the house walls.



The Agra Rug of the Dining-room Is a Rare Specimen Seldom Seen in American Homes



Antique Fur



ing-room



The Entrance Front and End Porch

Briefly stated, the interior of the house contains a central hallway; on one side is the living-room; on the other the dining-room, kitchen and service-rooms. The whole of the second story is used for sleeping and bath rooms, while the servants' rooms and storage space are provided for in the third story.

The hall runs clear through the house, from front to front. The staircase is in the center, with white-painted balusters and mahogany handrail, turned out on either side in a graceful curve on the first step. It mounts to the second story in

a straight line, with a short right and left flight at the summit before a recessed window beneath a low archway. The walls are hung with a toned green tapestry paper. The woodwork is white, and is limited to a low baseboard and the simple door frames. The ceiling is simply plastered in white. Some choice old bits of furniture, a tall-case clock, old table, antique mirror, are placed along the sides. Beyond the stairs, beneath the archways on either side, is an inclosed space that serves as a furnished withdrawing-room, from which the porch on the south front may be directly en-



re in the Hall



The Living-room Is Finished with Natural Chestnut and Hung with Japanese Paper



The Front Overlooking the Lawn

above, is on the south front. This porch, however, is wholly reserved for house uses, there being no carriage road, nor even a path here, the entrance front being on the opposite side, where there is a porte cochere before a very simple doorway. The porches, which run along two sides of the house, are broad and spacious; one end on the main front is inclosed with glass as a sun room; the double porch on the south front—double in the sense of double floor space, and not in height—is ample enough for an outdoor sitting-room, and is a place of wondrous comfort and view-gazing over

the surrounding hilltops and valleys. A Japanese bronze fountain stands in the center of the semi-circle, or deck porch, and many Japanese bronzes and vases decorate the porch margins everywhere.

The house is of wood, shingled throughout, and painted a dull pearl-gray drab. The trim, including the porch columns and piers, the cornices, the friezes, window and door frames and shutters are white, a white of a pure and intense quality that forms an admirable foil to the more somber color of the house walls.



The Porch Sitting-room

Briefly stated, the interior of the house contains a central hallway; on one side is the living-room; on the other the dining-room, kitchen and service-rooms. The whole of the second story is used for sleeping and bath rooms, while the servants' rooms and storage space are provided for in the third story.

The hall runs clear through the house, from front to front. The staircase is in the center, with white-painted balusters and mahogany handrail, turned out on either side in a graceful curve on the first step. It mounts to the second story in

a straight line, with a short right and left flight at the summit before a recessed window beneath a low archway. The walls are hung with a toned green tapestry paper. The woodwork is white, and is limited to a low baseboard and the simple door frames. The ceiling is simply plastered in white. Some choice old bits of furniture, a tall-case clock, old table, antique mirror, are placed along the sides. Beyond the stairs, beneath the archways on either side, is an inclosed space that serves as a furnished withdrawing-room, from which the porch on the south front may be directly en-



The Entrance Front and End Porch



The Agra Rug of the Dining-room Is a Rare Specimen Seldom Seen in American Homes



Antique Furniture in the Hall



The Living-room Is Finished with Natural Chestnut and Hung with Japanese Paper



The Hall Has a Central Stairway and Walls Hung with Green Tapestry Paper



The Dining-room Is a Cheerful Apartment in Red and White

tered. Both the design and lighting of this hall are thoroughly admirable. Its structural parts are simple, yet effective. The color scheme of green and white is as happy a combination as could have been arranged, and the effect of the central staircase, with the recessed window at the top, is extraordinarily fine.

The living-room occupies the whole of the house to the west of the hall, and is thus lighted on three sides. In the center of the south wall is the fireplace, a massive stone archway lined with brick.

Above the shelf is a superb Japanese screen of embroidered silk in four panels. The walls have a wainscot of natural chestnut, above which they are covered with a Japanese embossed paper, with a green and bronze finish of the old Ming period. The ceiling is beamed in chestnut, with plain white surface panels. From the center descends a Japanese electrolier, which is actually a portion of a Japanese bronze and lacquered temple lantern dismantled and adapted for its present use. The room is comfortably furnished and abundantly lighted. On the floor is an immense Agra rug, very large in size and beautiful in color. These rugs are no longer imported into this country, and are very rarely found in American households.

The dining-room is a delightfully cheerful apartment in red and white. The high wainscot in narrow strips of wood is painted with a dead white paint and is surmounted with a plate shelf. The fireplace is of wood, treated in a similar manner, with facings, hearth and lining of red brick. The



A View of Ample Porches

ing. Mr. Kirby's place is actually complete in every respect in itself. His water supply is obtained from a spring that is wholly under his control, and is pumped to his own cisterns and tanks by engines on his property. The mechanical plant is installed in a separate building devoted to it, which also contains a dynamo and storage batteries for the production of the electric light used in the house and outbuildings.

The house and other structures are also fully equipped with fire-hose and apparatus for use in case of fires, and he has thus within his own land and entirely under his control everything that is needed for the complete and uninterrupted enjoyment of his estate. The thoroughness with which the mechanical plant has been installed is, of course, equaled by the extent of the outbuildings, which include ample carriage and stable space, garage and other minor buildings essential to the conduct of a considerable country place, and necessary for the comfort and pleasure of the owner.

mantel ornaments are fine old Chinese blue and white porcelain. The space above the wainscot is hung with a red Japanese material, and the ceiling, supported on a somewhat deep cornice, is plain and without ornament. The rug is another large Agra rug, the pattern being a reproduction of a sixteenth century Is-pahan rug, and is a superb example of the finest weave made at Agra.

An isolated house such as this, naturally calls for much special treatment in the matter of convenience and necessities of liv-



Making Rugs from the Scrap Bag

By Mabel Tuke Priestman



WING to the revived interest in old-fashioned furniture, and in the love of simple things for the home, the old-time rag rug has become universally popular, and women in all parts of the country are bringing down from the garret old rugs made by their grandmothers, which they are industriously

copying. In olden days the dye pot played an important part in the making of rugs, for all old clothing was carefully hoarded and torn into strips and neatly sewed together in odd lengths. These strips were wound into loose hanks, which were dipped in the dye pot, when they took on a new lease of life, owing to their soft and beautiful colorings. Vegetable dyes were invariably used, so it is not surprising that to-day many of these old-time rugs are still beautiful in color, mellowed only by time. Old stockings, old undershirts, petticoats, and dress materials of all kinds were utilized in the making of these rugs, for when they were dyed and worked up in the rugs, the variety of texture added only to their beauty. There were always a few balls of white rags which were put on one side for the purpose of introducing white bands of color when it was deemed necessary.

In a colonial bedroom what could be prettier with the old-fashioned chuck-bottomed chairs, or hickory furniture, than a plaited or crocheted rug of long ago? Not only can they be used in a bedroom, but in summer cottages and unpretentious homes they are frequently found in the sitting-rooms and halls. Their advantages lie in their economy, and in the fact of their being washable, which appeals strongly to the housekeeper of to-day.

As the making of these rugs is so extremely simple, it is a delightful pastime for children and old people, for the work goes quickly and is no strain on the eyes.

The simplest rugs to make are those that are plaited, knitted and crocheted. The plaited rug may either be oval, square or round, and is done in the following manner: When

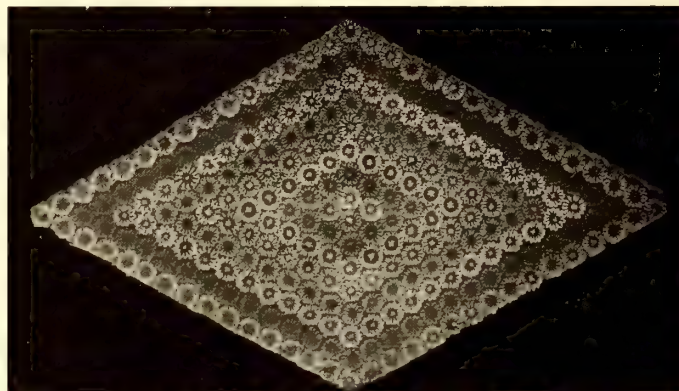
the strips are torn, thin material must be about one and a half inches wide, and thick material would be better only about half an inch wide, and would, when plaited, take up the same amount of space.

Take three colors or three shades from the plaited rug, and plait a strip about one yard long. Lay the half yard when plaited on the table and return the other half yard and neatly sew them together. Continue plaiting from half a yard to a yard at a time, sewing the plaits together as the work progresses. Many people get their lengths of stuff tangled up, but this can be avoided by only plaiting short lengths of material, and having one end in the plait much shorter than the other two. It is very easy to keep adding new pieces, but if a long strip is attempted to be plaited at once, the material becomes frayed, and the worker does not find it easy to do.

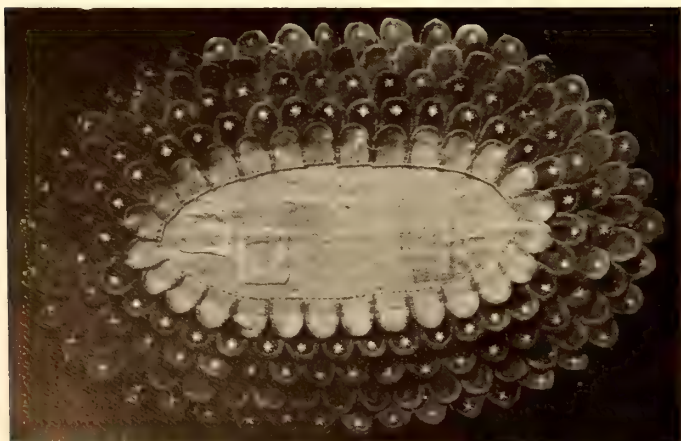
There is a great difference in the appearance of these rugs. Some workers turn in the edge of each strip as they plait, while others leave the raw edges slightly frayed and prefer its artistic appearance to the neat rug. This can be left entirely to the choice of the worker, as the extremely particular housekeeper will prefer the neat rug, while the woman who prefers to get artistic results from quick work will like the rough-and-ready plaiting.

In looking at the group of round rugs, it will be noticed how pretty the effect is of two or three rows of plain material breaking up the hit-or-miss surface. The large oval rug is made of three shades of denim and has been used in a hall for over five years, and to-day shows no sign of wear, this photograph being taken in its old age.

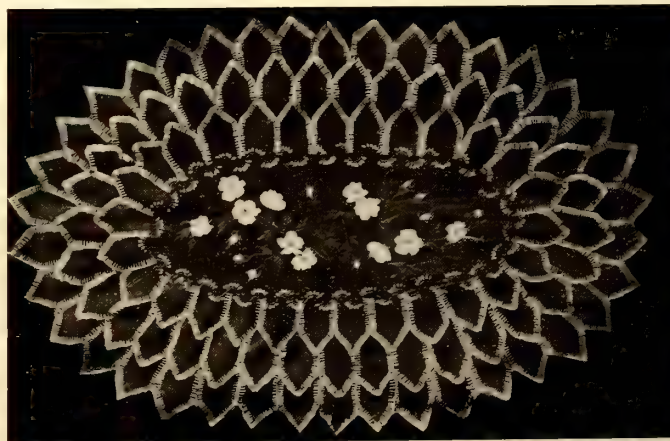
Those who are fond of crocheting will find the making of these rugs quick and delightful work. They can be made of rags, which should be torn about half an inch wide. Flannelette is particularly charming, as it is so soft to the feet. If they are to be of light weight, the material will just be crocheted in the round. Begin with a chain of four stitches, and join together with a crochet hook. Increase the round



Button Rug—Made from Cloth and from Pieces the Size of a Dollar and Sewed on a Burlap Foundation



Partly Finished Rug of Cloth and Homespun



Flower Rug—An Applique of Ribbon Ornaments the Center

about eight inches, and increase the same number for each round. Crocheters do not all work alike, and if this is found to be too full, do not add as many as eight stitches. The rug must lie perfectly flat and smooth. Single crochet or afghan stitch is used.

Many people prefer a thick and heavy rug, especially if it is to be used down stairs, and in order to make this really solid, manila rope can be used with the material, holding it in the hand and crocheting over the rope. If a rope is found to be too heavy, a round lamp wick can be used instead, but this makes a much softer rug; but for a heavy rug, an ordinary clothes line is the best filling. Shaker flannel is variegated in appearance and is, perhaps, the nicest of all materials for making crocheted rugs. If this is bought between the seasons remnants can often be obtained for a very small price. Experience will enable the worker to find out how many pounds of material to use. It is impossible to give the exact weight, as one worker will use twice as much material as another, according to the looseness of the crocheting or the size of the hook. I have seen beautiful fancy rugs made from unbleached muslin dyed in exquisite shades and torn only half an inch in width and without any filling. All sorts of intricate patterns can be made, and designs of all kinds can be worked out by a skilled worker. As the beauty of these rugs depends upon their coloring, and as this is not easy to plan for, dyeing can be resorted to after the rug is completed, by staining some attractive patterns on the rug both back and front. This should be done by means of a stencil, so as to keep the edges clear, and the dye should be allowed to soak in, so as to permeate well through the crochet work.

Those who are interested in knitting are always on the lookout for some new ideas, so that they may keep their needles busy. A knitted rug is even more quickly made than a crocheted one. It is best to wind the material into balls, and to decide on two or three colors beforehand. The material should be cut not more than half an inch wide, and, of course, must be neatly joined together before being wound. These rugs are made in the following way: Knit a strip six inches wide and twelve inches long. Then knit another strip, which may be of another color, four inches wide, and make it long enough to go entirely around the six-inch strip. The

right length must be determined by laying the wide strip on a table and laying the new strip beside it. The corners must be slightly full, so that the oval will lie perfectly flat. Do not take out the needles until the strip is neatly sewed to the centerpiece, so that more can be added if the strip has worked up in sewing. A third strip would make a rug fifty-six inches long and forty inches wide; and if a larger rug is desired, a fourth strip would make a rug sixty-four inches long, every

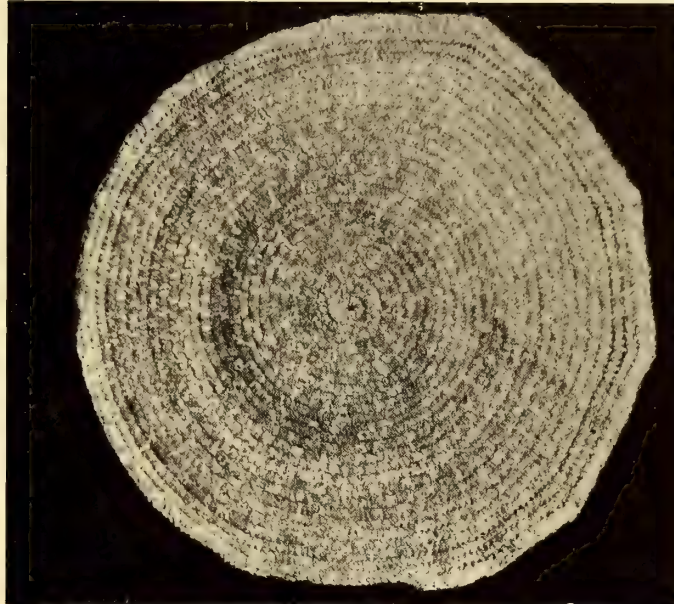
strip increasing the rug eight inches in length. These rugs are especially pretty when placed in front of a bureau or for a hearth rug, especially in a living-room, in conjunction with Mission furniture.

There is still another kind of rug that can be made from the scrap bag, but instead of using underwear, heavy cloth and old felt hats are used. Thus old trousers, women's linsey skirts, and all kinds of heavy outer clothing can be brought into service. Invariably these are of somber colors, but they are brightened by gay-colored silk, or flaxen stitches. Practically any kind of design can be made, according to the ingenuity of the worker.

The diamond-shaped rug is made from small pieces of felt, cut out in rounds, the size of a dollar. Each little piece of cloth is worked with color in various stitches. A cross stitch or star is the principal decoration. A piece of burlap is cut out the required size, and each little round is neatly sewed on to it, beginning from the center. Sometimes old horse-blankets or quilts are used for the foundation of the rugs. When the pieces are all sewed on to within three inches of the edge of the burlap, a heavy hem of the burlap is turned back in order to make the rug strong at the edge. This rug is called a button design.

One of the oval shell rugs is made of cloth and homespun and each little piece is outlined in blanket stitch. This rug is not quite completed and the burlap foundation with its printing is still visible. This has been started from the outside and is being worked toward the center. It will be noticed that torn burlap can be used and the holes covered with patches, all of which are hidden when the rug is completed.

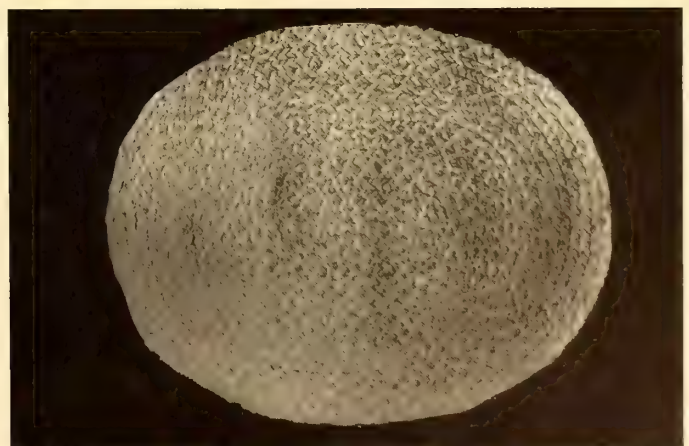
The other oval rug is of a more pretentious kind, as the center is ornamented by appliqué made from ribbons, and forms quite a decorative feature. The slightly pointed tips are outlined with blanket stitch like the other oval rug.



Variegated Cloth Crocheted Over Manila Rope



Plaited Rugs Done in Rough-and-Ready Fashion



A Neatly Plaited Rug of Three Shades of Denim



The Bridge and Abutments in a Water Park

Water Parks

By Charles Downing Lay



THE salt marshes are one of the most beautiful features of our Atlantic Coast. Sometimes in their illimitable expanse they suggest the sea, and their changing color in the sun and shade and wind is no less wonderful. They have, moreover, the advantage of being sea and land combined in a fascinating proportion and irregularity. From earliest spring, when the first tinge of green begins to overpower the winter brown, through the deep greens and dull reds of mid-summer, to the golden russets of the fall, they are always

changing, but always full of charm for those who love them. The thin lines of creeks and the broad pools mirror the sky and are like dull veins of blue in an amber marble. Or again, at sunset when suffused with pink and red, these same pools seem like colored windows letting out the light of the earth's smoldering fires below.

Nowhere else, except on the sea, can one so enjoy the sky, from the lowest purple haze of the horizon to the white zenith, and nowhere else can one see so many of the stars. They seem to come down close and they shine with a new brightness, in a night that is no longer dark.



A Waterway Decorated with Evergreens



Bridge and Island on a Reclaimed Estate

The surroundings, too, of a marsh are lovely. On one side there may be miles of sand-dunes; playful wind-built hills and valleys with their own character and charm; and there may be drumlins bare and treeless from their boulder-strewn shore to their rounded backs; or mayhap there are rocky points, clad with low trees, carrying the mainland far out in the sea of golden green!

Such is the salt marsh to the eye, and one would have it always so, but to the other senses it makes a different appeal. It is too wet to cultivate or to walk on and the mosquitoes and gnats it harbors are a pest. How shall it be made livable and its beauty not be destroyed? Or, if its unique character can not be preserved, what shall it become?

With its improvement for practical purposes, as in Holland, I am not concerned, except to say that it can be made as valuable here as there, and will be, so soon as the returns are likely to warrant the expenditure. As a part of private grounds, or of public parks, what shall be done with it?

There are two possible methods: one to raise the whole level, by filling, or by pumping sand on top of the marsh from the creeks, which are thus deepened; the other method being to drain and dyke the area so that the water is kept at a constant level, no matter how the tide rises and falls outside. The latter method is perhaps the better, as it preserves the character of the marsh more perfectly. The Back Bay Fens in Boston were so treated by F. L. Olmstead, but there the problem was rendered more difficult by

the stream running through the middle, which in times of storm carried a large volume of flood water. The floods are most likely to occur with a northeast wind and consequent high tides in the Charles River, into which the stream empties. To obviate this difficulty the edges of the marsh were raised, making it possible to store a great quantity of storm water between the usual water and marsh level and the tops of the banks-flood level. Raised to this upper level, which is higher than any recorded tide in the Charles River, the water would flow over the gates.

The result was a beautiful winding stream held at constant level slightly below broad marshes covered with a luxuriant growth of grass and wild flowering plants, and all inclosed by the high, thickly planted banks, on top of which the roads are carried. This was a costly and elaborate treatment, though, of course, not nearly so costly as complete filling would have been. The stream is a delightful canoe river, so the Park provides for more than the ordinary pleasures.

The simplest procedure is to dyke the meadows, keeping the water at about half tide, and allow rain water to run off for five to six hours from half tide to half tide, collect for the same period and run off again. This will leave many pools and small creeks too high for the water to reach. They should be filled, but the creeks must not be filled level; there must be left slight depressions so that surface



A Water Garden at East Hampton, Long Island, New York



Rustic Causeway Across a Lake

water can run off quickly, and the whole area should be graded so carefully that no water can stand for any length of time.

This scheme will work well if there are no large streams delivering flood water to the area, but it can only be undertaken when the proposed water level comes at half tide or above. It will undoubtedly change the character of the marsh, since the salt grasses will gradually give place, or can be made to do so, to more delicate varieties, and trees, shrubs and weeds will continually creep in. But if the planting be kept on the boundaries, and the meadow be left open and mowed or grazed, then the large spirit of the place will remain, even with the changed detail. Or if the salt grasses are to be saved and others kept out, then the marsh can be flooded twice a year and the salt water will kill the weeds and tree seedlings.

When the marsh is too low and is small, it is often possible to make a lake, and with the soil and sand so taken raise the surrounding land high enough to be dry. Thus a marsh of three acres has a lake of one acre area dug four feet deep

which fills the two acres left in grass to an average depth of two feet. The practical working of this is not difficult, requiring only an automatic gate to keep the water level constant.

If the marsh can be arranged so that there will be no rain-water, or water left from perigee tides, in pools not connected with the creeks, then the mosquito difficulty is solved, because larvæ do not live in water that fish reach. This is the simplest way to treat marsh, and can be done cheaply on a large scale, but makes its use limited to one crop of hay per year and its esthetic value.

I have thus far been considering marsh which is almost land locked and can be easily dyked, but there are large areas, as on the Great South Bay, Long Island, where the marsh is a narrow strip between sea and land. In such a place filling to raise the grade is the only thing. Bayberry Point, at Islip, is such an experiment. Here a deep channel was dredged at right angles to the shore line and the marsh filled by pumping sand on top. This left a barren waste of sand, which later on was covered with soil by the buyers of

(Concluded on page 453)



Summer House and Margin Planting by the Water



The Summer Home of B. B. Crowninshield, Esq.,

Marblehead, Massachusetts

By Francis Durando Nichols



HE problem of providing in the summer a home in the country for the city dweller is met and solved in various ways among the hills and by the sea.

If there is anywhere in our land a class of buildings which emanates from the people it is the homes built by families of moderate means in the country. Mr. Crowninshield has demonstrated this characteristic by the attractive house which he has built for his summer home, overhanging the rugged coast of Marblehead.

The house is built to follow the contour of the coast, and is perched high upon the rocks, from which broad vistas of the ocean are obtained from every room in the house. The house is built so that the under side of the building is occupied for the cellar, and for bath-boxes and boating apparatus.

The exterior framework is covered with matched sheathing and then with white cedar shingles. The roof is also covered with white cedar shingles.

The piazza is an attractive feature of the place, which is well furnished, and upholstered in turkey red.

The entrance to the house is reached by the approach to it from the driveway, which sweeps up to the front door opening into the vestibule.

The great living-room, which occupies the larger part of the first story, has paneled walls and trim of yellow pine, finished in a soft brown stain. The beamed and ribbed ceiling and all the trim of the room is treated in a similar manner. A feature of the living-room is the inglenook, which is provided with a fireplace built of rock-faced stone. The floor of the inglenook is laid with brick, and on either side of it there are seats and book-cases built in. The staircase, of ornamental character, rises up around the chimney to the second story. The cushions and the upholstery in the inglenook are covered with turkey red. Soft white muslin curtains are hung at the windows.

The dining-room has similar paneled walls in North Carolina pine, stained and finished in a



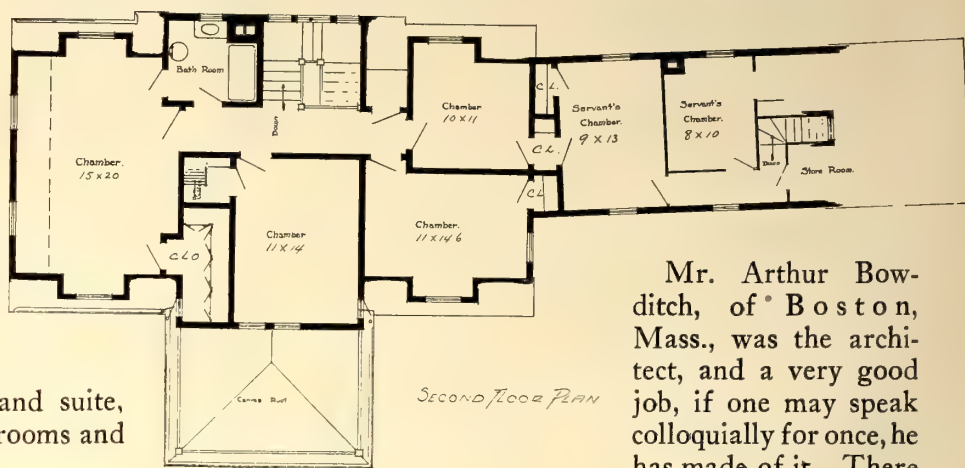
Gable End and Terrace

soft brown color. The ceiling is beamed and ribbed, and the under side of the second story floor, which is exposed to view, is painted cream white.

The oak furniture is upholstered in green leather, and the rug is a combination of yellow and green tints. Corner china closets are built in.

The butler's closet is fitted with drawers, cupboards and sink. The kitchen, laundry and rear lobby are trimmed with yellow pine, tiled and varnished, and finished in its natural state.

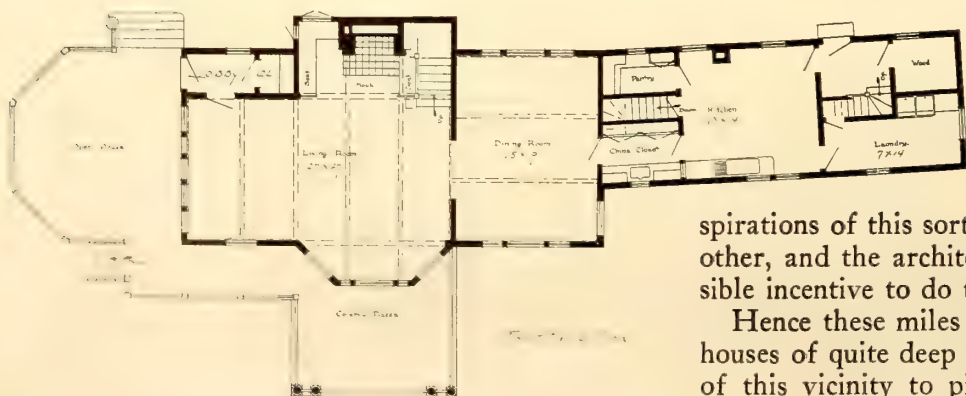
The second floor contains the owner's room and suite, and three guest rooms, besides the two servant bedrooms and trunk room placed over the kitchen extension.



Mr. Arthur Bowditch, of Boston, Mass., was the architect, and a very good job, if one may speak colloquially for once, he has made of it. There

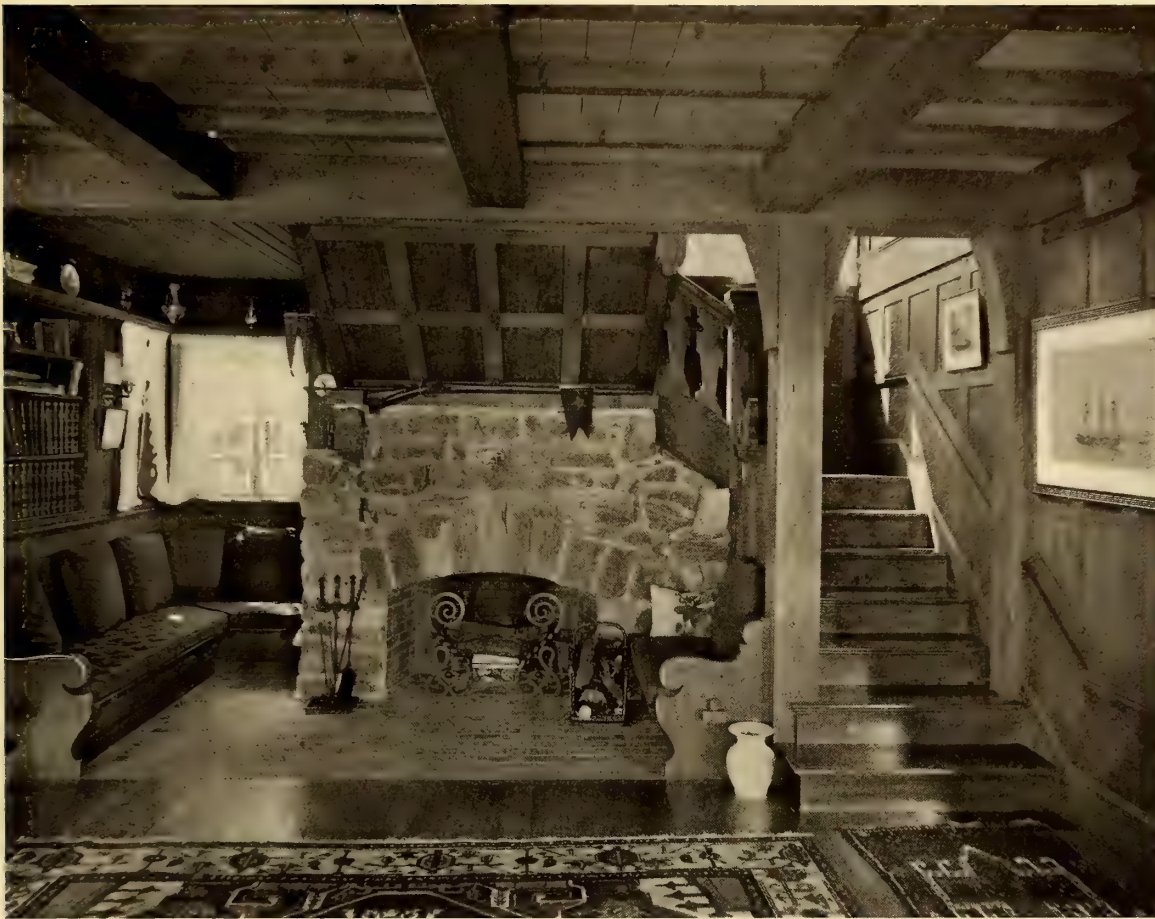


The Lower Story on the Sea Front Serves for Cellar, Bath Boxes and for Storing Boating Apparatus



were many encouragements to the attaining of this end. Few things appeal to the architect more completely than a fine site, and especially a fine outlook. Everyone who has the slightest familiarity with the beautiful coast line of Marblehead Bay knows how abounding this region is in inspirations of this sort. Houses are built here for this reason, and for no other, and the architect who is called upon to build them has every possible incentive to do the best he can.

Hence these miles of country estates, large and small. Hence these houses of quite deep interest, again large and small. Hence the interest of this vicinity to pilgrims of every sort, seeking to see what they may,



The Staircase Rises Around the Chimney

and at almost every step enchanted and delighted with what is before them. It is a true vacation spot, and the houses here are essentially vacation houses in every respect.

Mr. Crowninshield's house, as will be apparent to everyone who has read the foregoing brief description and examined the accompanying photographs, includes not a few special problems of its own. These Mr. Bowditch has solved in a very direct and simple manner, yet with intense individuality. A house built directly on the sea, be its size and cost what it may, has many aspects peculiarly its own. It is not, in short, a country house, but a seaside house, and the difference is often very great.

In Mr. Crowninshield's case the proximity to the sea was so close that the lower parts of the house immediately became available for housing the paraphernalia of sea sports. One might, if one choose, consider it a combination dwelling and boat house. This, however, would be quite unfair; for the house-boat quality is entirely subordinated, and the structure is a residence, a dwelling pure and simple, in which, as a matter of convenience, it has been found possible to accommodate certain features not always included in houses, even of seaside location.

It is as a dwelling, there-

fore, a very convenient, comfortable dwelling that this house makes its appeal, and it does so in a very convincing manner. Of lavish ornamentation there is none at all; of special enrichment there is nothing of any sort; but of comfort and convenience, of good devices used plainly and simply, of the real home quality there is an abundance and to spare, if indeed these matters can be spared or provided in any overabundance.

Hence the bare rock top on which the house is perched has been put to a new and quite unheard of use. For many years, no doubt, it seemed as though it were always to be unoccupied and never have other fate than a bare rock in the landscape. Modern ingenuity and the pressure of demands for desirable sites changed all this here as it has often changed it elsewhere. The rock for which

no good natural use seemed possible has been transformed into the foundation of a sturdy home. Human life has seized this outpost of nature and put it to a new and admirable use that has transformed its uselessness to positive utility.

And this has been well done in every way. It seems difficult to better the solution of the very interesting problems proposed in the design and construction of this dwelling.



The Dining-room Is Finished in Pine, Stained Brown

Old-Time Lights

By Mary H. Northend



THE earliest artificial light used by the first settlers of New England was furnished by candlewood, or pine torches, cut from the forest trees, after a fashion learned from the Indians. The pine torch was simply a portion of a dry limb of the pitch pine, cut into convenient lengths. It was usually

selected so that it would end in a knot, as this part of the wood is more abundantly supplied with pitch, and also burns away less rapidly, on account of its twisted fiber. "Candlewood" was formed by short sections of some old dry pitch-pine log, cut into lengths of about eight inches. Only heart wood was used, and the strips were split very thin. The resinous wood was so full of turpentine that the small cleft splinters burned like little torches. Lest the continually dropping pitch should disturb the neat housewife, these splinters were placed upon flat stones, usually just inside the fireplace. Several were burned at a time, and their steady flame, combined with the flickering blaze of the roaring fire, cast into the low, bare rooms enough light for the simple household tasks which hard-working people must perform after nightfall.

The use of candlewood fagots continued in New England throughout the eighteenth century. Each householder could cut, every fall, enough candlewood to supply his family for the year. The pine torch persisted until 1820, and is still used in the Southern States, where it goes by the name of a pine knot, and is used to carry in the hand, by

night, like a lantern, as well as for a fixed illuminator. Other kinds of lights were procured with more difficulty. Candles were first imported from England, at prices which made them too expensive for any but gala occasions. Domestic animals in the early colonies were all too few to be killed for their flesh. Deer and bear suet was mixed with the fat of beef or mutton, and used for candle-making. One of the first letters which Governor Winthrop wrote home to

his wife asked her to bring candles and wicking with her when she came. In the absence of proper wicking, the pith of the common rush was used instead. This constituted a rushlight, and such a candle did not last as long as those properly made, nor did it give as good a light.

Many candles were made from wax, which was easily obtained from the wild bees. Excellent material for candles was also found in the pale-green wax made from the gray berries of the wild bayberry, an aromatic shrub which grows in profusion along the coast. Sheep became more numerous, and everybody could have the inexpensive "taller dip."

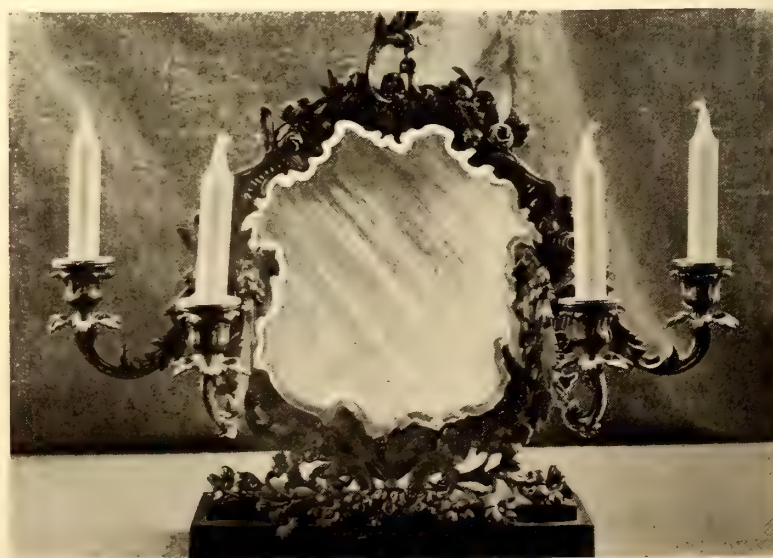
Then every housewife undertook to make her year's supply, and this was no easy task. Wicks were of loosely spun hemp or tow. Four or five lengths of the braided or twisted strands were suspended from a stick called a candle rod. The number of wicks hung to the rod depended upon the size of the kettle of boiling water, with melted tallow upon the surface, into which the wicks were dipped, after being carefully straightened. Then the rod was placed across two long poles, for cooling, while a



1—Candelabra of Cut Glass and Gilt Brass, Osgood Collection



2—Antique Sconces Owned by Mr. N. C. Osgood, Salem, Mass.



3—Mirror Candelabrum—Miss Sarah Kimball's Collection

second lot of wicks were being dipped. When cool, the operation was repeated, until the candles had grown to the proper size.

It was slow work, taxing both strength and patience. Care had to be exercised to keep the tallow hot, to keep the wicks straight, not to dip them too deep, lest they touch the water, not to let them touch one another, not to let them cool either too rapidly or too slowly, and to place boards under the poles, to catch the drippings, thus protecting the floor and preventing waste of tallow, as the drippings, when cooled, could be scraped from these loose boards and used over again. Observing all these necessary precautions a good worker, in a cool room, could make two hundred candles in a day by this dipping process.

A great improvement was made by the introduction of candle-molds. The molded candle, being of the same diameter throughout its entire length, was far superior to the "dip," which ran to a point at the top, and therefore burned out much faster. Men known as "candle-makers" traveled about the country with large candle-molds, capable of holding forty or fifty candles at one filling. In two days one of these men could easily mold a stock of candles sufficient to supply a family for a whole winter. They were jolly fellows, doing the work for the love of a roving life, as well as for the money which they earned. They were full of amusing stories, good songs, and the latest jest, gossip or anecdote. Their advent was eagerly welcomed, and the stock of candles which they left behind them was carefully guarded from rats and mice, by being stored in tin boxes.

As may be supposed, the candlestick was always esteemed an important article of house furnishing, and was often exceedingly expensive and ornamental. A turnip or a potato could be utilized for this pur-

pose, under stress of circumstances; but this was a mere makeshift candlestick, subject to the laws of change and decay, and necessarily lacking in permanence. Rude iron and tin candlesticks, which were in most common use, were among the very first articles of purely domestic manufacture found in New England. Similar utensils were also made of brass, pewter and silver. Perhaps the brass ones were the very earliest form in common use.

The candelabra represented in Fig. 1 are beautiful specimens of cut glass and brass gilt. They belong to a later period, probably the early days of the nineteenth century. The prism which occupies the center, in the midst of the five candles, reflects the light from innumerable facets with pleasing effect. The candles originally used in these candelabra were made of spermaceti, a substance obtained from the head of the sperm whale, in the days when whale fisheries flourished.

The mural sconces shown in Fig. 2, like the candelabra just described, are found in the home of Mr. Nathan C. Osgood, on Chestnut Street, in Salem, Mass. He is the son of an artist of national repute, who moved to Salem from Boston in 1827. These sconces hang in the reception-room, against a background of burlap. The brass-gilt filigree work takes the form of a lyre, encircled by a laurel wreath, and surmounted by a head of Apollo. The three branches curve gracefully from the wreath, below the lyre.

To the same period belongs the combination of mirror and candelabrum shown in Fig. 3. Note the wonderful design, worked out in brass gilt, and the artistic method used in joining the branches to the mirror frame. This piece is found in the collection of Miss Sarah Kimball, of Salem.

The solid silver candlesticks in Figs. 4 and 5 are



4—Salem Candelabra of Solid Silver



5—Solid Silver Candelabra—Osgood Collection

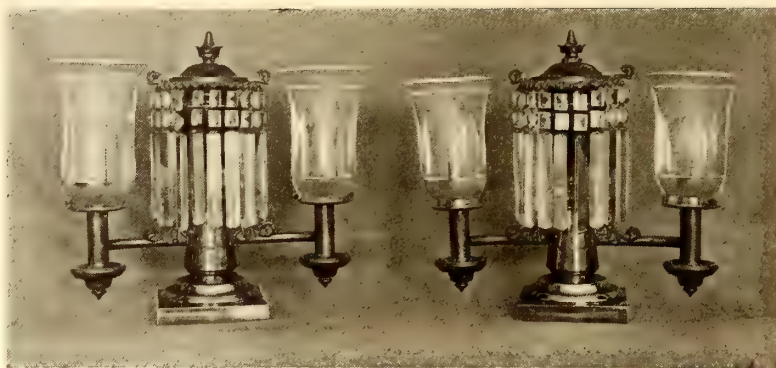


6—Candelabra with Cut Glass Prisms—Osgood Collection

probably much older, and date well back into the eighteenth century. The specimens shown in Figs. 5 and 6 belong to the Os-good collection. Observe here the difference in form between the molded wax candles used in Fig. 5 and the bayberry dip candles shown in Fig. 6. This latter plate deserves careful study. About the year 1830 fashion decreed the use of lamps and candelabra which were hung with cut-glass prisms. Great popularity was attained by sets of candelabra such as this one, to ornament the mantels. These sets consisted of a three-pronged candelabrum for the middle, with a single candlestick of similar design for each side. It will be seen that the base is of marble, while the gilt standard is cast in the form of the well-known "Paul and Virginia" group. At the base of each candle a brass-gilt ornament, shaped like an inverted crown, supports sparkling prisms, which quiver with every step upon the floor, and which catch the light in rainbow reflections at every slightest motion, on account of their pendant position.

From a well-known Salem house came the lamps of the same period, shown in Fig. 7. These are of bronze, mounted upon a marble base. The reservoir which holds the oil is beneath the long prisms which depend from the central standard. The flaring chimneys of ground glass softened and shaded the light, while they kept it from flickering, in case of sudden drafts of air.

Lamps were in use in the colonies during the latter part of the seventeenth century; but they were the Betty lamps or Phæbe lamps, made of iron, pewter or brass. They were shaped somewhat like bowls or gravy boats, with a blunt lip at one side, on which rested the protruding end of the wick, which was commonly made of tightly twisted rags. In these open lamps were burned tallow, grease and crude oils. They were used in bedrooms, and in passing from one room to another. Their light was but a feeble glimmer. They dripped fat and



7—Bronze Lamps Mounted on Marble



8—Old-time Salem Lamps

flame between two currents of air. Thomas Jefferson brought the first Argand lamp to this country, and presented it to his friend Thomson. The light was much admired, but the price of these lamps was beyond the means of persons

emitted a disagreeable odor.

With the introduction of whale oil, lamps came into more common use, and in 1782 a Frenchman named Argand, then living in Geneva, invented the lamp which still bears his name, and in which, by means of a hollow wick and a glass chimney, a strong and clear light is produced by placing the

flame between two currents of air. Thomas Jefferson brought the first Argand lamp to this country, and presented it to his friend Thomson. The light was much admired, but the price of these lamps was beyond the means of persons in the ordinary walks of life, who continued to use candles, of tallow, if poor, of wax, if in more comfortable circumstances. However, the introduction of chimneys and of movable wicks had so improved the general character of the lamp that its general acceptance was a mere matter of time. Once the theory of producing a brilliant flame was discovered, lamps began to be made in all sizes, shapes and materials. The use of pewter, brass and glass brought expenses down to a reasonable figure, while more ornate fashions prevailed among the wealthy. The oil receptacle was supported in some styles at the top of a slender column, as in Fig. 8. In others it hung from a rod. Many of the lamps made

wholly of glass were graceful and pleasing.

The lamps represented in Fig. 9 are to be seen in the house of Mr. Arthur West, of Salem. The small glass lamps at each side were made at a very early period, and are among



10—Lamps with Ground Glass Chimneys—Mrs. H. P. Benson's Collection

the oldest specimens in this country. The tall solar lamp belongs to the opening of the nineteenth century. The bronze lamps in Fig. 10 are from the collection of Mrs. H. P. Benson, of Salem. They show a favorite style of early ground-glass chimney. Ground glass was used for this purpose because our ancestors fancied that these lamps shed a glare too intense and dazzling for their taste. They did not live in the days of the arc light!

The richly ornamented specimen in Fig. 11 is

from the Salem home of Mr. Richard Stearns. This house, built more than a century ago, has remained in the same family ever since, as the daughter of Joseph Sprague, who built the house, married a man named Stearns. Joseph Sprague, the original owner of this handsome lamp, was a captain in the first uniformed company of Salem militia, and proudly wore his cap of black beaver, with its four ostrich feathers, his short green coat with gold trimmings, and his white underdress with ruffles over the hand. He claimed to be the first man in this section to shed blood in the Revolutionary War, as he was hurt in the skirmish at the time of Leslie's retreat, two months before the battle of Lexington.

An ornamental steel, upon which the flint was struck to make a flame, was employed before the introduction of the "lucifer" or "loco-foco" matches, about the year 1837. The use of flint and steel necessitated also the "tinder-box," with its store of charred linen, to catch the tiny spark as it leaped from the steel. Old-time

lights must have been of material assistance in the development of such necessary and standard virtues as patience and perseverance.



9—Lamps in the Collection of Mr. Arthur West, Salem, Massachusetts



11—Lamp in Mr. Richard Stearn's Collection

Water Parks

(Concluded from page 446)

the eight houses built on the sides of the canal. It would have been better if one-third of the marsh had been taken to fill on top of the sand after pumping it out, in order to make a little soil. The soil in a marsh, above the clay or sand which underlies it, is pure humus, and with proper enrichment makes good top soil.

It is very easy on the south shore of Long Island, for instance, to dig a lake either by excavating marsh or sand, and if the level is not much above the mean tide, it will fill with fresh ground water. The ponds in such a place should not be circular, but sinuous, more like lagoons than ponds. They should have many islands and many overgrown passages and short cuts from one broad place to another. The treatment of the banks is always a problem. Wooden dykes are very ugly and hard, and there they are inexcusable, because there are many shrubs which could be used to hold the bank more cheaply. Sod banks are very difficult to maintain in good order.

The button bush (*Cephalanthus occidentalis*) will grow in a foot or more of water. The sweet pepper bush (*Clethra alnifolia*) likes damp places, and there are many alders, willows and cornels which are suitable to plant at the edge of a lake. Besides these shrubs (and there are many others) the Pickerel weeds, *Sagittaria*, *Papyrus*, Sweet Flag, Irises, and other grasses, including the bamboo, can be used to soften the shore line.

There are two methods of planting such an artificial water park; one, and the best, in which the water is considered the main thing and the land between counts for nothing except that its thick foliage frames the stream. It is then a canoe park and its beauties are only to be enjoyed from the water. The other way attempts to bring land and water together in the scene—always a difficult matter when both are on the same level!

Paths leading through such a park usually necessitate bridges, which are expensive and may not be beautiful. The few paths which are necessary should be back from the water, leading from one sandy beach to another. Observation towers and rustic bridges savor of the beer garden.

The planting to be done on a reclaimed marsh is a little easier, because there the land is a hundred times as much as the water and both must be in the picture. In this case the planting would not be dense, as in the canoe park, but the trees would be single or in groups on the meadow and the banks of the stream would be left to take care of themselves. Elms can be planted in such a meadow and will not prevent one's feeling the large expense or from enjoying the flat horizon.

A small marsh where the boundaries can not be controlled entirely had better be planted more thickly, especially at the edges, but leaving enough of the broad meadow to keep the character of the place.





CORRESPONDENCE



The Editor of *American Homes and Gardens* desires to extend an invitation to all its readers to send to the Correspondence Department inquiries on any matter pertaining to the decorating and furnishing of the home and to the developing of the home grounds.

All letters accompanied by return postage will be answered promptly by mail. Replies that are of general benefit will be published in this Department.

Problems in Home Furnishing

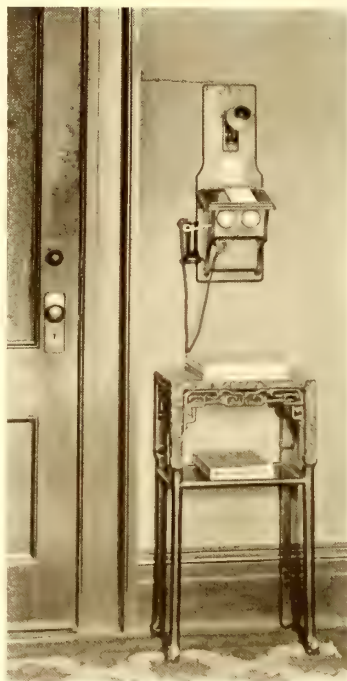
By Alice M. Kellogg

Author of "Home Furnishing: Practical and Artistic"

A SUITABLE TELEPHONE TABLE

"I HAVE had an unsuccessful hunt," writes R. C. B., a New England correspondent, "for an attractive looking, convenient shaped table to use in connection with my telephone. Something that could stand in the hall—which is rather small—and hold the telephone directory and, perhaps, the card tray. The Mission style I do not care for, and carved mahogany is too expensive; golden oak is too common. What else is there?"

As this query expresses quite a specific need of the times, an illustration is given of a pretty little stand in actual use below a telephone. This is made of Chinese teakwood, stained black, and costs eight dollars. It is seventeen inches across the front, twelve inches deep and thirty-two inches high. In shape, size and price it seems to exactly suit the conditions described by this correspondent.



A Hall and Telephone Table

A SCREEN FOR A BEDROOM

A Southern reader, L. M., of Memphis, writes: "I want to buy a new screen for my guest-room, but everything I see seems to be too heavy in style for a sleeping-room. What kind of screens are used in such a room, with white-painted woodwork and dainty wall paper?"

For a bedroom of this kind the prettiest screen would be of white-enameled wood for the frame, with the panels covered with chintz to match the wall paper. If it is not possible to match the paper, the screen may be covered with a plain linen taffeta, in the most prominent color in the wall paper. Or, if a pattern is preferred, a distinct contrast to the surrounding design may be chosen. Some new Japanese chintzes, thirty-one inches wide, at fifty cents a yard, are interesting for screen coverings.

FURNISHING A MAN'S ROOM

"How should the trim be painted in a bedroom where the furniture is heavy oak and the rug a dark olive green? The ceiling is nine and a half feet high, and the size of the room is about fifteen feet by sixteen feet. How to make this room, which belongs to the man of the house, dignified and, at the same time, attractive is perplexing one of your readers.—R. J. G."

To uphold the heavy lines of the furniture in this room, and also to do away with the idea of feminine decoration, the walls may be papered with a set pattern in greens, blues and yellows, painting the woodwork a dark olive green. The ceiling may be tinted with cream-white water color paint. For window curtains the lace now in use may be put aside and a thick yellow madras hung instead. The bed-cover may be of heavy linen, white, embroidered and hemstitched,

(Continued on Page x)

Garden Work About the Home

By Charles Downing Lay

DECORATION OF THE SUN PARLOR IN WINTER

"WHAT plants can be used in a sun parlor?" writes C. M., from Long Island. "It is not a conservatory with a glass roof, but an inclosed piazza, lighted only at the sides. There is steam heat, but sometimes in cold weather the temperature gets as low as 28 or 30 degrees, so that I can not grow the ordinary house plants, such as geraniums, primroses and calla lilies. Palms and other decorative greenhouse plants are, of course, quite out of the question."

The great difficulty about growing plants in such a room, aside from the occasional freezing, is the dry air. If the door to the house is open in the day time, the air will be as dry, or nearly so, as that of the house, and dry air is very hard for plants to endure.

If the sun room has a tile floor it will be easy to keep the air moist by frequent spraying and watering, but otherwise there should be open pans of water on the steam pipes and the evaporation from these will make a considerable difference.

There are many evergreen plants, as beautiful as palms though not in the same way, that can be used in such a room. They will not bloom perhaps until February or March, but they will at any rate take away the ordinary dismal bareness of the sun parlor in winter.

Standard or pyramid box trees in tubs are pleasing and will keep green and flourishing if properly watered.

Small rhododendrons and evergreen azaleas can be grown in pots and in the moist atmosphere should not lose their leaves, as they do so quickly in the house.

They should be potted in September and put in a shady, sheltered spot with leaves banked around the pots to prevent freezing, until December, when they are brought in the house and kept at the back of the room until the days begin to grow noticeably longer, say, the middle of February, when they can be moved near the windows. In a short time they should flower.

Of course, plants which are well set with flower buds must be selected, and if there is a cold pit to put them in before they are brought into the house that will be better and easier than the protection of leaves.

Almost any broad-leaved evergreen can be used in this way. Holly, any of the heath family, the evergreen thorn, evergreen roses and many others.

Other early flowering shrubs, such as the deutzia, lilac and forsythia can be treated in the same way, but will not be brought into the house so early in the year, as the light in December is hardly sufficient to make them grow well.

Evergreen ferns and other things can be collected in the woods in October, potted and brought into the house in December or January. They will not do well if they are brought in before that, as every plant must have some time for rest, which is only to be secured by keeping them outdoors or in the cold pit.

Bulbs grown in pans or flat boxes do excellently in a sun room, because they can endure much freezing after growth begins. Tulips, narcissi, hyacinths, crocus, etc., should be potted in early October and kept in a cool, damp cellar until December, when the earliest tulips are brought up. Every week or ten days a few more are brought to the light to give a succession of bloom.

If your cellar is warm and you have no pit or any place to bury the pans outdoors, they may be put on the cellar floor and covered with coal ashes, which will prevent their drying out.

It is a convenience to have all the bulbs in boxes of the same size, so that they can be changed about without trouble as the growth of the bulbs may require.

(Continued on Page xi)

and scillas. These are so easy to manage that it is merely necessary to plant and set them away for a few weeks, keeping them moist, and when they appear above ground bringing them to the light. If the scillas and white crocus are planted together in bulb pans the effect will be lovely and furnish a charming centerpiece for the dining table. As the scillas flower is somewhat later than the crocus they should be planted first in the center of the dish, using half a dozen bulbs, and two or three weeks later plant the crocus around the edge of the dish. The Pride of Holland, or the golden forty-flowered crocus, are the best to plant, as they will give a succession of fine flowers for weeks.

In planting bulbs for winter blooming one must not forget that cheerful little flower, the Bermuda Buttercup Oxalis. This is one of the most charming of winter bloomers, and may be planted at any time. One small bulb will cover a four-inch pot with bloom all winter, but they are at their best in hanging baskets, or in pots set on brackets in a sunny window, as the flower stalks droop over the edges of the pot very gracefully. They have, in addition to their charming color, a most delightful odor, and might be grown for this alone. The other forms of winter blooming oxalis, Duchess and the like, are much less certain of blooming. Oxalis, like the freesias, need no preparatory rooting period, but may be planted in good leaf mold and loam, and placed at once in a sunny window to grow. Freesias, especially, should have a good light from the start, as they are inclined to grow spindly. They should be given some support from the start and kept moderately moist.

Most of the other bulbs recommended by the florists are good to experiment with, and one will do well to try a few each year, for often an amateur will meet with success denied a professional, every one has some special plant with which they succeed or fail notably. Personally, I could never make the common ground myrtle (Perriwinkle) grow, and I know a florist who can not bloom the Eucharis lily.

THE NEW HYDRANGEA

ABOUT four years ago Mr. E. Y. Teas wrote me that a new hydrangea had been found, of immense importance. It was as great a bloomer as paniculata, while absolutely hardy, and beginning its bloom early in June. Old man as he is now, his enthusiasm was at boiling heat, and I could see him as he was at forty years of age when he originated those wonderful hybrid catalpas. He sent me a small bush, which I planted at Clinton in ordinary garden soil. This began to blossom when two years of age, and now it is absolutely covered with flowers from mid-June until winter. It is hardy as an oak, for twenty degrees below zero does not in the least affect it. Its form of growth is more easy and graceful than paniculata, bending over some of its limbs, but breaking out into bloom at every possible spot. It seems to me pretty nearly the most wonderful shrub that we have, and it is a native, found, I think, in Indiana. The readiness of this hydrangea to endure all conditions makes it likely that it will prove to be a good hedge plant. Bear in mind that Paniculata grandiflora does not begin flowering until September, and its growth is very stiff and brittle. The new variety grows readily from cuttings and can be propagated with great rapidity. It is already procurable from most of the high-class nursery-men.



ARE YOU GOING TO BUILD?

No matter what kind of a structure you contemplate building, it will pay you to post yourself on the advantages of concrete construction made with

DAILY
CAPACITY

ATLAS
PORTLAND CEMENT

OVER
40,000 BARRELS



CONCRETE RESIDENCE AT ELKINS PARK, PA.

A concrete building means protection from fire, vermin and decay—a building that is cool in summer and warm in winter, requiring no paint or repairs, yet permitting of pleasing architectural effects and color schemes. In most cases you will find concrete construction the least expensive in the beginning and in all cases the cheapest in the end. The success of concrete construction depends largely on the quality of the cement used.

ATLAS is the highest grade of Portland Cement manufactured.

This Company makes but one quality—the same for everybody.

Tell your architect to specify **ATLAS**.—Ask your dealer for it. You will know it by the Trade Mark.

Building Books FREE on Request

TRADE MARK

As a guide to prospective builders we have published the following books which will be sent FREE on receipt of postage.

Concrete Country Residences. Postage 25 cents.

Concrete Cottages. Postage 1 cent.

Concrete Construction about the Home and on the Farm. Postage 4 cents.

Reinforced Concrete in Factory Construction. Postage 10 cents.

THE ATLAS PORTLAND CEMENT COMPANY

Dept. 10, 30 Broad St., New York

None Just as Good



ATLAS—THE CEMENT ORDERED BY THE U.S. GOVERNMENT FOR THE PANAMA CANAL

SEND FOR OUR CATALOG, "HOME HEATING"

HOT-WATER HEATED \$198
by **ANDREWS SYSTEM** EACH



14 ANDREWS HEATERS IN ONE BLOCK

AVERAGE PRICE \$198

IT IS WELL WORTH READING

Paper Patterns for Heating Plants

About 40 years ago a man named Butterick made a business of cutting patterns for men's shirts. His wife suggested that patterns be made in similar manner for women's and children's clothes. He did this, and the result is the present tissue-paper pattern used in every home. By using these patterns any woman who can sew can save half the cost and make clothes fully as attractive and serviceable as she can get from a professional dressmaker.

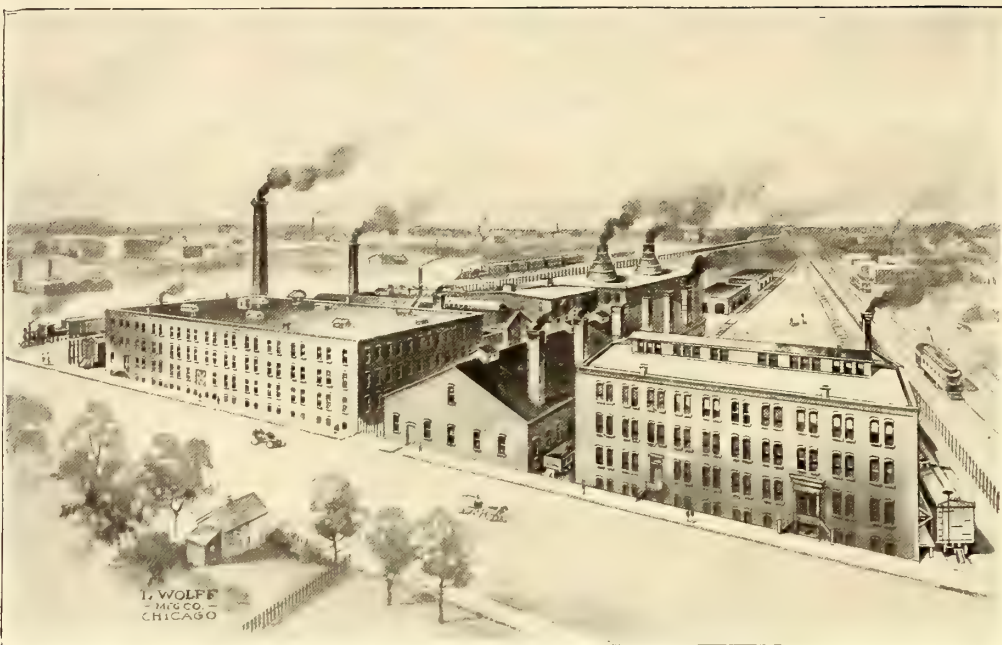
We make patterns for Heating Plants. Send plan or sketch of your house for exact estimate free. Our price will include best radiators, pipes cut to fit, fittings, valves, gold bronze, and the now famous Andrews Steel Boiler. Everything complete, ready for erection, with diagram and directions, so any man handy with tools can erect. Andrews Steel Boiler has double heating surface, requires less fuel, is simple, durable, easily cleaned, and needs no repairs. We furnish the hottest radiators (100 square feet

with the Andrews System will do the work of 150 feet with the others); perfect control secured by our Regurgitating Safety Valve and Group System of piping. We design, manufacture, guarantee and sell each plant direct from factory to user, giving you the lowest price for the value. Don't buy a heating plant, either water or steam, until you have sent for our catalog, "Home Heating," which explains fully how you can erect your own plant and save plumbers' charges. Send for list of our customers in your vicinity and examine their plants. We do it right in 44 States, Canada and Alaska. Plants guaranteed and sold on 360 days' trial free. (Remember we manufacture the most economical boiler, furnish the quickest circulation, hottest radiators and lowest price for the value.) Freight Rates Equalized. Cut out this ad. to-day, send names of other people going to buy and get full particulars. Old houses easily fitted.



ANDREWS HEATING COMPANY, 825 Heating Building, MINNEAPOLIS
783 LaSalle Building, CHICAGO

MANUFACTURERS CONTRACTORS CONSULTING ENGINEERS



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.

Denver

CHICAGO

Trenton

PROBLEMS IN HOME FURNISHING

(Continued from page 454)

with a spread laid over the pillow. By excluding the many useless articles that usually find their way into bedrooms, and hanging on the walls a few large pictures, the desired element of dignified interest will be attained.

QUESTIONS ABOUT WINDOW CURTAINS

Several letters this month show that there is considerable thought for winter comfort in home furnishing. D. W. writes: "What kind of a curtain would look well over my Brussels net? This room is my parlor, but I do not want anything fancy. The wall paper is ecru colored, and the carpet is two tones of green. Is madras ever used to hang over a lace curtain?"

As the real mission of an over-curtain is to draw at night to exclude drafts of air, the madras would not be suitable. As a suggestion for color, a mixed material in ecru and green would look well, if it could be obtained in the locality. Or, a self-woven tan goods, to follow the tone of the walls, would be right. There are new drapery fabrics brought out every fall by the manufacturers that are desirable for over-curtains.

Another reader, F. W. A., inquires about the merits of stenciled curtains. "I have read so much about decorating curtains with a stencil that I would like to hear from you if this process is suitable for a home that is furnished with considerable regard to artistic perfection."

From the conspicuous position that curtains take in the interior effect of a home, they necessarily demand a certain degree of excellence. This is not always attained by amateur efforts, and until a standard of execution is reached it would be better not to introduce this work in any of the formal rooms of the home. Some beautiful curtains are being designed and executed by experts in stenciling, and one of their advantages is in bringing into the furnishings an article that can not be duplicated.

COLOR SCHEME FOR A LIVING-ROOM

L. A. D., of Wisconsin, asks about a color scheme for a living-room which she wishes to furnish for service and comfort. "Restful, but not lacking in character. I rather like gray," she writes, "but you may have something better to suggest. I also lean to browns and tans, if these would not be too warm for a southern exposure. I want some hints for my fireplace tiles that would be out of the ordinary, and I would be willing to expend an extra amount to make this part of the room interesting. The woodwork is oak, but I imagine it may be stained any color. Would you advise green? The color for the coverings of window-seat cushions is also another perplexing question. I do not want velvets, plushes, or that kind of material in this room, as it is a real living-room, to be lived in every day and every evening by all the family. I know the influence that colors have in a place of this kind, and, therefore, would appreciate any help you can give me."

As this correspondent is willing to avoid the popular, accepted ideas, the color scheme proposed for this room could be built up on blues and browns, introducing green as a subsidiary color. The woodwork may be stained a medium shade of oak, not as dark as weathered and not as light as golden, and a rug made for the floor of a brown and dark blue carpeting. As there is so much light for this room, the walls may be covered with a brown or gray English paper. The curtains may be of heavy ecru net, with the hems drawn and finished with spider-web stitch. Over these curtains dark blue rep curtains may be arranged to

The "GLOBE"

IS BUILT ON HONOR
& SOLD ON MERIT



THE "GLOBE" VENTILATOR

IN GALVANIZED IRON, BRASS AND COPPER
ALSO WITH GLASS TOPS FOR SKYLIGHT

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. Smoky Chimneys Cured

"Globe Ventilated Ridging"

Mfd. by GLOBE VENTILATOR CO., TROY, N. Y.

The SCIENTIFIC AMERICAN BOY

By A. RUSSELL BOND

12mo. 320 Pages. 340 Illustrations. Price, \$2.00, Postpaid.



STORY OF OUTDOOR BOY LIFE, suggesting a large number of diversions which, aside from affording entertainment, will stimulate in boys the creative spirit. Complete practical instructions are given for building the various articles. The book contains a large number of miscellaneous devices, such as scows, canoes, windmills, water wheels, etc.

MUNN & CO. Publishers of "SCIENTIFIC AMERICAN" 361 Broadway, New York

draw at night. If a trimming is desirable for these curtains a band of antique galloon may be sewed down the sides and bottom. The cushions in the window seats may be covered with mahogany-colored corduroy, which has not the objectionable smoothness of the velvet or plush. On the pieces of furniture that are to be upholstered without tufting, a foliage tapestry may be used, in a mixture of colors in which greens and blues predominate. On the tufted furniture an olive green material would look right. A point of attraction could be made at the fireplace by facing the front with Moravian tiles. Lamps or low lights, books and pillow covers may then be selected for their rich tones, showing to advantage against the more subdued colors of the background.

PICTURES AND FRAMES

From a Brooklyn, N. Y., reader, J. D., the selection and framing of pictures is inquired about. "What pictures shall I buy for my hall and how must I frame them? The woodwork is dark brown, and there is very little light. Should the frames match the woodwork? In the bedrooms the woodwork is white and the walls are tinted in light colors, blue, pink, yellow and green. Would white enamel frames be right in these rooms? My living-room has mahogany finish with a two-toned olive green paper. Please give me an idea of what subjects to choose for the different rooms."

The chief thought in framing pictures is to surround the tones of the picture with a harmonious line. The mistake is often made of giving an independent character to the frame, without regard to its really secondary part. It is also necessary to suit the frame to its position. In the non-observance of these two rules lie the many mistakes one sees in the framing of pictures.

For the rooms described by this correspondent, the conditions of light and woodwork would be considered, and to relieve the gloom of the hall some oak frames gilded would be a help. In the bedrooms a plain gold molding or white enamel would look well. In the living-room some of the new mahogany veneered frames would be suitable. (Of course, these ideas would depend upon the picture itself.)

Too little attention is paid to the selection of pictures, and very often there is a superabundance in small rooms. The feeling of space is lost by this overcrowding and the interest is not focused in any decisive way. One also finds the same assortment of pictures in different homes and wearies of seeing Queen Louise coming down the stairs, the prayerful attitude of Millet's "Angelus," or the portrait head of the Countess Potocka.

So many progressive ideas have been reached in color printing that one does not need to buy the old-time chromos to have delightful pieces of color on one's walls. The magazines often publish full-page color prints that, properly framed and matted, contribute an almost water-color effect to the home.

GARDEN WORK ABOUT THE HOME

(Continued from page 454)

If there is not a tile floor, zinc or galvanized iron pans should be made, of the right size to hold the boxes. These can be put on a temporary shelf or portable stand.

Euonymus radicans and English ivy in pots are good evergreen vines to use on the walls or around the windows.

If the tile floor is laid directly on the earth it would be possible to take up a couple of tiles and plant the vines directly in the ground. They can then be permanently trained against the wall or on the ceiling.

¶ The soft, rich colors in the brickwork of

An English Country House

add the Hall Mark of gentility to its quaint outlines.



¶ American Home Builders can secure all the charm of Old-World brickwork, by using **TAPESTRY BRICKS**.

¶ **TAPESTRY BRICKS** have the texture, finish and beautiful shadings of the best bricks manufactured abroad.

Illustrated literature and samples on application.

FISKE & COMPANY, Inc., 175 Fifth Avenue, New York



STEEL CEILINGS

For Effectively
Decorating All
Kinds of Rooms

YOU CAN GET THEM IN



Appropriate Designs for Residences, Business Rooms, Auditoriums, Etc.

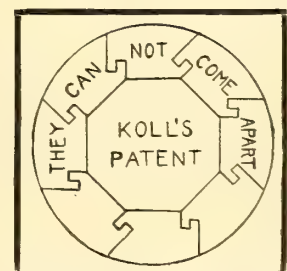
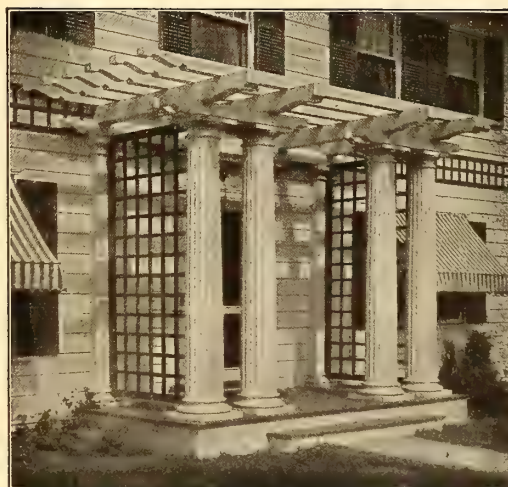
¶ Largest and most complete line of artistic STEEL Ceilings in existence. Covers the field so completely you can get just what is required, whether bold or elaborate designs or something comparatively simple.

¶ Before buying a Steel Ceiling of any description, get full details of Berger's "Classik."

ASK FOR CATALOG D-64

The Berger Mfg. Co., Canton, Ohio

New York Philadelphia Boston Chicago
St. Louis Minneapolis San Francisco Atlanta



KOLL'S PATENT Lock-Joint Columns

Suitable for Pergolas, Porches
or Interior Use
are made exclusively by

HARTMANN-SANDERS COMPANY

Elston and Webster Avenues, CHICAGO, ILL.

Eastern Office, 1123 Broadway, NEW YORK

Send for Catalogue A-19 of Columns, or A-29 of Sun-dials, Pedestals, etc.



One Policy One System Universal Service

THAT the American public requires a telephone service that is universal is becoming plainer every day.

Now, while people are learning that the Bell service has a broad national scope and the flexibility to meet the ever varying needs of telephone users, they know little of how these results have been brought about. The keynote is found in the motto—"One policy, one system, universal service."

Behind this motto may be found the American Telephone and Telegraph Company—the so-called "parent" Bell Company.

A unified policy is obtained because the American Telephone and Telegraph Company has for one of its functions that of a holding company, which federates the associated companies and makes available for all what is accomplished by each.

As an important stockholder in the associated Bell companies, it assists them in financing their extensions, and it helps insure a sound and uniform financial policy.

A unified system is obtained because the American Telephone and Telegraph Company has for one of its functions the ownership and maintenance of the telephones used by the 4,000,000 subscribers of the associated companies.

In the development of the art, it originates, tests, improves and protects new appliances and secures economies in the purchase of supplies.

It provides a clearing-house of standardization and thus insures economy in the construction of equipment, lines and conduits, as well as in operating methods and legal work—in fact, in all the functions of the associated companies which are held in common.

Universal, comprehensive service is obtained because the American Telephone and Telegraph Company has among its other functions the construction and operation of long distance lines, which connect the systems of the associated companies into a unified and harmonious whole.

It establishes a single, instead of a divided, responsibility in inter-state connections, and a uniform system of operating and accounting; and secures a degree of efficiency in both local and long distance service that no association of independent neighboring companies could obtain.

Hence it can be seen that the American Telephone and Telegraph Company is the active agency for securing *one policy*, *one system*, and *universal service*—the three factors which have made the telephone service of the United States superior to that of any other country.

American Telephone & Telegraph Company

The Only One of Its Kind : Humorous : Artistic : Satirical : Dainty : Literary

If You Are a Person

of culture, refinement or intelligence, or all three, you cannot afford not to know LIFE.

If you have a sense of humor, you should see it every week.

Perhaps you know LIFE slightly.

Perhaps you don't know LIFE at all.

To get acquainted all you have to do is remit one dollar to Life Publishing Company, 40 West Thirty-first Street, New York City. It will bring LIFE to you every week for three months and will cost you **Only One Dollar**.

The conditions of this SPECIAL OFFER are:

It is open only to new subscribers.
The subscription must come to us direct; not through an agent or dealer.
It must reach us before January, 1909.
No subscriptions will be renewed at this rate.
Foreign postage 26c., Canadian, 13c. additional.



GAME COVERTS

A. F. D.—To make your Connecticut pastures into good game coverts you might plant shrubs which hold their berries through the winter, thus providing a good supply for the birds, and giving them protection from snow and cold and from wild animals. Bushes with thick branches help to keep the snow off the ground so that the birds can find shelter, and their tangled branches make it harder for foxes to crawl through. They also make warm places for nesting and for the protection of the young birds.

You might try planting seed in the spring, or you could buy small plants and set them out six or seven feet apart.

The following is a list of shrubs which bear an abundant supply of berries: *Cornus paniculata*, *C. stolonifera*, *C. sericea*, *C. florida*, *Ilex verticillata*, *Rhamnus catharticus*, *Viburnum acerifolium*, *V. dentatum*, *V. molle*, *Pyrus arbutifolia*, *Crataegus*, in variety, *Berberis vulgaris*, *B. thunbergii*, *Lonicera* in variety. You should also plant groups of pines and hemlocks for further protection, and a few oaks and beeches might be useful.

STREET TREES

J. I. D. B., Westchester County.—Oaks seem to me far the best trees to plant along the roadside. They are perfect shade trees, having few diseases or insects and making a comparatively small amount of litter on the ground.

Their growth is not as slow as people suppose—a supposition which originated perhaps because a tree which is known to reach a great age must take a long time to grow, and therefore must grow slowly! Actually, the trouble is this, that an oak tree is much more difficult to transplant than a maple and the shock of transplanting, when it is poorly done (as it is usually), is greater to the oak than to the maple.

Eminent authorities claim that the oak does grow as fast as the maple when properly transplanted. Certainly the annual growth of a young oak, as seen on the butt of a tree that has been cut, is as great as that of a sugar maple.

I have on my place a black oak and a sugar maple which were planted in the same year and are now of equal size. But even if the oak should not grow as fast, is it not worth waiting for?

There are twenty-two varieties of native oaks, but of these the following ten are the best for use here: *Quercus rubra*, red oak; *Q. palustris*, pin oak; *Q. coccinea*, scarlet oak; *Q. velutina*, black oak; *Q. alba*, white oak; *Q. minor*, post oak; *Q. macrocarpa*, mossy cup oak; *Q. plantanoides*, swamp white oak; *Q. prinus*, rock chestnut oak; *Q. acuminata*, chestnut oak.

Any of them may be planted in good soil, but for dry ridges it will be safer to use the scarlet, post, or rock chestnut oak. The chestnut oak grows naturally on dry limestone ridges. For low ground the swamp white, mossy cup, or pin oak will be found best. The white oak I think the finest tree; next to that the post oak, mossy cup and swamp white. These all have leaves with light back and rounded lobes on the leaves.

In the class with pointed lobes on the leaves I prefer the scarlet oak, after that the pin, red, and black.

Of these the pin oak is the easiest to get in nurseries and the easiest to transplant.

The chestnut oaks are seldom planted, yet they are noble trees and should be very useful.

For special purposes some of the other twelve varieties may be found desirable, and in large collections other species and horticultural varieties will be used in moderation.

Take off your Hat to the
Write for Circulars and Prices to
F. E. MYERS & BRO.
 Ashland, Ohio

THE PUMP THAT **PUMPS** **HAY** **TOOLS** **BARN DOOR** **HANGERS** **MAT RACK** **CLAMPS**

WIZARD BRAND
1 BARREL EQUALS
4 WAGON LOADS
STABLE
MANURE

Sheep Manure
 Kiln dried and pulverized. No weeds or bad odors. **Helps nature hustle.** For garden, lawn, trees, shrubs, fruits and house plants.
\$4.00 LARGE BARREL, Cash with Order. Delivered to your Freight Station.
Apply now.
 The Pulverized Manure Co., 21 Union Stock Yards, Chicago.

Keep Your Cellar Dry

No excuse now for wet cellars. Send stamp for Catalogue E, with full instructions, prices and testimonials.
 Neal Farnham, Inc., Engineers, 1 Madison Ave., New York

PLANTING NEAR THE HOUSE

H. W., Pennsylvania.—Your scheme for a retaining wall, instead of the grass slope, in front of your house is a good one, and I also approve of closing the path which leads straight from the sidewalk, up a long flight of steps, to the front door, and having instead a few steps from the end of the piazza to the driveway at the side of the house.

There is no reason for having so many front entrances to a place—a driveway to the end of the piazza is more convenient for the occupants of the house and for the visitors who come in carriage; for those who walk the distance is no greater. No one objects to walking on a smooth macadam road.

At the top of the retaining wall you will want to plant vines to hang over; *Rosa wichuraiana* would be good, or you might use English ivy or Virginia creeper. The evergreen *Euonymus radicans* planted at the bottom will grow up, clinging to the wall and mingle prettily with the rose.

If you get earth enough in digging the foundations for the retaining wall you might widen the terrace in front of the house, sloping the earth at the same angle that it is now to meet the top of the wall. A privet hedge planted at the top of this slope would, of course, be at the edge of the terrace.

The sloping bank between the hedge and the top of the wall might be planted with low shrubs, such as *Stephanandra flexuosa* or *Berberis thunbergii*, or even wild roses. Any of these would be pretty and would need less care than a turfed bank.

The privet hedge will screen all the terrace and most of the piazza from the street and give sufficient privacy for afternoon tea or bridge.

A formal tree or two, like the cedar or clipped box, or even a magnolia, might give interest to the terrace.

The strong horizontal lines of the wall and hedge will be a distinct aid to the architectural effect of the house.

Close to the house, to screen the foundations, you might plant rhododendrons and ferns; or if you prefer deciduous shrubs use the bush honeysuckle (*Lonicera tartarica morrowi*, etc.) on the sunny side and *Philadelphus* on the shady sides. Vines on the piazza and the house would be nice—*Clematis* and *Akebia* are beautiful and need not cut off much light in winter.

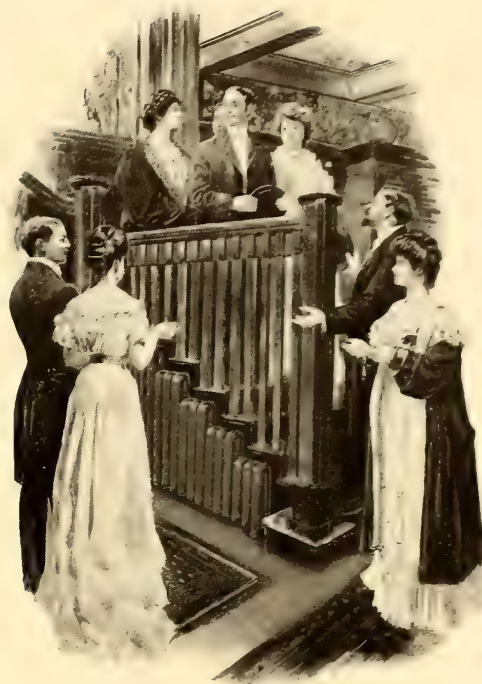
GETTING READY FOR WINTER

By E. P. Powell

NOVEMBER brings the country home face to face with winter, and now the problem is to get good and ready before the zero weather. The latest jobs are likely to be (1) clearages in the orchard and potato fields; (2) husking; (3) gathering

A warm home makes happy guests

To put the hostess at her best and the guests at their ease, modern hospitality requires that the home shall be comfortably, healthfully, and cleanly warmed. All heating methods other than Hot-Water and Low-Pressure Steam are rapidly passing out of fashion. At the present attractive prices, and the many economies and benefits brought about through their use, no home-lover need longer put off the purchase of



Illustrates special shaped Stairway Radiator



ADVANTAGE 16: IDEAL Boilers are so well controlled by automatic draft and check dampers that there is no overheating or fuel waste in maintaining a low fire for the chill days of early Fall and Spring.

AMERICAN & IDEAL RADIATORS & BOILERS

for Steam and Hot-Water warming. Those who newly build cannot afford to put in anything but IDEAL Boilers and AMERICAN Radiators.

Nor can owners of OLD homes neglect to modernize their property with these comfort-producing outfits. When the time comes to sell or rent, these Hot-Water and Low-Pressure Steam outfits assist to bring quicker transaction at a better price—owner gets full money back. Thousands are moving each year into new homes, houses, flats, offices, or stores, solely to enjoy the comforts, conveniences, fuel economy, and labor-saving of these outfits. Ever hear of any one of these wanting to go back to the use of old-fashioned heating methods?

With IDEAL Boilers the indoor weather is made just what you want it to be—no matter what it is outside, calm or storm, day or night. Whether your building is OLD or new, small or large, farm or city, send for our free valuable booklet, which will make you a better judge of heating values. Seven cold months ahead! Write, telephone, or call today.

Sales Offices and Warehouses throughout America and Europe.

Dept. 6

AMERICAN RADIATOR COMPANY

CHICAGO



THE GORTON QUICK-OPENING RADIATOR VALVE

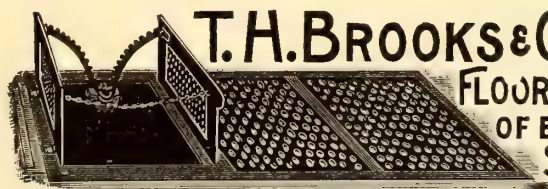


CAN BE USED WITH ANY LOW PRESSURE STEAM, VAPOR OR VACUUM SYSTEMS OF HEATING. ONE-THIRD OF A TURN OF THE LEVER HANDLE WILL OPEN OR CLOSE THE VALVE

Send for Prices

GORTON & LIDGERWOOD CO.

96 LIBERTY STREET, NEW YORK



T. H. BROOKS & CO. CLEVELAND, O.
 FLOOR & SIDEWALK LIGHTS.
 OF EVERY DESCRIPTION.
 SEND FOR CATALOGUE.

leaves and making compost piles; (4) trimming and cutting canes in your berry gardens; (5) caring for drainage, to prevent the wash of soil in the winter; (6) marketing what surplus is on hand, and preparing a cold stor-

age for that which is not finding ready sale. Now all of these things are of importance in any and every country home, although most of them are neglected or entirely omitted.

As to clearages, I wish to place very strong

To Good Housekeepers!

Dear Madam:—

A SHABBY piece of furniture never *looks* worth sending out to be refinished—It really *is* worth it. You forget that it isn't the *wood* that is worn—it is the *finish*.

Replace the *finish*—the piece is as good as new. When you do this yourself, the expense is slight and the labor nothing.

You must first *remove* the old finish. Varnishing over it looks *cheap*—shiny—home-made.

The old finish is a coat. Johnson's Electric Solvo takes this off quickly, easily. The piece is then left "in the white"—new wood—to be finished as *you* like.

Choose one of Johnson's Wood Dyes (14 shades). A shade to suit you. If too dark, add alcohol, if not dark enough, add our Flemish Oak Dye, No. 172.

You'll find the dye thin like water. It enters the wood pores evenly—it brings out the beauty of the grain—the lights—the darks.

JOHNSON'S
ARTISTIC WOOD FINISHES
JOHNSON'S

You cannot make a "spotted" job if you try. It contains no varnish to *cover* the beauty of grain. It is a dye that accentuates the effect you want. Each shade is always the same.

The finishing is equally simple. Johnson's Prepared Wax is pastelike. It is applied with a soft cloth. It dries instantly. Rubbing with a dry cloth then gives a velvety protecting finish of great beauty.

The same treatment will refinish your *woodwork* and floor. This is worth your consideration for Johnson's Wood Finishes do not mar, scratch nor peel.

Every paint dealer carries these three simple necessities—Johnson's Electric Solvo—Johnson's Wood Dyes—14 shades—30c and 50c—Johnson's Prepared Wax—10c and 25c.

48-Page Illustrated Book Free—
Edition AH-11

Our text book on "The Proper Treatment for Floors, Woodwork and Furniture," will be sent you or your friends free for your names and addresses.

S. C. JOHNSON & SON, Racine, Wis.

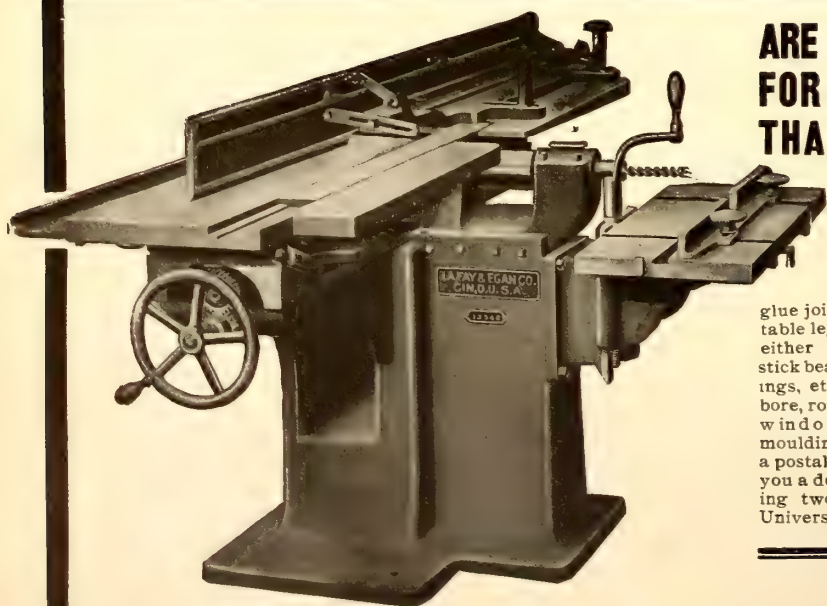
"The Wood Finishing Authorities"

emphasis on this matter of waste. Driving about among the homes and farmsteads, I do not find many exceptions to the general rule that there is enough waste in orchards and fields to prevent all the bankruptcies, and to add a neat little bank account. Take a look along the roadside first, and you will see that there is aftermath in sight, enough to keep up the milk flow of at least one cow for each home all through the country. The fact is, this is the very best possible feed for milk production, unless it be early June-cut hay; but instead of cutting it, the owner of the cow, or cows, lets it winterkill, while he buys mill stuff. The result is a good bill to pay and a lessened income. Take a look in your orchard, and you will see that there are many bushels of fruit left on the trees, and more bushels wasted on the ground. My rule is that not one apple shall remain—neither stored for sale or for home use, or, if inferior, turned to cider. No one should own more fruit than he can care for, or, in other words, he should thoroughly care for all that he possesses.

Now go into the corn fields, and you will find that Mr. Putoff has a very large family everywhere, and that the husking of corn, instead of being wound up in October, has been delayed, until the stalks are nearly ruined, so far as feed value in concerned, and the corn itself not a little molded. Hens, rats and mice have put their work in, and this has depreciated the value of the corn crop from one-fifth to one-third. I suppose that some people would put off husking until July of the next summer if the winter delayed as long. At all events they will sit down to strip off the husks in the cold wet November, and themselves suffer as badly as their crops. Nearly all of this delay can be avoided by keeping a memorandum of all the work to be done, little items as well as large, and seeing to them exactly when they should be done.

I have made an item of gathering autumn leaves. I mean by this that nature works all summer to prepare for us a storage of soil stuff—material out of which to make humus first and then permanent soil. Leaves represent one of the most important items of property, and one of the most valuable crops that nature can give us. To burn them up is to send back the equivalent of thousands of tons of commercial fertilizer into the air. This is done heedlessly, but it is all the same a terrible loss. The little pile that you may burn stands for only a small sum of cash, but if you will take pains to gather autumn leaves and put them into compost with your winter manures, and then add to these compost piles all the weeds and waste of next summer, you will have by next November a mass of the most valuable plant food—far ahead of the best commercial fertilizers. The latter can only be used as a kind of stimulant, and used once. But your compost piles, costing next to nothing, add immensely to the wealth of your soil—because they can not only be used once, but are of even more value after that—meanwhile serving as humus and cover crop; that is, all this stuff helps to equalize the temperature of the soil. The very first law in agriculture and horticulture is to increase the humus.

November brings us to the time most convenient for doing a large amount of trimming, training, and putting in order. I am frequently asked if it will do to trim apple trees in the winter. It will do no harm at all to cut all the suckers out of your trees, and at the same time remove decayed limbs. This stuff should be burned up, not left to be rubbish in the way of culture. If you have berry gardens, you probably have not yet entirely cleaned them up. The old canes must be gathered, and they also should be burned. The wiring of your trellises and berry gar-



ARE YOU LOOKING FOR A MACHINE THAT WILL

plane out of wind, surface straight or tapering, rabbet door frames, rabbet and face inside blinds, joint, bevel, gain, chamfer, plow, make glue joints, square up bed posts, table legs, newels, raise panels, either square, bevel or ogee, stick beads, work circular mouldings, etc., rip, cross cut, tenon, bore, rout, rabbet, joint and bead window blinds, work edge mouldings, etc.? If so, drop us a postal card, and we will send you a descriptive circular showing two views of our No. 62 Universal Wood Worker.

Write
209-229 WEST FRONT STREET
J. A. FAY & EGAN CO.
CINCINNATI, OHIO

No. 62. UNIVERSAL WOOD WORKER

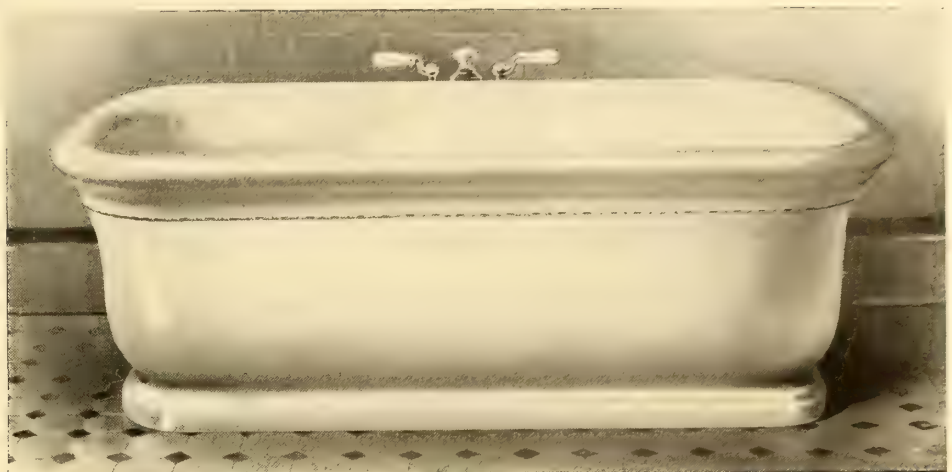
dens should be looked over and staples replaced. If you have grown vines on your house and barn, as I have advised, see that these are all in perfect order for next year's growth. Now go into your vineyard and trim your grapes, laying down the vines at the same time. The vines that must be covered I can not recommend, although I do a little of this sort of work myself. Dutchess and Goethe and Iona require and deserve such extra care, but you are probably growing Worden and Niagara and Brighton and Hayes and Agawam, which do not need covering. When vines are quite young it is well enough to hill up about them with compost or soil. Now go into your flower garden and trim your roses. If you live far enough to the north you can afford to cover a few of these—at least lay over them limbs of evergreens. In this trimming business keep your saws and shears away from your evergreen trees. An evergreen tree should stand like a pyramid flat on the ground. It can be headed in for a few years to make it compact, but never sheared. If you have evergreen hedges be sure they are not trimmed until spring.

There is a special sort of drainage necessary at this time of the year, especially if you live on a hillside. You must get ready for freshets and a surplus of water when the thaws come. Study your ground and cut little surface ditches which will catch the water quickly and throw it into larger ditches. The importance of this matter can hardly be overestimated. Land is impoverished with great rapidity where it is allowed to wash. The best soil goes down into the valleys, until the land becomes a rock pile or a clay heap. There is no sense in putting on manures every year only to have them washed off by the rains. I have watched the denudation of knolls and slopes, and carefully measured the loss. It is annually from two to six inches. This can be entirely prevented by studying the lines of wash, and just as freezing weather comes on, opening temporary ditches. Underdraining, if thorough, will, of course, do a good deal of this work, but the superficial ditches will still be necessary.

I do not consider a country home any way complete without cold storage. This does not mean a costly building, arranged for an entirely equable temperature. It is not difficult to have a cheap storage place that will serve quite as well as elaborate buildings. The trouble is that storage in our ordinary cellars has become impossible since the advent of furnaces. Potatoes are dried up so that the shrinkage becomes one-fifth of the bulk. Apples can only be stored at a loss of so many that one can scarcely keep a kitchen supply. Those that do not decay are shriveled and flavorless. I prepared a cellar under my carriage house, connected with my barn, by building very thick stone walls, absolutely frost proof. Through this an underground ditch runs, keeping the air moist, but not molding. This cellar is thoroughly ventilated all summer, but when the apples and vegetables are once in storage, it is closed entirely for the winter; opening it only as we need to take our stock to market. The temperature is kept at about thirty-four degrees, just above freezing. Over the floor above is spread a liberal supply of autumn leaves. Out of this the apples come in May and June without the slightest shrinkage, and with very little loss from decay. The expense of such a cellar is trifling, and the advantages are very great.

During November the market wagon is in continual call, and my custom is to close up stock as closely as possible, although my storage is good. If the market price is any way reasonable, accept it. Let each year take care of its own troubles, and not run over into the next.

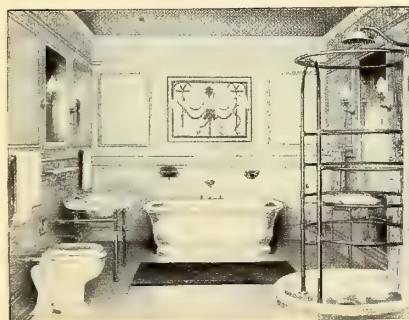
MOTT'S PLUMBING



THE ALHAMBRA BATH—A type of Mott's Imperial Porcelain

TO MEET every requirement of bath-room equipment, we manufacture a complete line of both Imperial *solid* porcelain and porcelain *enameled* fixtures. While each has its definite field of usefulness, the great superiority of Imperial *solid* porcelain is fully recognized.

Mott's Imperial and Vitreous Porcelain are the most advanced products of sanitary science. Fired in the kiln under a heat that would *fuse* metal, its beautiful white china surface is unstainable, non-absorbent and wear-resisting. Ask your plumber or architect.



THIS small illustration of our Florentine Bathroom is reduced from our book,

"MODERN PLUMBING"

which shows 24 such model interiors ranging in cost from \$85 to \$3000. Detailed illustration and description of each separate fixture is given with costs and valuable general information regarding tiling and decoration. "Modern Plumbing" will be sent free on application.

THE J. L. MOTT IRON WORKS
1828 :: EIGHTY YEARS OF SUPREMACY :: 1908
FIFTH AVENUE AND 17TH STREET NEW YORK CITY

The Artistic Value of Hardware

There is a value in hardware fittings far beyond actual cost or mere utility—a lasting decorative value that cannot be overlooked by the home builder. The possibilities for effective ornamentation in hardware are many—and find their greatest expression in

Sargent's Artistic Hardware

Wide variety assures you whatever your individual taste may dictate—every design carrying with it the same reputation for durability and satisfaction.

Sargent's Book of Designs—Free

Contains illustrations and descriptions of over seventy beautiful styles, besides numerous suggestions to home builders, etc.

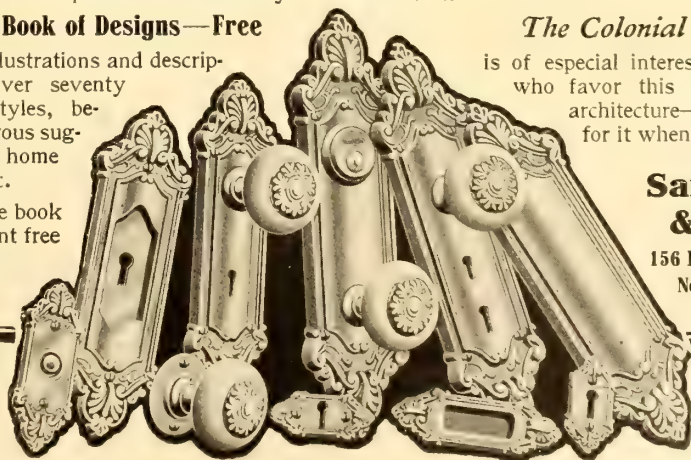
A valuable book to you—sent free on request.

The Colonial Book

is of especial interest to those who favor this scheme of architecture—free. Ask for it when you write.

**Sargent
& Co.**

156 Leonard St.
New York



THE NAME



Bissell

On a Carpet Sweeper

Insures Easy, Thorough Sweeping

To use tallow candles for illuminating purposes today would be no more absurd than to use a corn broom for sweeping fine carpets or rugs. Would you use a harsh whisk broom to brush a delicate fabric of silk or satin? We are confident you wouldn't.

Then why use a harsh corn broom for sweeping a fine carpet or rug? A corn broom is positively destructive to fine carpets or rugs, to say nothing of the fact that it doesn't sweep clean. After you've swept with a broom, the BISSELL will follow and gather an immense quantity of fine dust and grit.

Once you use a BISSELL you will never be without one, and don't forget its economy, as it will outlast fifty corn brooms. Sold everywhere—Prices, \$2.50, \$3.00, \$3.25, \$3.50, \$3.75, \$4.00, \$4.50, \$5.00, \$5.50, \$6.00, \$6.50. Send for free booklet.

Buy a Bissell "Cyco" Bearing Sweeper now of your dealer, send us the Purchase slip within one week from the date of purchase, and we will send you a neat, useful present FREE.

BISSELL CARPET SWEEPER CO., Dept. 125
Grand Rapids, Mich.

(Largest and Only Exclusive Carpet Sweeper
Makers in the World.)

3818



The expense and annoyance of painting will not recur every year or two if you use

DIXON'S SILICA-GRAPHITE PAINT

the "Proven Shield for Steel Work." Durability records in all climates; write for a few.

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.

Three Great Stories

THE CUB REPORTER—By Rex E. Beach. (Our Fiction Editors call this the strongest story of the year.) To all the mystery of a swift detective story is added the warm human qualities of an attractive boyish hero. It will rank as one of the few perfect newspaper stories—all motion and speed like newspaper life itself. It is a story that falls into place with Richard Harding Davis's "Gallagher" and Jesse Lynch Williams's "The Stolen Story."

McGENNIS'S PROMOTION—By Rowland Thomas. With a vivid story-telling gift the author has effectively dramatized "The White Man's Burden" and expressed it in human terms. He pictures the natives, part devil and part child, reaching out beseeching hands to the strong White Man who is in charge of their little cross-section of chaos, and when the call comes to him to go to a larger job his people are broken-hearted. But most broken-hearted are the tiny girls whom he has been teaching and to whom he has been telling stories.

HE ALSO SERVES—By O. Henry. A tale of a heathen god, dead and turned to stone, who comes to life as his beloved approaches. The scene is laid in a ruined temple on a far-off island, and has an undertone of romance and dead religions—and yet it is told in Bowery cocktail slang. It gives the effect of a funeral march played on a banjo. It is just one more of O. Henry's perfect stories, wherein he strikes the bull's-eye while he is looking the other way and shooting over his left shoulder.

Illustrated by noted artists, these stories will be published complete in the November Fiction Number, issued October 31, and on sale everywhere during the entire month of November for Ten Cents



Collier's
The National Weekly



Green Corn In Mid-Winter

Think of that! That's what Kornlet means. Just the luscious, nourishing heart of the corn kernel—husked, hulled, packed and hermetically sealed in six hours from the time of plucking.

Kornlet

is *not* canned corn. If it was you couldn't begin to prepare it in so many tasty ways. You can have it a new way every meal.

Look for recipes on every wrapper. Valuable book of recipes sent free on request.

If your grocer hasn't Kornlet, write us.

THE HASEROT CANNERS CO.,
CLEVELAND, OHIO,
U. S. A.

*The
Heart
of the
Kernel*

Van Dorn Iron Works Co.

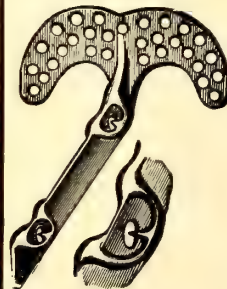


PRISON, HOUSE &
STABLE WORK

JOIST HANGERS
LAWN FURNITURE
FENCING, ETC.

CLEVELAND, OHIO

STANDING SEAM ROOF IRONS



PATENTED

CLINCH right through the standing seam of metal roofs. No nails are needed unless desired. We make a similar one for slate roofs.

Send for Circular

Berger Bros. Co.
PHILADELPHIA

A New \$1 Offer—"KEITH'S"



for six months and a copy of my new
Book 100 Plans

BUNGALOWS—COTTAGES
for attractive Homes
costing \$1000 to
\$4000. Keith's

monthly magazine is the recognized authority on Planning and Decorating Homes. Each issue gives several designs by leading architects. \$1.50 year. News-stands 15c. copy.

With each \$1 order I will also include 2 recent back numbers. Send to-day.

MAX L. KEITH, 406 Lumber Ex., Minneapolis, Minn.

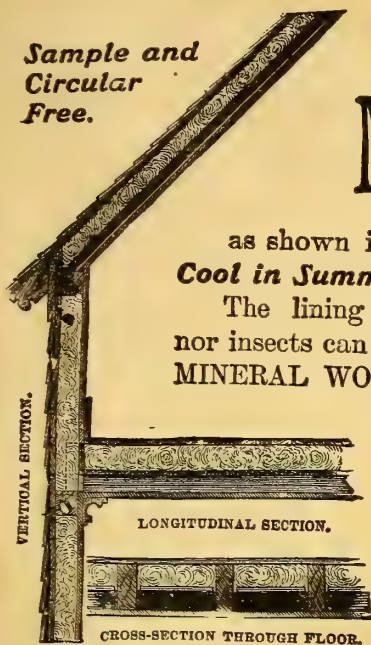


American
Homes and Gardens
and
Scientific American

To one address \$5 per year
Regularly \$6



Sample and
Circular
Free.



A House Lined with Mineral Wool

as shown in these sections, is *Warm in Winter,
Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice,
nor insects can make their way through or live in it.
MINERAL WOOL checks the spread of fire and keeps
out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.
140 Cedar St., NEW YORK CITY.



The exquisite beauty of line and form shown in the light-
ing instruments of our forefathers has led to the use of
many a beautiful old lamp, even in our modern homes.

For the protection of our clients, our trade-mark will
be found on each and every piece of work made by us

The Enos Company
MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
San Francisco, 1748 California Street
Toronto, 91 King Street, West
Pittsburg, G. P. Norton, Penn at 4th St.
Chicago, W. K. Cowan & Co., 205 Michigan Blvd.
NEW ENGLAND REPRESENTATIVES
BIGELOW, KENNARD & Co., BOSTON



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING RUBBER, TILING

An Ideal Floor Covering for Court
Houses, Banking Institutions, Churches,
Hospitals, Libraries, Business Offices,
Restaurants, Vestibules, Elevators,
Kitchens, Laundries, Pantries, Bath-
rooms, Steamships and Floating Pro-
perty generally.

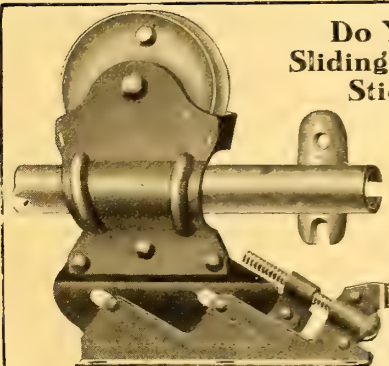
We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
ST. LOUIS, MO.: 218-220 Chestnut Street
PHILADELPHIA, PA.: 118-120 N. Eighth Street
SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
Oakland

BOSTON: 232 Summer Street
BALTIMORE, MD.: 114 W. Baltimore Street
BUFFALO, N. Y.: 600 Prudential Building
PITTSBURGH, PA.: 913-915 Liberty Avenue
SPOKANE, WASH.: 163 S. Lincoln Street



Do Your
Sliding Doors
Stick?

Sliding doors hung on the old style hangers cause the
doors to jam, bind and stick in the ways, robbing you of
the luxury you ought to and can have, of easy running,
noiseless, frictionless sliding doors. If you are going to
build a house or remodel your present one, put in sliding
doors and hang them on

ALLITH

"Reliable" Parlor Door Hangers

These prevent the sliding doors from jamming, make
the slide noiseless and are not affected by the sagging
or warping of walls, floors or doors. They cannot jump
the track or get out of order, and they can be adjusted
without removing strips or stops.

Every Allith Hanger is guaranteed to give complete
satisfaction. They have become exceedingly popular
among architects and house builders.

Add an inexpensive luxury to your home by putting in
sliding doors hung on Allith's Parlor Door Hangers. Send
us your name and address and the name of your architect,
and get our latest catalog, with prices, etc., free of charge.

Allith Manufacturing Company
2111 West Taylor Street Chicago, Illinois

**TECO
POTTERY**

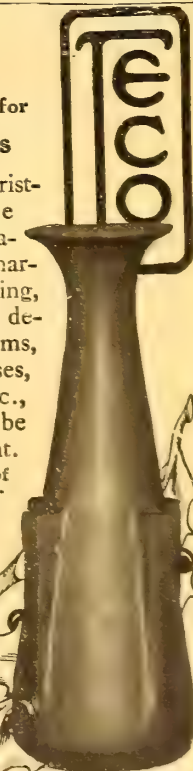
Is extensively in demand for
Prizes and Presents

Is especially suitable for Christ-
mas Presents, also Bridge
Whist prizes. It is apprecia-
ted by everyone, because it har-
monizes with every surrounding,
and because in originality of de-
sign and in multiplicity of forms,
such as candle sticks, vases,
lamps, bowls, jardiniere, etc.,
it fills every claim that can be
made for a useful ornament.

TECO POTTERY is the pottery of
restful, peaceful green, and is re-
markable for its purity of line and
newness of design. Ask your dealer
or write for booklet. Our trade-
mark is on every piece.

The Gates Potteries
651 Chamber of Commerce Bldg.,
Chicago, Ill.

Exclusive art
dealers not
carrying Teco
should write.





FINISHED HOUSE AFTER CEMENT STUCCO COATING WAS APPLIED.

Hundreds of houses are now being built in all parts of the country with materials and methods as used in the house we illustrate.

Besides the inestimable value of their being fireproof, these residence buildings are *better* than frame, brick-and-wood, or concrete-and-wood, because they are of

Enduring Masonry Construction Throughout

By reason of the indestructibility of the material and their substantial construction, these houses

Cost Far Less for Maintenance and Repairs

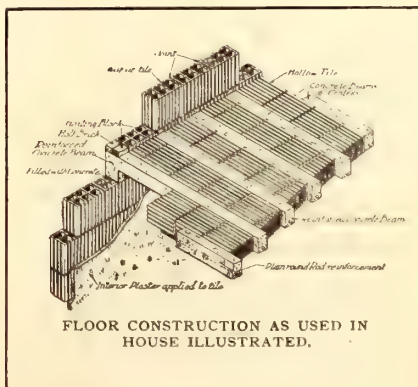
than is the case with buildings of brick-and-wood.

Floors of wooden joist construction warp and crack. Floors of Fireproof Terra Cotta Hollow Tile endure for all time.

Exterior of frame houses must be painted frequently, walls of Cement Coated Terra Cotta Hollow Tile, never.

Walls of wood, stone, concrete or brick, absorb, retain and carry to the interior of the house, the frost of Winter and heat of Summer. The air space in walls of Terra Cotta Hollow Tile furnishes complete insulation against atmospheric conditions, thereby reducing the cost of heating to a minimum, and buildings of this material, compared with brick, frame, stone, concrete, or a combination of all four, are

Warmer in Winter, Cooler in Summer



Houses with walls of brick, stone, concrete or frame, must be "furred" or lined with wood to be plastered, and they carry the sound and vibration and are subject to the penetration and ravages of vermin. Terra Cotta Hollow Tile Houses require no furring the plastering being applied direct to the Hollow Tile, and they are

Moisture Proof—Sound Proof—Vermin Proof

When it is considered that a residence with all these advantages, and completely Fireproof, can be built at as low cost as one of brick, brick-and-wood, stone-and-wood, concrete or frame, is it not worth while to talk with your architect about this modern construction?

All competent architects are familiar with methods of designing and building houses of Terra Cotta Hollow Tile.

A copy of our book showing how houses are constructed of Fireproof Terra Cotta Hollow Tile will be sent upon request.



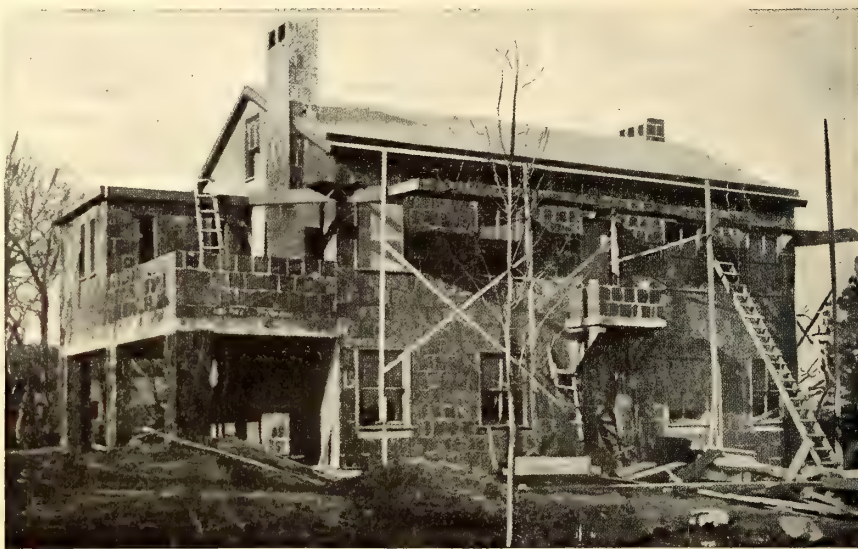
The same material that makes the big "skyscrapers" fireproof will

Build Your Home Fireproof This House is Fireproof

Its walls, floors, roofs, partitions and stairs are all built with

Fireproof Terra Cotta Hollow Tile

It cost only *eight per cent. more* than the bid to build an *all frame* house from same plans, and nearly two per cent. less than a bid to build it with concrete walls and *wood* floors and roof.



HOUSE DURING CONSTRUCTION, SHOWING TERRA COTTA HOLLOW TILE WALLS BEFORE CEMENT STUCCO COATING WAS APPLIED.

National Fire Proofing Company

Contractors for Construction of
Fireproof Buildings

Manufacturers
of - - - Terra Cotta Hollow Tile

Capital—Twelve and one-half
Million Dollars

The largest firm in the world devoted exclusively to the business of Fireproof Construction

PITTSBURGH, Fulton Building
PHILADELPHIA, Land Title Building
WASHINGTON, D. C., Colorado Building
BOSTON, Old South Building
ST. LOUIS, MO., Victoria Building

CINCINNATI, Union Trust Building
SAN FRANCISCO, Monadnock Building
CHICAGO, Commercial National Bank Building
NEW YORK, Flatiron Building

MINNEAPOLIS, MINN., Lumber Exchange
CLEVELAND, Cuyahoga Building
LOS ANGELES, CAL., Union Trust Building
TORONTO, CAN., Traders Bank Building

26 Factories throughout the United States

NA
7100
A572
Hort.

AMERICAN HOMES_{AND} GARDENS



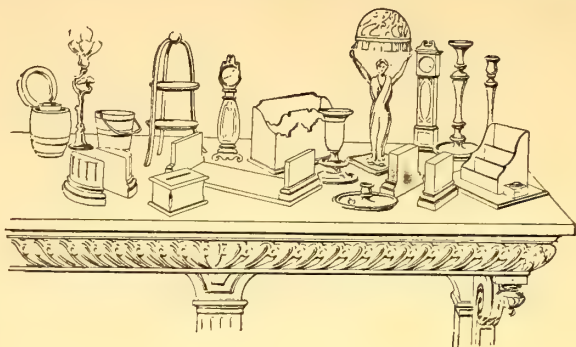
\$3.00 A YEAR

MUNN & COMPANY, Publishers

PRICE, 25 CENTS



FLINT'S FINE FURNITURE



Holiday and Presentation Gifts

No more acceptable gift can be made to any member of the home circle than a choice bit of "Flint's Fine Furniture" built "Flint Quality"—something that will be prized for its individuality and usefulness. Such gifts add to the beauty of one's surroundings and daily comfort. A large variety of individual pieces and small articles, suitable for every purpose of household adornment and utility.

Our vast collection, as displayed on our ten spacious floors, is replete with suggestions for Christmas gifts, assuring appropriate selections.

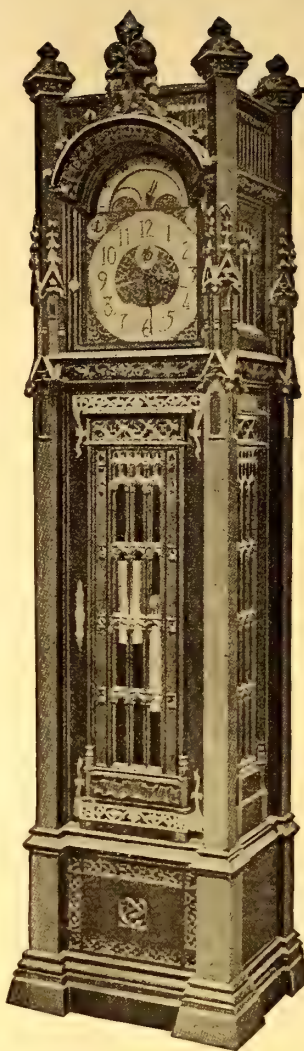
Selections will be held for specified delivery dates.

GEO. C. FLINT Co.

43-47 WEST 23rd ST.

24-28 WEST 24th ST

HALL CLOCKS



The most useful and ornamental article you can have in your home is a fine HALL CLOCK. We make many styles and kinds, with or without chimes.

The "Banjo," which is so popular for dining-room and library, is a most satisfactory clock.

We also make a full line of Marble Clocks and Regulators.

If your local dealer does not sell our line, send direct for new illustrated catalogue.

Waltham Clock Company
Waltham, Mass.

❧ Americans are now building more beautiful houses and are decorating and furnishing them with greater care and in better taste than ever before.

❧ The most potent single influence working for higher standards in architecture and decoration is

The Architectural Record

❧ If you are interested in building a building of any sort, you will be interested in *The Architectural Record*.

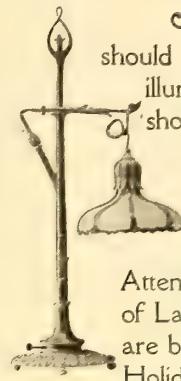
Send for a Sample Copy—Free.

THE ARCHITECTURAL RECORD COMPANY

11 to 15 East 24th Street, NEW YORK

511 Monadnock Building, CHICAGO

A LAMP



should not only give sufficient illumination for reading, but should also cast a warm glow of light around the room, and be at the same time an effective and pleasing addition to its decoration.

Attention is called to our stock of Lamps and Portables, which are both useful and beautiful as Holiday Gifts.

For the protection of our clients, our trade-mark will be found on each and every piece of work made by us.

The Enos Company

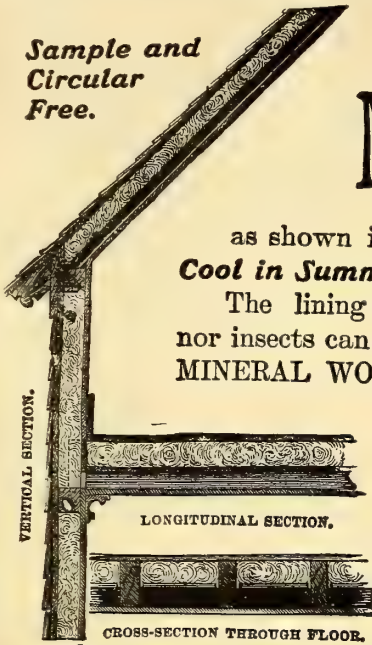
MAKERS OF LIGHTING FIXTURES

5 West 39th Street, New York City

Baltimore, 519 N. Charles Street
 San Francisco, 1748 California Street
 Toronto, 24 King Street, West
 Pittsburg, G. P. Norton, Penn at 4th St.
 Spokane, Washington, Cutter & Plummer
 Seattle, Washington, Cox & Gleason Company,
 1914 Second Avenue
 Chicago, W. K. Cowan & Co., 203 Michigan Blvd.
 NEW ENGLAND REPRESENTATIVES
 BIGELOW, KENNARD & Co., BOSTON



Sample and
Circular
Free.

A House Lined with
Mineral Wool

as shown in these sections, is *Warm in Winter, Cool in Summer*, and is thoroughly DEAFENED.

The lining is vermin-proof; neither rats, mice, nor insects can make their way through or live in it. MINERAL WOOL checks the spread of fire and keeps out dampness.

Correspondence Solicited.

U. S. Mineral Wool Co.

140 Cedar St., NEW YORK CITY.



Kitchen
Showing
Interlocking
Rubber
Tiling in
Residence of
Mr. Webb
Horton,
Middleton,
N. Y.

INTERLOCKING
RUBBER, TILING

An Ideal Floor Covering for Court Houses, Banking Institutions, Churches, Hospitals, Libraries, Business Offices, Restaurants, Vestibules, Elevators, Kitchens, Laundries, Pantries, Bathrooms, Steamships and Floating Property generally.

We are the original manufacturers of Interlocking Rubber Tiling

NEW YORK BELTING & PACKING CO., Ltd.

91-93 Chambers Street, NEW YORK CITY

CHICAGO, ILL.: 150 Lake Street
 ST. LOUIS, MO.: 218-220 Chestnut Street
 PHILADELPHIA, PA.: 118-120 N. Eighth Street
 SAN FRANCISCO, CAL.: E. 11th St. & 3d Ave.,
 Oakland

BOSTON: 232 Summer Street
 BALTIMORE, MD.: 114 W. Baltimore Street
 BUFFALO, N. Y.: 600 Prudential Building
 PITTSBURGH, PA.: 913-915 Liberty Avenue
 SPOKANE, WASH.: 163 S. Lincoln Street

Sliding Doors
That Never Bind

If you are going to build a house, or remodel your present one, put in sliding doors wherever you conveniently can. Instead of jamming or sticking in the ways, they will slide easily and freely when hung on the

ALLITH

"Reliable" Parlor Door Hangers

These prevent the sliding doors from jamming, make the slide noiseless and are not affected by the sagging or warping of walls, floors or doors. They cannot jump the track or get out of order, and they can be adjusted without removing strips or stops. They are absolutely

Noiseless, Never Bind,
Stick or Jump the Track

or get out of order. Every Allith Hanger is guaranteed to give complete satisfaction.

They are exceedingly popular with architects and house-builders. Every Allith Hanger is guaranteed to give satisfaction. Send us your name and address with the name of your architect, for our latest complete catalogue with prices, etc.

Allith Manufacturing Company
 2115 West Taylor Street Chicago, Illinois

TECO
POTTERY

Is extensively in demand for
Prizes and Presents

Is especially suitable for Christmas Presents, also Bridge Whist prizes. It is appreciated by everyone, because it harmonizes with every surrounding, and because in originality of design and in multiplicity of forms, such as candle sticks, vases, lamps, bowls, jardiniers, etc., it fills every claim that can be made for a useful ornament.

TECO POTTERY is the pottery of restful, peaceful green, and is remarkable for its purity of line and newness of design. Ask your dealer or write for booklet. Our trade-mark is on every piece.

The Gates Potteries
 651 Chamber of Commerce Bldg.,
 Chicago, Ill.

Exclusive art
dealers not
carrying Teco
should write.



BURLINGTON Venetian and Sliding BLINDS



Venetian Blind for inside window and outdoor veranda. Any wood; any finish to match trim.

SCREENS AND SCREEN DOORS

Equal 500 miles northward. Perfect privacy with doors and windows open. Darkness and breezes in sleeping rooms.



Sliding Blinds for inside use. Require no pockets. Any wood; any finish.

WRITE FOR OUR CATALOGUE, PRICE-LIST AND PROPOSITION TO YOU

BURLINGTON VENETIAN BLIND CO., 975 Lake St., Burlington, Vermont

Accurate information regarding THE WORLD'S INDUSTRIAL PROGRESS is a necessity of MODERN BUSINESS LIFE, as well as a subject of ABSORBING INTEREST for every thinking man and woman.

For nearly sixty-five years the

Scientific American

has been the most widely quoted authority on all matters relating to the progress made in the fields of discovery, invention and scientific news.

Free from dry technicalities, it tells the story of the WORLD'S PROGRESS in a fascinating and practical manner, which makes its weekly visits welcome to the entire family. It is unique among periodical literature because it contains authoritative information which cannot be obtained from any other source.

Subscription price, \$3.00 per year.

The Season's Best Club Combinations

Scientific American or American Homes and Gardens.....	\$3.00	\$4.45	Scientific American or American Homes and Gardens.....	\$3.00	\$5.35
Review of Reviews.....	3.00		McClure's Magazine.....	1.50	
	\$6.00		Review of Reviews.....	3.00	
Scientific American or American Homes and Gardens.....	\$3.00	\$6.80	Scientific American or American Homes and Gardens.....	\$3.00	\$5.10
Review of Reviews.....	3.00		World's Work.....	3.00	
World's Work.....	3.00		Delineator.....	1.00	
Everybody's Magazine.....	1.50			\$7.00	
	\$10.50		Scientific American or American Homes and Gardens.....	\$3.00	\$4.60
Scientific American or American Homes and Gardens.....	\$3.00	\$5.35	McClure's Magazine.....	1.50	
Everybody's Magazine.....	1.50		Woman's Home Companion.....	1.25	
World's Work.....	3.00			\$5.75	
	\$7.50				

After February 1st, 1909, 25c. must be added to combinations including Woman's Home Companion.

MUNN & CO., 361 Broadway, New York City

Practical Steam and Hot Water Heating and Ventilation

By ALFRED G. KING

402 Pages. Containing 304 Illustrations

Price \$3.00

An original and exhaustive treatise, prepared for the use of all engaged in the business of Steam, Hot Water Heating and Ventilation

THE standard and latest book published. Tells how to get heating contracts, how to install heating and ventilating apparatus. Describes all of the principal systems of steam, hot water, vacuum, vapor and vacuum-vapor heating, together with the new accelerated systems of hot water circulation, including chapters on up-to-date methods of ventilation; fan or blower system of heating and ventilation; rules and data for estimating radiation and cost, and such other tables and information as make it an indispensable work for heating contractors, journeymen steam fitters, steam fitters' apprentices, architects and builders.

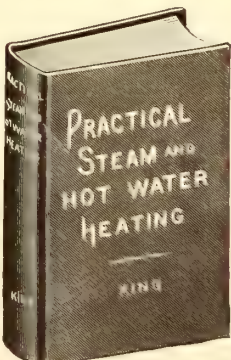
This work represents the best practice of the present day and is exhaustive in text, diagrams and illustrations.

CONTAINING CHAPTERS ON

I. Introduction. II. Heat. III. Evolution of Artificial Heating Apparatus. IV. Boiler Surface and Settings. V. The Chimney Flue. VI. Pipe and Fittings. VII. Valves, Various Kinds. VIII. Forms of Radiating Surfaces. IX. Locating of Radiating Surfaces. X. Estimating Radiation. XI. Steam-Heating Apparatus. XII. Exhaust-Steam Heating. XIII. Hot-Water Heating. XIV. Pressure Systems of Hot-Water Work. XV. Hot-Water Appliances. XVI. Greenhouse Heating. XVII. Vacuum Vapor and Vacuum Exhaust Heating. XVIII. Miscellaneous Heating. XIX. Radiator and Pipe Connections. XX. Ventilation. XXI. Mechanical Ventilation and Hot-Blast Heating. XXII. Steam Appliances. XXIII. District Heating. XXIV. Pipe and Boiler Covering. XXV. Temperature Regulation and Heat Control. XXVI. Business Methods. XXVII. Miscellaneous. XXVIII. Rules, Tables and Useful Information.

Valuable Data and Tables Used for Estimating, Installing and Testing of Steam and Hot-Water and Ventilating Apparatus are Given

MUNN & COMPANY, PUBLISHERS, 361 BROADWAY, NEW YORK CITY



Nothing Like It

In Kornlet you have a green corn dainty the year 'round. You never tasted anything like it. It's so much better than canned corn that there's no comparison.

Kornlet

(The Heart of the Kernel)

is the heart of tender, juicy, young green corn, at the height of its milk. A delicious, nourishing food that you'll never tire of.

Look for the recipes on every wrapper. Valuable book of recipes sent free on request.

If your grocer hasn't Kornlet, write us.

THE HASEROT CANNERIES COMPANY, Cleveland, Ohio, U. S. A.

Standard Bone Cutter

Sent on Free Trial

gives cut bone the greatest feeding value because it is the only cutter that cuts across the grain. Cuts green or dry bone, meat or gristle. Runs easily. Cannot clog. Low in price, but guaranteed superior to any other bone cutter.

Cut shows No. 9, price \$8.80. Sent on 10 days' free trial, to be returned at our expense if not entirely satisfactory. Write for trial order blank, and catalogue showing all sizes of bone cutters.

STANDARD BONE CUTTER CO., Milford, Mass.

Van Dorn Iron Works Co.

PRISON, HOUSE & STABLE WORK

JOIST HANGERS LAWN FURNITURE FENCING, ETC.

CLEVELAND, OHIO

A New \$1 Offer—"KEITH'S"

for six months and a copy of my new **Book 100 Plans** BUNGALOWS—COTTAGES for attractive Homes costing \$1000 to \$4000. Keith's monthly magazine is the recognized authority on Planning and Decorating Homes. Each issue gives several designs by leading architects. \$1.50 year. News-stands 15c. copy. With each \$1 order I will also include 2 recent back numbers. Send to-day.

MAX L. KEITH, 406 Lumber Ex., Minneapolis, Minn.

PREVENTS DRAFTS, DUST AND WINDOW RATTLING. IVES' PATENT Window Stop Adjuster.

HEAVY BED

PATENTED.

The only Stop Adjuster made from one piece of metal with solid ribs and heavy bed that will not cup, turn or bend in tightening the screw. Manufactured only by The H. B. IVES CO., New Haven, Conn., U. S. A. (Fifty-page Catalogue Mailed Free.)

"To have your roof last — Use Ruberoid Roofing First."

RUBEROID

TRADE MARK, REG. U.S. PAT. OFFICE

The only permanent Roofing with permanent colors



Made in Red, Brown, Green and Slate color

ROOFING

THE STANDARD

has none of the defects common to other roofing materials, as the following comparison shows:

Metal Roofs rust and leak unless frequently painted. A metal roofed house is always hot in summer.

RUBEROID never rusts, needs no painting when laid and insures a cool interior. **Shingles** warp, split and rot, are very expensive and require frequent repair.

RUBEROID does not warp, split or rot, is less expensive than metal or shingles and lasts longer.

Tar and Low-Priced Roofings, even when covered with sand or gravel, are quickly affected by changes of temperature. They melt and run under summer heat, leaving their felt or paper base unprotected. They are also more or less inflammable.

RUBEROID is not affected by changes of temperature and never melts or runs under the hottest sun. It is weather-proof, water-proof and so highly fire resistant that sparks or burning brands will not ignite it.

RUBEROID has an unequalled record of over 16 years' satisfactory service and is proven the most economical roofing made. Any handy man can lay it. No skilled labor required.

For further particulars write for Booklet No. 15

THE STANDARD PAINT COMPANY
Manufacturers of Ruberoid Roofing, Building and Sheathing Papers, etc.
100 William St., New York

Chicago, St. Louis, Kansas City, Boston, Philadelphia, New Orleans
THE STANDARD PAINT CO. OF CANADA, LTD., Imperial Bank Bldg., Montreal
THE RUBEROID CO., LTD., 81-83 Knightbridge St., London, England
CIE. FRANCAISE DU RUBEROID, 93 Boulevard Richard Lenoir, Paris, France



Under The Hood That's Sealed

MOBIL OIL insures the highest scores in exacting tests where the performance of the engine depends on the quality of the oil. It is a friction-proof, trouble-proof oil, and can be relied upon under every condition.

VACUUM MOBIL OIL

is made in various grades—a special grade for every make of engine. It won't cause fouling of spark-plugs and valves. Lubricates most at minimum feed.

Write for free booklet, telling the grade for your car. An invaluable book for motorists.

MOBIL OIL in barrels, and in cans with patent pouring-spout, is sold by all dealers.

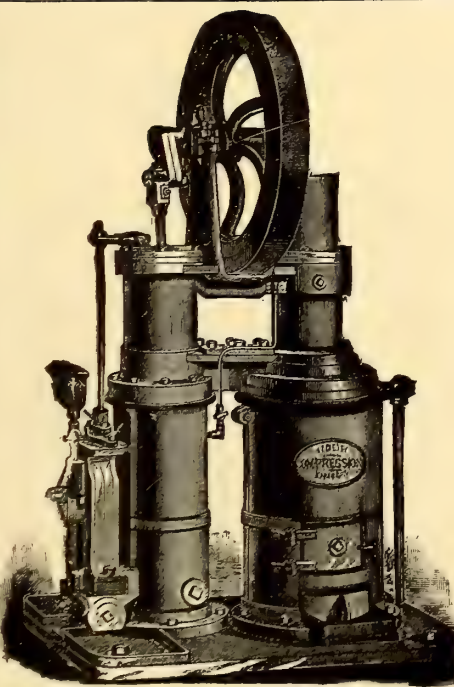
Manufactured by
VACUUM OIL COMPANY,
Rochester, N. Y.



Take a few minutes right now and get real facts on **steel ceilings and side walls.**

Call in your stenographer and simply say "Eller Manufacturing Company, Canton, Ohio. Send for catalogue." You will be more than repaid. We take such an interest—are glad to serve you, and for years everybody knows "Eller" has stood for the highest in quality.

ELLER MFG. CO.
CANTON, OHIO



Improved "Reeco" Rider Hot Air Pumping Engine

And—

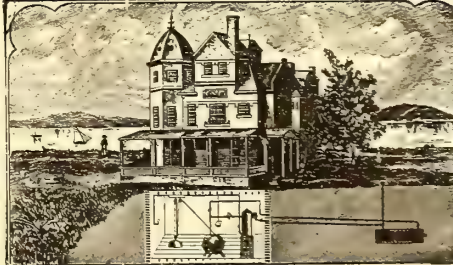
Improved "Reeco" Ericsson Hot Air Pumping Engine

Prices Greatly Reduced

Send for Catalog "E" to nearest office.

Rider-Ericsson Engine Co.

39 Warren St., New York 40 Dearborn St., Chicago
40 N. 7th St., Philadelphia 239 Franklin St., Boston
234 Craig St. West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.
Amargura 96, Havana, Cuba



THE most modern, and best illuminating and cooking service for isolated homes and institutions, is furnished by the CLIMAX GAS MACHINE.

Apparatus furnished on TRIAL under a guarantee to be satisfactory and in advance of all other methods.

Cooks, heats water for bath and culinary purposes, heats individual rooms between seasons—drives pumping or power engine in most efficient and economical manner—also makes brilliant illumination. IF MACHINE DOES NOT MEET YOUR EXPECTATIONS, FIRE IT BACK.

Send for Catalogue and Proposition.

Low Price Liberal Terms Better than City Gas or Electricity and at Less Cost.

C. M. KEMP MFG. CO.
405 to 413 E. Oliver Street, Baltimore, Md.

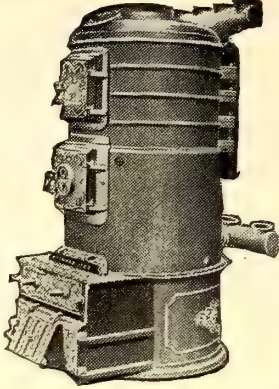
GURNEY HEATERS GURNEY HEATERS GURNEY HEATERS

Gurney HEATERS

GURNEY HEATERS, measured by quality, economy and efficiency, are the standard of value.

- ☐ They are made of the best materials and by the highest grade of mechanical and engineering skill; constructed under these conditions, they are unequalled in durability.
- ☐ There is also complete combustion of fuel and no waste of heat units, thus insuring great economy.
- ☐ The **GURNEY HEATER**, made either for hot water or steam, distributes the heat evenly and with a certainty that gives complete satisfaction to the user.
- ☐ Easily installed in old or new buildings they appeal to those who want to eliminate extra care and waste, or who want greatest value for amount expended.
- ☐ Send for illustrated catalogue.

GURNEY HEATER MFG. CO.
188-200 Franklin St., Corner Pearl St., BOSTON, MASS.
NEW YORK BRANCH, 12 East 42d Street



GURNEY HEATERS GURNEY HEATERS GURNEY HEATERS

WINTER FARMING

By E. P. Powell

WHAT to do with the long, severe Northern winters became with me a very serious problem. I think it is with a large majority of our people. New England and New York and Michigan and Illinois, I have tried them all, and what do we went better than such homes for summer. It is a different question when the coal bills begin to increase and the whole summer profit is poured into the hopper to carry us through the freezing weather. I tried a good many expedients before I decided to go to Florida. I used to look up at the birds, and wish that I had wings to follow them. I could not see that there was any other way of migrating that would not cost too much for my purse. I had not thought through the problem, when my friend President Ward, of Camp Hill Institute, in Alabama, offered me ten acres of Florida land, facing a lake, as he told me, for "one hundred and fifty dollars." I bought it on the spot, but for three years did not see it. An unusually cold winter following an unpleasant summer forced me to venture southward in December.

This is what I found out: First, I found that central Florida, instead of being flat like the land the tourists touch, is full of lakes and rolling land. I found the lakes to be mirrors of splendid pines standing eighty feet to one hundred feet high. I found the soil debilitated by reckless culture, and devoid of humus, owing to the annual burning over; but capable of almost anything in the hands of a skilful farmer. I found that Florida was marvelously endowed with legumes, that would make splendid hay, and could be plowed under to make humus. I found a climate beyond description for health and the beauty of the scenery indescribable. Second, I found that I could grow my own vegetables, keep my bees, raise my own chickens and eggs, and have the honey harvest and egg harvest all winter. I could pull my cabbages and cut my lettuce in January. I could dig my sweet potatoes at any season and leave those not wanted in the ground. I could reduce my coal bills from one hundred and twenty-five dollars to twenty-five at my Northern home; while I could pick up all needed fuel in Florida without any expense. The cost of hired help was lowered about seventy-five dollars; and doctor's bills were forgotten. It cost a good deal less for clothing where one could go in bathing at Christmas and walk in his shirt sleeves through most of January. Oranges and sweet potatoes made the bulk of food, with honey, eggs and vegetables. My savings covered at least my round trip ticket by Clyde steamer from New York, and the railroad expenses at each end of the route.

So nowadays I undertake to have my corn husked, my apples sold or stored, and all the other items in the way of winter preparation closed by the middle of November. This can be done by any Northern country man, unless he be a dairyman. I let out my horse and cow, leave my collies with a neighbor, dispose of my hens, lock up my house and go. I have bought more land, until I own most of Lake Lucy and between two and three hundred acres around it. I have planted some citrus fruits in the way of oranges and grape fruit, but mostly I have set peaches, quinces, grapes, figs, loquats, pears, cherries, plums and apples. I am told that apples are a failure in Florida; but I am told a great many other things that I do not believe. My Staymans, Winesaps and King Davids gave me four to five feet of fine wood last year, with a system of careful mulching. I have built a comfortable house, for it is much better economy



Running Water in Zero Weather

THERE is no longer any necessity for inconvenience and repairs due to frozen tanks and pipes. No matter how cold it may be, you can have a constant supply of fresh running water delivered at a usable temperature to all fixtures. This satisfactory water supply service will be yours, if you install the

Kewanee System of Water Supply

With the Kewanee System, there is no elevated tank exposed to all extremes in weather conditions. No freeze-ups in winter and no warm stagnant water in summer. Instead, a **Kewanee Pneumatic Tank** is located in the cellar, or buried in the ground. It cannot leak, freeze, overflow or collapse.

Pump the water from your well, cistern or other source, into this tank; and it will be delivered to the fixtures and hydrants under **air pressure**. Water will always be on tap at the plumbing fixtures. Horses and stock can be watered in the barn. First-class fire protection assured for your buildings.

Over 9000 Kewanee Systems in operation, supplying water for country and suburban homes, farms, schools, public and private institutions, etc. Every Kewanee System a success and every user a friend.

The Kewanee System is the **original** water supply system, involving the use of **air pressure** instead of gravity pressure. There are imitations now—avoid them. Get the genuine and you will take no chances—we guarantee that. Look for our trade-mark (**Kewanee**) and name plates on tank and pumping machinery.

No charge for expert engineering service. Let us help you solve your water supply problem. Write for our 64-page illustrated catalog No. 36. It is free.

Kewanee Water Supply Company, Kewanee, Illinois.

1566 Hudson-Terminal Bldg. 50 Church St. New York City, N. Y.	1212 Marquette Bldg. Chicago, Ill.	710 Diamond Bank Bldg. Pittsburg, Pa.
---	--	---

than a shakedown. I found that nearly all Northern vegetables, including Irish potatoes, thrive here as well as they do in Jersey or Ohio. One of my neighbors has taken up two thousand pounds of honey from here in the winter, returning to the North to take up two thousand pounds more in the summer. The soil is so easily worked that one man can do the work of four in our Northern clay. The supply of fuel is unlimited. The pines, if you can secure those that have not been tapped for turpentine, are growing in value, and must continue to do so.

There is a strip of land up and down the center of the State, absolutely free from malaria and nearly so of mosquitoes; and it is this strip of land to which the Northerner who seeks a home should migrate. Most of this land can be bought, as yet, for from ten dollars per acre to thirty. A few improved places, specially well located, will sell for forty or fifty dollars per acre. Ten or twenty acres will be quite enough for most people to hold, leaving a part of this to pines. Among the crops which a migrant can raise are cassava—a huge root, liked by cows, horses, hogs and hens; sweet potatoes, which can be left in the ground indefinitely; chufa nut, a deliciously sweet ground nut, good for hens or for human use; carrots and mangel wurzels, sugar beets—in fact nearly all the vegetables of a Northern garden; eggs, which he can dispose of at thirty cents a dozen; very early peaches, which will ripen before he needs to go north, and others that will not ripen till he returns in November. Mulberries constitute a superb fruit, ripening in March, while the loquats and oranges and grape fruit are a specifically winter crop. If the orange grower gets there by the middle of November, or even the first of December, he will be in time to handle the whole of his crop. The last of these citrus fruits will be disposed of by March.

Florida is endowed with legumes unlimited. Among the best of these are beggar weed—a capital food for horses; soja beans—also good for nearly all animals; cow peas—excellent for sheep, cattle, hens, and even human use; vetches—which can be used for almost all sorts of foddering; but above all else the velvet bean. This grows fifty to seventy feet in a season, can be cut two or three times for hay, can then be foddered, then used for a cover crop, and finally plowed under. A cover crop, however, is needed in Florida during the summer against heat instead of during the winter as it is in the North.

An orange orchard is a good thing to have; a grape fruit orchard is still better; that is, if already in bearing; but Florida does have its frosts, and about once in ten years it gets the end of a Northern blizzard, hauling its thermometer down to eighteen or twenty above zero. This kills citrus trees, unless protected by fires, which are kindled up and down the rows. Such orchards are as beautiful as any-



Cattle Manure **in Bags** Shredded or Pulverized

Best and safest manure for florists and greenhouse use, absolutely pure, no waste, no danger. Write for circular and prices.

The Pulverized Manure Co.
21 Union Stock Yards, Chicago.

Bound Volumes of Volume for 1905 \$3.50
American Homes Volume for 1906 \$5.00
and Gardens Volume for 1907 \$5.00
MUNN & CO., Publishers 361 Broadway, New York

TRADE

"Standard"

MARK

PORCELAIN ENAMELED

Baths and Lavatories

are always preferred for the most modern homes because they insure better sanitation and greater satisfaction in use than any other plumbing equipment made.

Write for our beautiful new 100-page book—"Modern Bathrooms." This illustrates and describes a series of the most attractive bathroom interiors. You will find it of great assistance in connection with your sanitary arrangements. Send for your copy now. Enclose 6c. postage, and give name of your architect and plumber if selected.



Address, **Standard Sanitary Mfg. Co.** Dept. 23, Pittsburgh, Pa., U. S. A.

Offices and showrooms in New York: "Standard" Building, 35-37 West 31st Street.

Louisville: 325-329 West Main Street.

Pittsburgh:

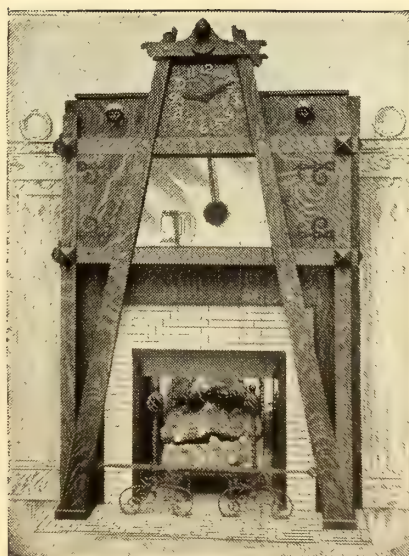
New Orleans: Cor. Baronne & St. Joseph Sts.

London, Eng.: 22 Holborn Viaduct, E. C.

949 Penn Avenue

Cleveland: 648-652 Huron Road, S. E.

Artistic Mantels

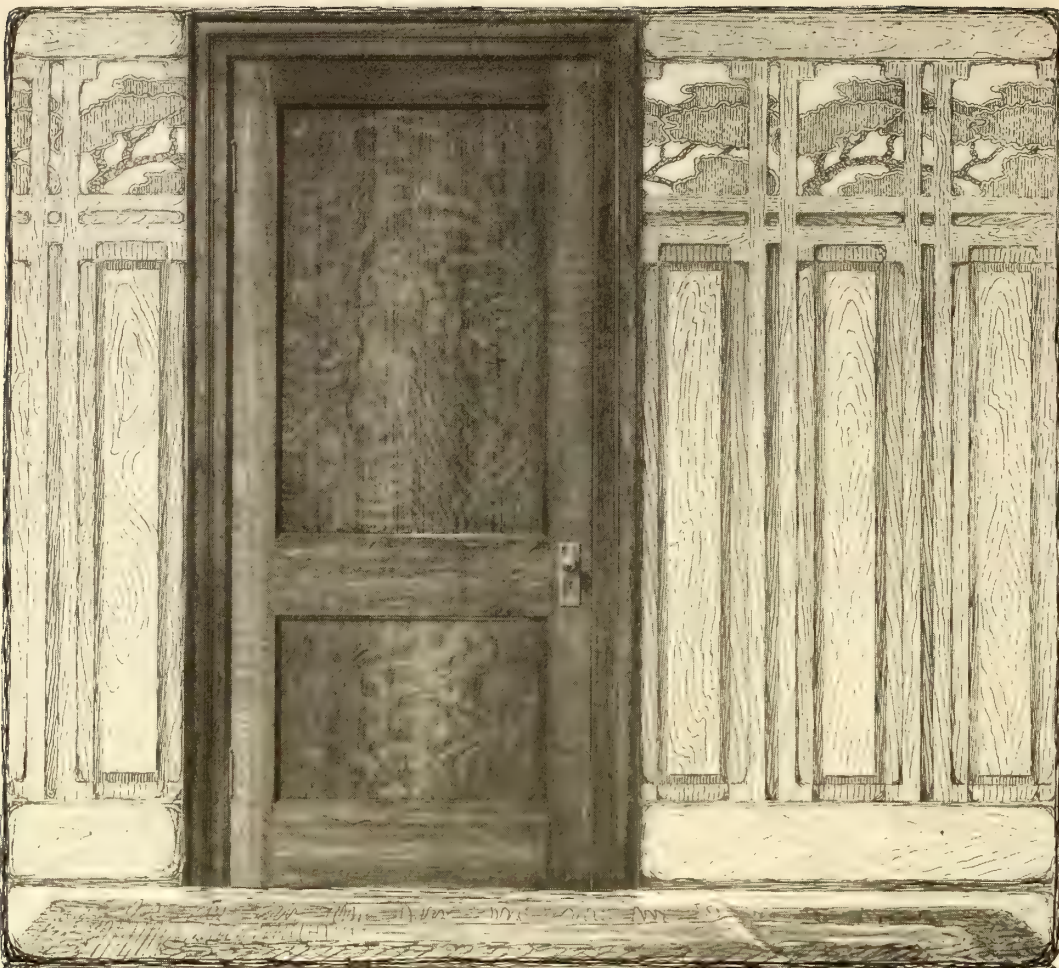


¶ Our Catalogues contain 130 designs, including Mission, Colonial, White, Mahogany and Oak. Everything, from the very cheapest to the best.

¶ Fireplace Hardware and Tiling of every description.

¶ Catalogue and Special Designs sent on receipt of 25c. in postage.

The Geo. W. Clark Co.
Unity Building Chicago, Ill. Clark Building Jacksonville, Fla.
Factory, Knoxville, Tenn.



Beauty and Strength

stand out prominently in every **Morgan Door**. Their beauty is not only in the exquisite grain of selected woods from which they are made, but in their dignified designs which harmonize with any interior finish or exterior style of architecture.

Morgan Doors

are the most perfect doors manufactured. They are made of several layers of wood with the grain running crosswise, making shrinking, warping or swelling impossible and giving them **great strength** and they are veneered in all varieties of hard-wood, birch, plain or quarter-sawn red or white oak, brown ash, mahogany, etc.,—the coloring of each particular wood being brought out to the highest degree.

Morgan Doors are correctly designed by experts, in all styles of architecture—Colonial, Empire, Mission, etc., and you will have none of the disappointments that invariably result from the use of ordinary doors if you insist that **Morgan Doors** are used in your building.

Write today for our handsome illustrated book "The Door Beautiful" which shows you more of the detailed beauty of **Morgan Doors** and why they are the only doors you should use in your building.

Morgan Company, Dept. A, Oshkosh, Wisconsin

Distributed by Morgan Sash & Door Co., Chicago, Ill. Morgan Company, Oshkosh, Wis. Morgan Company, Baltimore, Md.

Serpentine Crepe

The cheapest and most effective fabric
For Draperies, Curtains, Screens, etc.
Send for free samples.
PACIFIC MILLS, BOSTON, MASS.

"You do the designing—we'll make the rug."

Thread & Thrum Rugs

are different from all other rugs, as you can have the color scheme made to harmonize with your requirements. Wool or camel's hair weft, heavy and durable. If your dealer does not sell them, write for color card and price list to
Arnold, Constable & Co., Distributing Agents, New York
The Thread & Thrum Workshop, Auburn, N. Y.

**One Policy
One System
Universal Service**
American Telephone & Telegraph Co.

St. Louis, Mo. Baltimore, Md.
F. Weber & Co.
1125 Chestnut St., Philadelphia, Pa.
Architects' and Engineers' Supplies

"FABRIANO" Hand-Made Drawing Papers
Superior to any other hand-made paper
F. Weber & Co.'s Illustration Boards, Air Brushes
and Materials

STANDING SEAM ROOF IRONS

CLINCH right through the standing seam of metal roofs. No rails are needed unless desired. We make a similar one for slate roofs.
Send for Circular
Berger Bros. Co.
PHILADELPHIA

BRISTOL'S RECORDING THERMOMETERS

make continuous records of atmospheric temperatures, and are designed for both indoor and outdoor temperatures. Send for new catalogues.
THE BRISTOL COMPANY, WATERBURY, CONN.
NEW YORK Branches CHICAGO



STEEL CEILINGS

For Effectively
Decorating All
Kinds of Rooms

YOU CAN GET THEM IN



Appropriate Designs for Residences, Business Rooms, Auditoriums, Etc.

□ Largest and most complete line of artistic STEEL Ceilings in existence. Covers the field so completely you can get just what is required, whether bold or elaborate designs or something comparatively simple.

□ Before buying a Steel Ceiling of any description, get full details of Berger's "Classik."

ASK FOR CATALOG D-64

The Berger Mfg. Co., Canton, Ohio New York Philadelphia Boston Chicago
St. Louis Minneapolis San Francisco Atlanta

thing the earth holds, when covered with fruit; and in blossom the fragrance is beyond words to describe, and beyond imagination to conceive. Great waves of delicious odor roll off with the wind for a quarter of a mile. Millions of bees work and feast. However, I do not advise Northerners to go to Florida and invest largely in planting orange orchards. They may lose the whole venture before they get the fruit. Grapes, strawberries, peaches and vegetables constitute a much safer venture—especially for those who are not permanently on the ground. If you can stay through May and into June the melon crop will be peculiarly fascinating. Whole carloads are shipped from central Florida which weigh forty and fifty pounds to the melon. A good deal heavier melons than these are grown, but not by the carloads. The quality is simply superb, as the quality of the oranges that drop right from the trees is infinitely superior to the quality of those found in the Northern markets. Those who prefer trucking can do better nearer the coast, or near the St. Johns River. There artesian wells can be secured by driving down from fifteen to twenty feet. The land is level, and irrigated with great ease. I have seen a celery avenue four miles long, with little in sight but lettuce and celery. This same land is good for cucumbers and Irish potatoes. Many people would prefer this level and money-making section; I do not. I want the poetry of life as well as the mutton. Around my lake I have level land enough—a good many acres that are several feet deep with black muck—land enough for all the celery that I care to grow. This muck has to be aerated before it is good garden soil. It will then grow almost anything. My pines sing to me, especially when they are full of red-winged blackbirds, cardinal birds, mocking birds, and the breezes that come from both the gulf and the ocean. The lake is a mirror so clear that it repeats everything it sees. Bluebirds and robins collect here in vast numbers during January and February, before starting for their Northern homes. They start in great flocks, just at sunset, flying by night, and reaching the North in about three weeks. You never saw anything more beautiful than a thousand or more bluebirds sitting all over the shrubs and hopping around the lake shore.

This is the way I solved my winter problem. I have saved a large part of my annual expenses, escaped the severity of zero weather, grown young under the balmy skies, and have not lost anything by investment. Land is going up in value steadily; markets are opening wider and wider for Southern fruits and vegetables; and the country is gradually becoming inoculated with scientific culture. In January we are gardening—that is, we are gathering part of the products of our November, while we plant for March and April. Any one who goes to Florida must expect to experiment a good deal. He can not believe one-half that is told him, for if he did he would do nothing. Most of the early settlers here were storekeepers, carpenters, and almost everything excepting out and out land tillers. What is needed now is a steady influx of Northern capital and energy. The summers are no more debilitating than the winters, and if anybody cares to stay through he may be homesick for the big hills, but he will not be weakened or injured in any way by warm weather. President Blackman, of Rollins College, says, "The summers are healthier than the winters, and I always long for them to come." The people of Florida are pleasant neighbors, and the negroes do not constitute a bad element. American homes and gardens must hereafter include, with increasing emphasis, these Southern States, especially those that surround the Gulf of Mexico.



CORTRIGHT

THE ROOF YOU SPECIFY says plainly whether you are keeping up with the times or not. Architects took a big risk in specifying

CORTRIGHT METAL SHINGLES

twenty years ago, but you're taking a bigger risk in *not* specifying them to-day, because they've demonstrated their superiority over all other forms of roofing. The first roofs put on 20 years ago are as good as new to-day, and have never needed repairs. They're lighter than slate or tile—they're better looking—they're fireproof and stormproof, and last, but not least, they're so simple to put on—no expert required—any handy man with a hammer and nails can do the job. Specify them for some otherwise unattractive structure and see if they don't improve its appearance wonderfully—neither you nor the owner will ever regret it.

CORTRIGHT METAL ROOFING CO., Philadelphia and Chicago



THE ALL PURPOSE GREENHOUSE

So many write us about a greenhouse "for cut flowers and other things," but do not seem to have a definite idea of exactly what "the other things" will be.

Here is a combination that admirably meets just such wants. A curved roof Palm House in the center, with even span wings on either side. Each wing is 60 feet long and divided in two compartments, so that roses, carnations, chrysanthemums or general plants can be successfully grown, with a compartment left for either vegetables, grapes or potted fruits.

Send for our circular illustrating some of the houses we have built.

We will be glad to take the question up direct with you, or through your architect.

HITCHINGS & COMPANY

1170 BROADWAY, NEW YORK CITY

THE HOWARD THERMOSTAT

(Damper and Valve Regulator)

WITH CLOCK ATTACHMENT

is the most perfect and most reliable heat controlling device ever placed on the market. Keeps your home at an even, healthful temperature day and night all the winter and saves enough fuel in two seasons to pay for itself. Therefore, it costs you nothing. Cannot make a mistake. Cannot run down and leave draft open. Prevents accidents by fire. Saves running down stairs.

Easily applied to all heating plants.

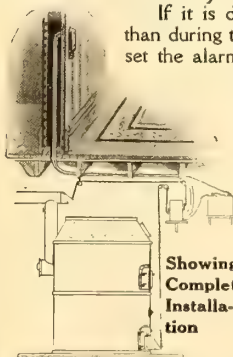
If it is desired to have the temperature of the house lower at night than during the day, it is only necessary before retiring to wind the clock, set the alarm hand one hour before rising time and move the Thermostat pointer to temperature desired for the night. At the appointed hour the Thermostat will automatically adjust draft and damper so that at rising time the temperature of the entire house will be that to be maintained during the day. Guaranteed for 10 years. Thousands have been in use 25 years.

TRIAL OFFER

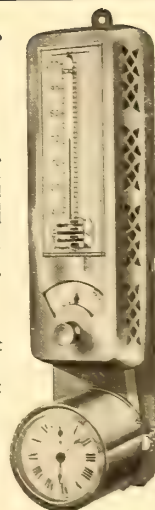
If, after thirty days' trial, you are not satisfied that the Howard Thermostat (Damper and Valve Regulator) will do all we claim for it, send it right back at our expense and your money will be promptly refunded.

Howard Thermostats are sold by heating appliance men all over the country. If you will kindly send us the name and address of your furnace man or steam fitter, we will send you our Booklet No. 17, which gives complete details about the Howard Thermostat. It is intensely interesting to any one who values his own health and that of those near and dear to him. Write to-day.

Howard Thermostat Co., 44 West First Street, Oswego, N. Y.
New England Office: 188 Franklin Street (Gurney Building), BOSTON, MASS.



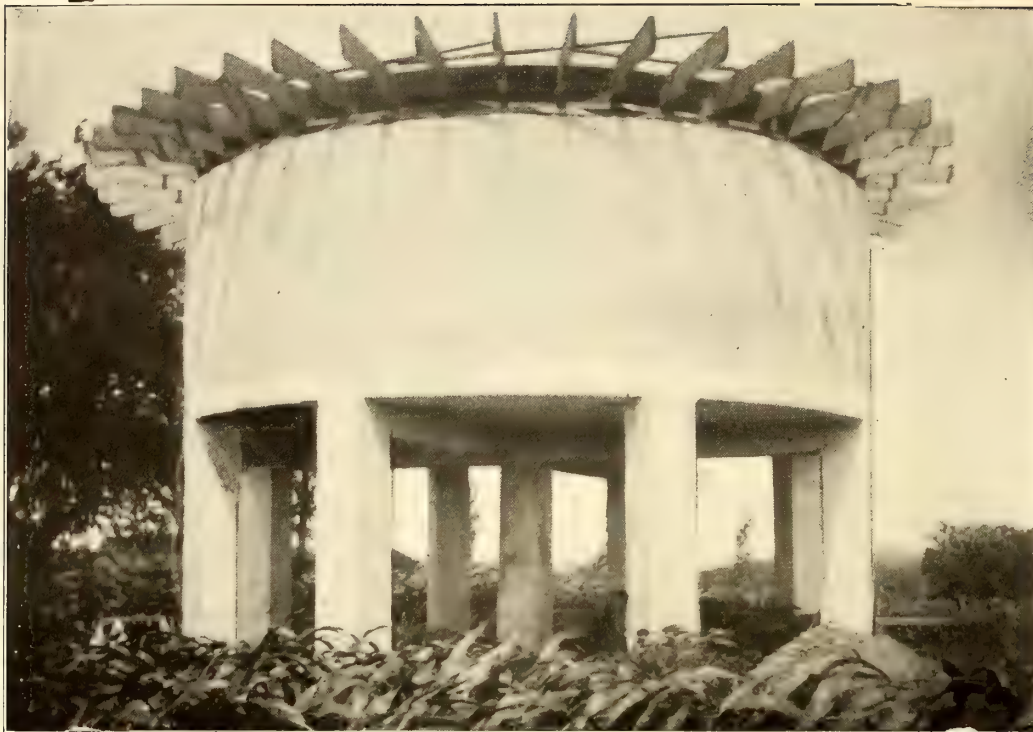
Showing
Complete
Installation



FLOORS



ROOFS



A concrete tank erected on estate of Edmund Tatham,
Katonah, New York

Frederick J. Sterner, Architect - - New York
De Lancey A. Cameron, Builder - - New York

Tank designed for storage supply of 15,000 gallons,
built entirely of concrete reinforced with Clinton welded
wire. Before roof was placed over tank, and during
winter months, ice 10 inches thick formed on water
stored therein. No cracks or leakage have developed.

Clinton Wire Cloth Company
CLINTON, MASS.

Ceilings

FIREPROOFING DEPARTMENT

ALBERT OLIVER

1 MADISON AVE., NEW YORK

WASHINGTON: ROSSLYN SUPPLY CO., COLORADO BUILDING
SYRACUSE, N. Y.: PARAGON PLASTER CO.
ST. LOUIS: HUNKINS-WILLIS LIME & CEMENT CO., SOUTH END 18TH ST. BRIDGE
SAN FRANCISCO: L. A. NORRIS, 835 MONADNOCK BUILDING
SEATTLE: L. A. NORRIS, 909 ALASKA BUILDING

Partitions

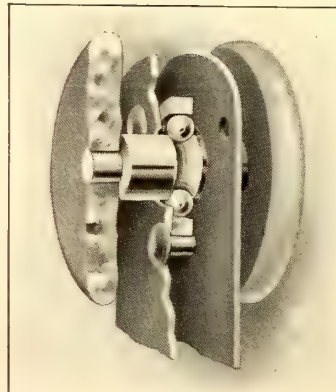
Lane's Trolley Parlor Door Hangers and Track

THE particularly distinguishing features of the
Lane Trolley Door Hanger equipment are
the excellence of the ball bearing and the lateral
as well as vertical adjustment of the track.

Lane Trolley Hangers are made in both the
rigid and adjustable pendant styles and with both
single and double trucks. All are fitted with
machined and hardened ball bearings as shown
and in all the various details the quality of Lane
products is maintained, thus virtually placing
them in a class by themselves.

Send for Complete Catalog.

LANE BROTHERS COMPANY, (The Door Hanger
Manufacturers)
434-466 Prospect Street, Poughkeepsie, N. Y.



SECTION BALL BEARING IN LANE
TROLLEY HANGERS

MENNEN'S BORATED TALCUM TOILET POWDER



"Baby's Best Friend"

and Mamma's greatest comfort. Mennen's relieves and
prevents Chapped Hands and Chafing.
For your protection the genuine is put up in non-
refillable boxes—the "Box that Lox," with Mennen's
face on top. Sold everywhere or by mail 25 cents.
Sample free.

Try Mennen's Violet (Borated) Talcum Toilet Powder—It
has the scent of Fresh-cut Parma Violets. Sample Free.
GERHARD MENNEN CO., Newark, N. J.
Mennen's Sen Yang Toilet Powder, Oriental Odor } No
Mennen's Borated Skin Soap (blue wrapper) } Samples
Specially prepared for the nursery. Sold only at stores.

Take off your Hat to the
Write for Circulars
and Prices to
F. E. Myers & Bro.
Ashland, Ohio

MYERS

THE PUMP THAT PUMPS HAY TOOLS BARN DOOR HANGERS RAY RACK CLAMPS

Wizard Brand
1 BARREL EQUALS
4 WAGON LOADS
STABLE
MANURE

Sheep Manure
Kiln dried and pulverized. No weeds or bad
odors. Helps nature hustle. For garden,
lawn, trees, shrubs, fruits and house plants.
\$4.00 LARGE BARREL. Cash with Order.
Delivered to your Freight Station.
Apply now.
The Pulverized Manure Co., 21 Union Stock Yards, Chicago.

Belgian Hares

Rufus Red, Registered, and
Pedigreed Stock For Sale.
Send three 2-cent stamps
for Illustrated Catalogue.

Pleasant Ridge Rabbitry

Cor. Dudley St. & Hampton Ave.
Station B LONG BRANCH, N. J.

**American
Homes and Gardens
and
Scientific American**

To one address **\$5** per year
Regularly \$6



AMERICAN HOMES AND GARDENS



Price, 25 Cents. \$3.00 a Year

CONTENTS FOR DECEMBER, 1908

	PAGE
MORNING SHADOWS AND REFLECTIONS.....	456
MONTHLY COMMENT	458
NOTABLE AMERICAN HOMES—The Home of Lieut.-Governor Lewis Stuyvesant Chanler, at Tuxedo, New York.....	By Barr Ferree 459
OLD-TIME LATCHES AND KNOCKERS.....	By Mary H. Northend 466
A HOUSE AT NEW HAVEN, CONNECTICUT.....	By Charles Chauncey 469
A NOVEL IDEA IN DECORATIVE WINDOWS.....	By Dorothy Sythe 472
SHALL WE HIRE AN ARCHITECT?.....	473
VINES FOR WINDOW BOXES, VASES AND BASKETS.....	By Ida D. Bennett 474
"INDIAN HILL"	By Esther Singleton 475
THE WEAVING OF NORWEGIAN TAPESTRY IN AMERICA.....	By Mabel Tuke Priestman 482
HOUSE BUILT FOR F. MURRAY FORBES, ESQ., WELLESLEY, MASSACHUSETTS. By Francis Durando Nichols	485
A PROBLEM IN SANITATION.....	By Lewis W. Hine 489
THE SUMMER HOME OF MRS. C. J. MILLS, BRIDGEHAMPTON, LONG ISLAND. By Paul Thurston	492
CORRESPONDENCE:	
PROBLEMS IN HOME FURNISHING	By Alice M. Kellogg 494
GARDEN WORK ABOUT THE HOME	By Charles Downing Lay 494

Winter Farming

Combined Rate for "American Homes and Gardens" and "Scientific American," \$5.00 per year
Rate of Subscription of "American Homes and Gardens" to foreign countries, \$4.00 a year
Rate of Subscription of "American Homes and Gardens" to Canada, \$3.50 a year

Published Monthly by Munn & Company, Office of the "Scientific American," 361 Broadway, New York

CHARLES ALLEN MUNN, President
361 Broadway, New York

FREDERICK CONVERSE BEACH, Secretary and Treasurer
361 Broadway, New York

[Copyright, 1908, by Munn & Company. Registered in U. S. Patent Office. Entered as second-class matter, June 15, 1905, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879]

NOTICE TO CONTRIBUTORS—The Editor will be pleased to have contributions submitted, especially when illustrated by good photographs; but he cannot hold himself responsible for manuscripts and photographs. Stamps should in all cases be inclosed for postage if the writers desire the return of their copy.



Morning shadows and reflections

AMERICAN HOMES AND GARDENS



Volume V December, 1908 Number 12



The home of Lieut.-Governor Lewis Stuyvesant Chanler, Tuxedo, New York : the forecourt

Monthly Comment



THE open season for rural burglary is now about at its height. It begins toward the end of October, the actual date varying in different localities and being somewhat dependent on the advent of cold weather. The burglary scare generally arrives with the first hard frost, or shortly thereafter, and remains with the residents of the country side until spring has well opened. It is true the country has no monopoly of this disease, plague, nuisance—call it what you will, for the cities seem to afford rich pickings at all seasons. But the person living in the city is surrounded at all times with a multitude of fellow beings, many of them close at hand; moreover, he has, supposedly, an expert police force and a costly detective bureau which are his for the asking. He has burglar alarms, telephones, electric light switches, burglar insurance, and a host of other means, modes, ways and methods of protecting himself, some of which he is sure to avail himself of, while all of them are pretty certain to receive more or less attention from him—after he has been burglarized.

BUT the position of the country resident is very different. He is very much alone, and never so much so as in the winter months. Mere inaccessibility is no detriment to a thrifty burglar, for he has frequently been known to travel a considerable distance, and even to undergo hardship and personal inconvenience, if the fruit of his toil promises a lucrative return for his industry and ingenuity. The victim is, in most cases, utterly helpless. It is true he may not be without resources in the way of protection. He may have electric light; there may be a burglar alarm at his bedside; each member of his family may have his or her own revolver, or even a shotgun; but of outside assistance or exterior protection there is scarcely any at all.

THIS is the crux of the whole matter. The whole country side, almost from one end of our great land to the other, is almost completely without police protection, even of the most primitive kind. The rural constables and marshals in the sparsely settled regions, while in many cases the best men to be had, and often excellent men of their kind, bring no trained intelligence and little familiarity with even the rudimentary nature of their work. Even the officials of the various boroughs, townships, villages and communities are similarly deficient in practical matters of this kind, and while it may be assumed they are both willing and anxious to render every possible assistance and to afford the utmost protection at their command, they are so greatly handicapped that the sum total of their efforts amounts to hardly anything at all.

THE problem as to what shall be done under such difficult conditions is enormously complicated and difficult of solution. As a matter of fact it is one of the many problems surrounding human life for which no single solution can be proposed. There are, however, a few general principles that are applicable everywhere. The problem must, at the outset, be treated with intelligence. It must be studied and considered in all its aspects. It is often a good thing to find out what other communities are doing or what has been the result of such efforts as have been made elsewhere. The methods adopted in one place may not yield the expected result in another; but it is always wise to ascertain what

other people have done in a certain line of work before embarking in it, especially if it is, as rural police protection must be to many, a new subject for thought and activity.

THERE must, also, be co-operation among the residents of a given neighborhood. The country resident is dependent on himself and his own resources to a much greater extent than even he supposes. In the matter of police protection he cannot act alone. Neighborhoods must unite in such work, unite in a friendly general way, without personal rivalry and for the common good. The timid man who thinks only of himself is not only abominably selfish, but a source of real danger, since his views and ideas will be confined to himself alone and he will have no word or help for his neighbors who may need both quite as much as he, and who are quite as much entitled to them. Some States make provision for the organization of local protective associations, and the co-operation that is needed may better take advantage of such opportunities than to depend upon verbal agreements or neighborhood courtesies. Associations are bound to be more effective than individuals, and a formal organization will invariably accomplish more than the best of separated interests.

MANY rural robberies are traced to house and farm servants, or at least are often attributed to them. The responsibility of the employer in such cases is very clear and evident. It is often difficult to get accurate information concerning such employees, but it should not be forgotten that they are brought into the neighborhood and maintained there by the very people they turn against. The promptest of punishments should be meted out to such miscreants, but the person who is responsible for them cannot hope to escape at least a partial responsibility himself. Too much care cannot be taken in examining into the antecedents of rural employees of every sort. If the employer can be brought to feel the full extent of his responsibility in such cases the source of many rural robberies will be quickly eliminated. The same care should be taken in the designation of local police officials. Incompetent and faithless men must be instantly dispensed with. Lawlessness is promoted quite as effectively by inefficient police as by the importation of criminals.

NOR should personal means of protection be omitted or ignored. Every household should be provided with some effective weapon, with the use of which all adult members should be familiar. To be without firearms is in many instances a direct invitation to the burglar to come in. The use of weapons in the case of such visitors is a matter that each man must decide for himself. The chief of police of one of our largest cities, some time ago, recommended the underside of a bed as the best withdrawing place for any householder in the event of a visitation from a robber. It is a suggestion of real merit. The burglar who comes into your house is often a desperate character, and while not necessarily a murderer at heart, may commit this dreadful crime while seeking what he imagines to be his own safety. It is an opportunity that should never be offered. Personal safety is more important than the retention of a few articles of silver or a warm cloak. One final word: if you must shoot, be sure it is an actual burglar and not a member of your own family, or one of your neighbors who is returning home uncertain as to the whereabouts of his own domicile.

Notable American Homes

By Barr Ferree

The Home of Lieut.-Governor Lewis Stuyvesant Chanler at Tuxedo, New York



THIS is one of the many charms of Lieut.-Governor Chanler's home in Tuxedo Park that the approach to it is through a wilderness. The road mounts onward and upward, as most of the roads in this fascinating place have a habit of doing; the automobile whirls past handsome place after handsome place, of which one no sooner catches a glimpse than some new object of interest presents itself. Then, all at once, civilization seems left behind; for a few minutes the road seems to have plunged into the forest; there are dense trees to the right and left, and trees before one. Suddenly there is more light ahead, more space, no doubt, for the trees are further back from the road; the underbrush, all along of a genuinely woody character, now gives way to great bushes of white flowers shining behind an avenue of white pines. Almost before you know it you have driven into an open forecourt and dismounted before the doorway of the house.

Vastly unexpected and vastly delightful it is. One knows, of course, there is a house here, for one has started to reach it. One knows, also, if the dignified folk who have made Tuxedo Park famous were addicted to the game of hide and seek, they could have no better sport—were they actually unfamiliar with the location of these dwellings—than to use them as a base for play of this sort. One lives in Tuxedo for the beauty of the place and not to be seen or heard; and while there are many beautiful places and wonderful sites here I doubt if any one has a more charming and delightful situation than Lieut.-Governor Chanler. Moreover, the sequestration of his place is more apparent than real, for the Park automobile service permits it to be readily reached at all times, and the telephone keeps him in touch with the whole world.

The house is a charming structure, not large, but modest in size, and was designed by R. Clip-

ston Sturgis, architect, of Boston. It is built of Harvard brick, with sandstone trimmings. The entrance front presents two wings of which the larger, on the left, contains the service rooms; while the smaller, on the right, contains the end of the drawing-room. Midway between these is a third extension, a shallow pavillion with the entrance door. The first story of this is completely encased with sandstone. The doorway is placed beneath a curved pediment, cut away in the center to give space for a decorated cartouche; the entablature is supported by channeled pilasters standing on pedestals. Higher up is a twin window and then the plainly pointed gable.

Save for the stone edging of the corners there are no other parts of this front that may be described as "features" except the windows. In other words, the exterior of the house is strictly architectural, depending solely on its structure for the effect. And this, it should be noted at once, is highly picturesque; not the picturesqueness of the bizarre and the strange, but the picturesque that is obtained by the use of simple motifs arranged in a picturesque way for the obtaining of a picturesque end.

One can imagine, then, the pleasure with which the architect set about his task; choosing a style that permitted of varied surfaces and parts and which encouraged the employment of windows designed to meet definite interior problems without very much regard as to where they came on the outside, being sure that whatever their form or location, they would be bound to help the design and not to hinder it. One does not realize, until one sets out to study it, how exceedingly irregular this front is and how very varied are its component parts. As a matter of fact such an analysis is not needed, for the exterior offers itself as a whole, and as a whole it is immensely delightful and thoroughly charming.

The building problem here was



The inscription from Isaiah over the door is the keynote of the place: "The wilderness and solitary place shall be glad for them; and the desert shall rejoice, and blossom as the rose"

complicated by a number of unusual and individual conditions. The house was not only in a wilderness, but actually a-top a precipice; it had to be not only a habitable dwelling, but one in which these conditions must be correlated to each other. They have been met in an extremely happy manner. The house is actually in a clearing in the woods that is sufficiently ample to give it full individuality. The forecourt is simply the end of the road that runs directly into it. Two sides, in front and on the left, are bounded by the house, while a branch of the road on the left conducts to the service yard and beyond to the conservatory, which is quite hidden from the main entrance. On the right, before the drawing-room



Rocky steps to the summer-house

windows, is a square of lawn, raised somewhat above the level and supported by a low wall of rough stone. A square vase stands at the steps which lead up to it, and some slender trees on the outer margin yield an agreeable shade. The further edge of the lawn is immediately at the crown of the precipice above which the house stands. Its steep side is densely wooded, and the bottom of the declivity is well nigh out of sight. There is another flight of steps here, a long descent of a hundred, by which the road far below may be reached. It is a picturesque scramble either way you take it, down or up.

Over the front door is a Latin inscription, suggested by Mr. Sturgis, from Isaiah xxxv,



The garden porch from which the hillside beauty may be seen

which seems the keynote of the whole place: "The wilderness and solitary place shall be glad for them; and the desert shall rejoice, and blossom as the rose." The door itself is oak, solidly paneled below but glazed above. It opens into a small vestibule, paneled in wood painted white, with an arched ceiling, from which depends a Japanese lantern. A second door leads into the hall, which fills the center of the house. It, also, is paneled in wood painted white, there being large rectangular panels above a wainscot of smaller ones. The stairs are on the right and rise against the entrance front, being brilliantly lighted by the great triple window whose solid lower panels are a striking feature of the

ing the precipice is a rectangular bay window that affords a wonderful view of the deep valley below, the lake that shines beyond in the distance, and mountains that, afar off, close in the entire outlook.

On the left of the hall are two small rooms, the more important of which is Mr. Chanler's smoking-room and library, which is at the back of the house. It is paneled in oak to the ceiling, and has a molded cornice. The fireplace has facings of red brick with a hearth of Welsh tile, and is contained within a molded frame. The mantel shelf is supported on carved corbels. The curtains are of yellow and silver brocade. One entire wall is lined with book



The summer-house in the woods

exterior. The carpet is an Oriental pattern in red, blue and green. The windows opposite the entrance are hung with curtains of rich rose damask silk, and electric lights are supplied by side fixtures of brass.

The drawing-room is on the right and occupies the whole of that wing of the house. It is lighted by windows on three sides, all of which are furnished with curtains of rose damask. The walls are white with molded panels and a simple classic frieze supports the plain white ceiling. The mantelpiece is of carved white marble with facings and hearth of polished mottled white marble; the fireplace fixtures are brass. The furniture is covered with rose damask silk and some handsome Oriental rugs are laid upon the hardwood floor. Two panels of the wall are filled with low bookcases, and the wall light fixtures are brass. Overlook-

shelves. Opposite this, on the entrance front, is a room for arranging flowers and a passage to the service rooms.

Further on is the dining-room, which is finished in mahogany. There is a paneled wainscoting, above which the walls are hung with green silk damask. The cornice and ceiling are in white plaster. The furniture is antique. The carpet is green and the window curtains of green damask. The mantel is mahogany, with facings and hearth of mottled marble. The wall lights are silver, and the portraits are family heirlooms. Just without is a small porch that serves as a breakfast room. It is enclosed within brick walls on three sides, with sandstone columns on the open side which overlooks the garden. The floor is brick, laid in herringbone fashion.

You come out on to the garden porch from the main hall



The hall is paneled in wood, painted white and contains a beautiful stairway

risers somewhat behind the house, sometimes with great bare boulders, at others with treed ridges that help to emphasize the picturesque-ness of the site. And everywhere, save for a little space beyond the porch, are flowers, splendidly blooming, merging into the older shrub and tree growth, but everywhere alive and flourishing, garland upon garland of lovely bloom, bordering the paths, rising up on the hillocks, blooming on into the forest, the trees of which rise on every side, the leafy casket within which these wonderful floral jewels are treasured and retained.

It is a garden of no kind or form, but just a garden. There are paths, it is true, but of no form or style, just paths that one may walk along and drink in the wonderful beauty gaily blooming at one's feet. It is a garden created solely

and hold your breath at the amazing spectacle disclosed before you. House details sink into insignificance before the beautiful garden that is spread before you. The ground

for the purpose of growing flowers, growing them grandly and in abundance, so that the whole is a veritable mosaic of lovely splendor, comparable to nothing else save it be the



The drawing-room has paneled walls, a carved white marble mantel and curtains of rose damask

richly emblazoned page of some rare medieval manuscript.

sant to know
veliness is di-
the to Mrs. Chanler,
who "v superin-
tended a planting here,
and to whose loving care
so much of its beauty and
its success is due. How
much space is covered by
the flowers I do not know;
certainly they are every-
where, and to their number
and variety there seems no
limit. Being a natural gar-
den there are no architec-
tural or ornamental fea-
tures to befog the imagina-
tion or to distract the at-
tention. It is true there is
a summer house some dis-
tance away from the main
house, a dainty little brick
structure with a porch that
faces the further wood. It
is quaintly set, too, and is
reached by steps, some of
which are cut in the grand
old rocks, while others are
carefully laid of rough cut stone. But this, after all, is but
an incident, and the little house is so embowered within trees
that it makes no contribution to the style of the garden;

rather it is a resting place, where one may sit or swing in the
hammock and absorb the loveliness that has been here since
time began or which has been brought here of late.



Lieut.-Governor Chanler's study is a charming room paneled throughout



The dining-room is hung with family portraits; above the sideboard is a silver bowl presented to the Lieutenant-Governor by the New York Senate

Beneath the dining-room windows, next the garden porch, is a wide and spacious border, reaching quite out to the bounding path. Here are row after row of hardy shrubs and flowering annuals; an inner row of nicotiana is followed by a low hemlock hedge; then another row of nicotiana; then Japanese barbery; then nicotiana again, and a final luscious growth of heliotrope. The corresponding border beneath the drawing-room windows is chiefly composed of day lilies and hardy phlox, harmonizing with the old rose tones of the bricks.

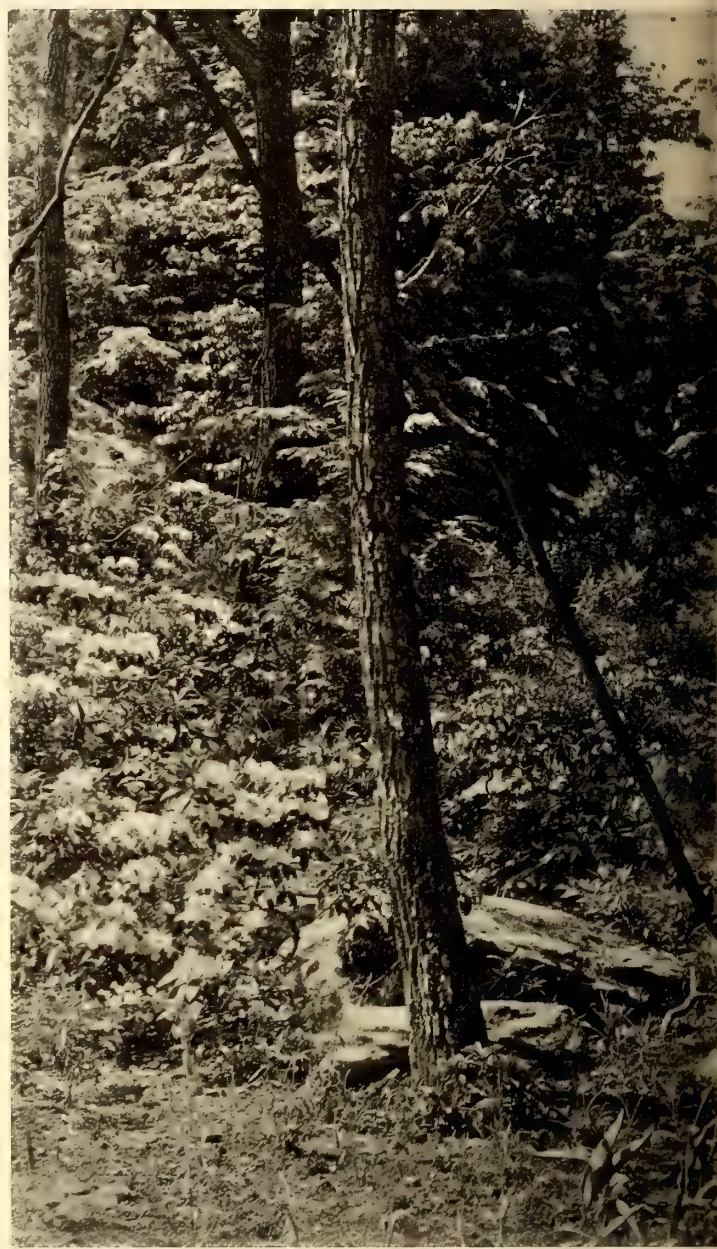
But it is the path bordering that seizes the attention and

most it would be a florist's catalogue, and would convey no sense at all of this planted loveliness, in which so much has been combined to produce so grand an effect. For there is ample spacing everywhere. The beds are wide and the paths are long; they twist a bit and turn some, so that an end is no sooner reached than an opening presents itself with new varieties and new growths. Somewhere in between this beauty a vegetable garden has been contrived, but it is so embedded and decorated that its more useful growths hardly count in the beauty within which it is planted.

There are few things so difficult to describe as a garden,



Steps to the lawn by the forecourt



The long path

holds it. The paths out beyond the house are bordered on both sides by wide beds filled with flowers of the most brilliant sort. One may almost believe that everything that grows and blooms has its place here, and certainly every plant is at home, for the growth is everywhere lusty and the blooming continuous and vigorous throughout the season. Here are huge beds of verbenas; immense clumps of gay petunias, each color in a place of its own; some immensely high lilies; brakes of fern; clumps of hardy phlox; brilliant asters; more nicotiana, and other splendid annuals and perennials. In other paths the planting changes and there are masses of dahlias, foxgloves, marigolds, snapdragons, chrysanthemums, salpiglossis—but why continue the list? At the

and few gardens so untranslatable into words as Mrs. Chandler's. A recital of its contents would be a mere list of names and there would be no conveyance at all of its wonderful charm and beauty. It is a garden that would be lovely everywhere, but which is here most lovely of all; since one hardly looks for this floral wealth in the midst of a forest, and the rocks and trees afford so fine a shelter and so beautiful an enclosure. So here it grows and flourishes, like nothing but itself, a beautiful scented garden, so filled with flowers that the air is saturated with their sweet odors, and one carries away from it a lasting sense of its beauty and its perfume.

Yet it is a garden to linger in as well as to delight in. Its area, as I have already hinted, is sufficiently large that one

may lose oneself in its floral borders; stand, as it were, in the center of a great bouquet, spread out on every side as far as eye can see. You may, indeed, be the single incongruous element in the whole landscape, for what mere man dare compare himself with the loveliness of flowers?

Not I, surely; and in truth, as my entranced eyes carried me from one mass of flowering to another, from one delicate hue to perhaps a richer, stronger note, it seemed as though, most unworthily, I had gained entrance to fairyland, a true and real fairyland; for the path I trod was real and solid, the trees gave back their natural resistance

moment, if you please, imagine that there has been no system displayed in its planting, no reasoning avoided in what has been done here. Nor think, if you will, that there can be only confusion here, plentifully distributed, displayed under every tree, flourishing unabashed by every foot of walk.

There is nothing of this at all; for how could there be when the single underlying idea that determined the form and content of this garden was simply to gather here every beautiful kind of plant, every plant that had beauty or helped beauty, or that gave forth a delicious perfume, or which had some exquisite or some noble form—if I say all



in the woods



Some of the hundred steps on the hillside

once I put my hand upon them, and the flowers were real, too, growing in endless profusion, each stem seemingly capped with its own precious note of loveliness and color.

Yes, it was all true and all real, and I had no need to pinch myself or thrust a pin within my flesh to realize that I was awake and really here. But, surely, fairyland could not be fairer than this sweetly scented garden, nor finer nor more beautiful. Even the "common" flowers, if there be such things, took on an unaccustomed note of beauty and seemed the better fitted to fill their part of having something to do and doing it with as much grace as they could.

If I have described this garden as a place in which every lovely thing grew and bloomed in profusion, do not for a

this lay below the planting of this garden, then how could it be aught but beautiful? Surely, where beauty is gathered together, there is beauty, and all else matters not at all.

And a garden being a place for plants, this is a true garden. The architect has not hauled into it mammothly heavy constructions of stone and cement; the sculptor has not set up his statuary or his carved vases; the landscape architect has not brought out his plans and instruments. I doubt if any of these good folk had a "job" here or needed one. Quite certainly they were not needed; for in the deliciously lovely embroidery of the simple plants themselves there is nature's richest adornment to her own surface, and her most gracious offering to the human mind and senses.

Beneath the dining-room windows, next the garden porch, is a wide and spacious border, reaching quite out to the bounding path. Here are row after row of hardy shrubs and flowering annuals; an inner row of nicotiana is followed by a low hemlock hedge; then another row of nicotiana; then Japanese barberry; then nicotiana again, and a final luscious growth of heliotrope. The corresponding border beneath the drawing-room windows is chiefly composed of day lilies and hardy phlox, harmonizing with the old rose tones of the bricks.

But it is the path bordering that seizes the attention and

most it would be a florist's catalogue, and would convey no sense at all of this planted loveliness, in which so much has been combined to produce so grand an effect. For there is ample spacing everywhere. The beds are wide and the paths are long; they twist a bit and turn some, so that an end is no sooner reached than an opening presents itself with new varieties and new growths. Somewhere in between this beauty a vegetable garden has been contrived, but it is so embedded and decorated that its more useful growths hardly count in the beauty within which it is planted.

There are few things so difficult to describe as a garden,



Steps to the lawn by the forecourt



The long path in the woods



Some of the hundred steps on the hillside

holds it. The paths out beyond the house are bordered on both sides by wide beds filled with flowers of the most brilliant sort. One may almost believe that everything that grows and blooms has its place here, and certainly every plant is at home, for the growth is everywhere lusty and the blooming continuous and vigorous throughout the season. Here are huge beds of verbenas; immense clumps of gay petunias, each color in a place of its own; some immensely high lilies; brakes of fern; clumps of hardy phlox; brilliant asters; more nicotiana, and other splendid annuals and perennials. In other paths the planting changes and there are masses of dahlias, foxgloves, marigolds, snapdragons, chrysanthemums, salpiglossis—but why continue the list? At the

and few gardens so untranslatable into words as Mrs. Chandler's. A recital of its contents would be a mere list of names and there would be no conveyance at all of its wonderful charm and beauty. It is a garden that would be lovely everywhere, but which is here most lovely of all; since one hardly looks for this floral wealth in the midst of a forest, and the rocks and trees afford so fine a shelter and so beautiful an enclosure. So here it grows and flourishes, like nothing but itself, a beautiful scented garden, so filled with flowers that the air is saturated with their sweet odors, and one carries away from it a lasting sense of its beauty and its perfume.

Yet it is a garden to linger in as well as to delight in. Its area, as I have already hinted, is sufficiently large that one

may lose oneself in its floral borders; stand, as it were, in the center of a great bouquet, spread out on every side as far as eye can see. You may, indeed, be the single incongruous element in the whole landscape, for what mere man dare compare himself with the loveliness of flowers?

Not I, surely; and in truth, as my entranced eyes carried me from one mass of flowering to another, from one delicate hue to perhaps a richer, stronger note, it seemed as though, most unworthily, I had gained entrance to fairyland, a true and real fairyland; for the path I trod was real and solid, the trees gave back their natural resistance

moment, if you please, imagine that there has been no system displayed in its planting, no reasoning avoided in what has been done here. Nor think, if you will, that there can be only confusion here, plentifully distributed, displayed under every tree, flourishing unabashed by every foot of walk.

There is nothing of this at all; for how could there be when the single underlying idea that determined the form and content of this garden was simply to gather here every beautiful kind of plant, every plant that had beauty or helped beauty, or that gave forth a delicious perfume, or which had some exquisite or some noble form—if I say all

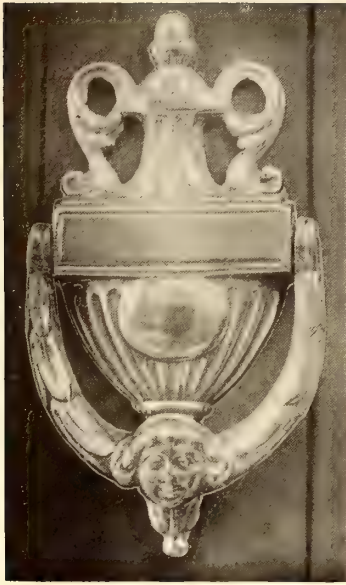
once I put my hand upon them, and the flowers were real, too, growing in endless profusion, each stem seemingly capped with its own precious note of loveliness and color.

Yes, it was all true and all real, and I had no need to pinch myself or thrust a pin within my flesh to realize that I was awake and really here. But, surely, fairyland could not be fairer than this sweetly scented garden, nor finer nor more beautiful. Even the "common" flowers, if there be such things, took on an unaccustomed note of beauty and seemed the better fitted to fill their part of having something to do and doing it with as much grace as they could.

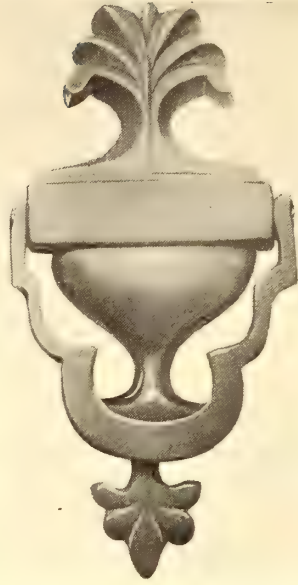
If I have described this garden as a place in which every lovely thing grew and bloomed in profusion, do not for a

this lay below the planting of this garden, then how could it be aught but beautiful? Surely, where beauty is gathered together, there is beauty, and all else matters not at all.

And a garden being a place for plants, this is a true garden. The architect has not hauled into it mammothly heavy constructions of stone and cement; the sculptor has not set up his statuary or his carved vases; the landscape architect has not brought out his plans and instruments. I doubt if any of these good folk had a "job" here or needed one. Quite certainly they were not needed; for in the deliciously lovely embroidery of the simple plants themselves there is nature's richest adornment to her own surface, and her most gracious offering to the human mind and senses.



Vase knocker



Greek design



Dog and ring



A graceful form

Old-time Latches and Knockers

By Mary H. Northend



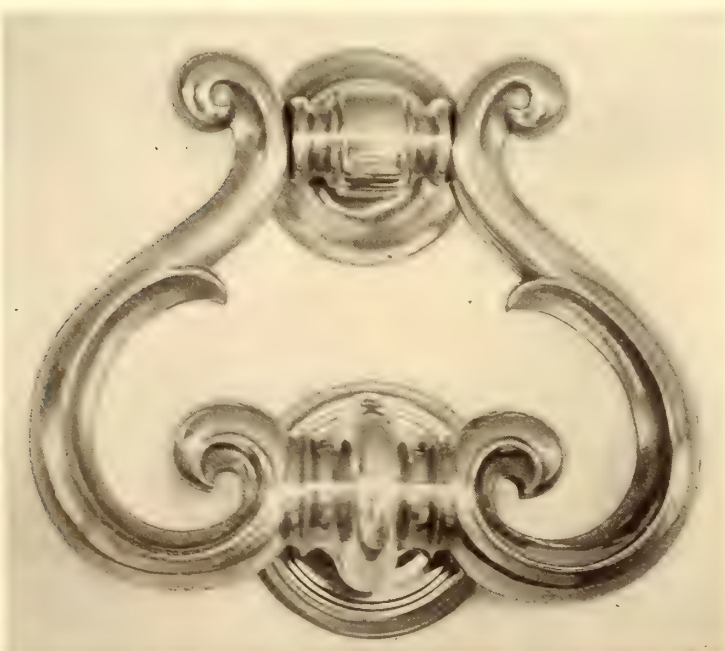
CAST iron and solid brass were the usual materials from which knockers were made in old times; whereas we now use cast bronze or wrought iron for their reproduction. As the proportions of the doors and gates for which they are designed must needs vary, the dimensions of the knockers are variable also. We may, however, classify the door-knockers into three types, of which the first has the form of a ring, usually suspended from the jaws of a lion. This kind of door-knocker is sometimes called a door-ring, and served a secondary purpose, as door handle, in addition to its primary use of heralding the visitor's arrival.

The second type includes all knockers having the form of a hammer, movable on a more or less primitive hinge, such as the horseshoe knocker here represented.

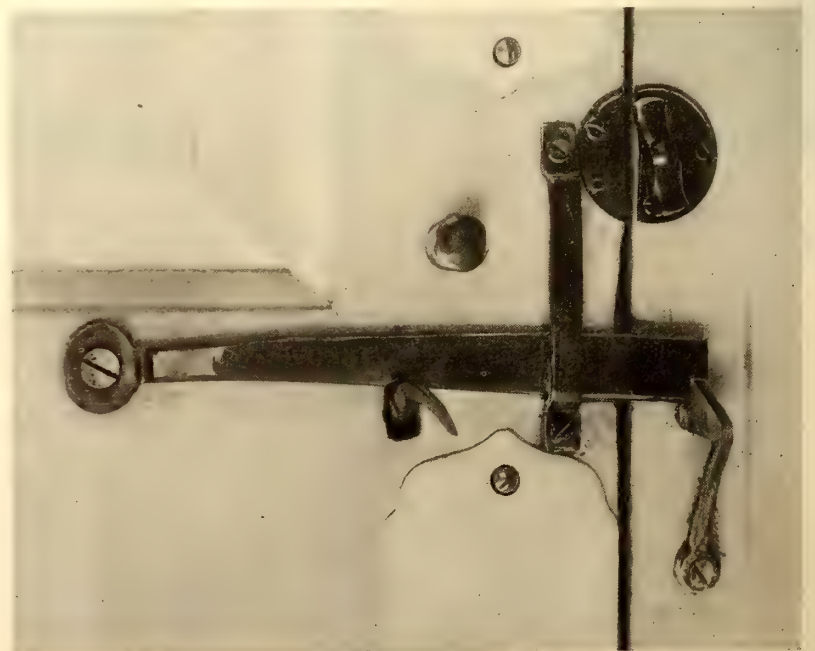
The third type arose in Italy, during the best days of the Renaissance, and comprises all those bronze door-knockers showing groups of figures, whether lions, dolphins, or human beings.

In all three classes the desired sound is produced by the falling of the movable part upon a metal stud; but in the third class, the escutcheon, or plate by which the knocker is fastened to the door, is considered of but little importance, whereas in the two preceding classes it seems to have been the leading motive, from the standpoint of design. During the Gothic period these escutcheons were usually of diamond shape, and richly decorated with pierced work. This motive was sometimes retained during the Renaissance, but was more frequently replaced by double-headed eagles, and the like.

With regard to repetition of design, what was true of medieval knockers holds true at the present day. There is



Scroll knocker



An old-time latch



Head of Daphne



Phoenix type



Tiger design



Eagle knocker

a certain fine individuality about this article, and we find few duplicates of even the most admirable specimens. Having found a suitable copy, however, it is not at all difficult to have it reproduced. Present day manufacturers make a variety of brass knockers, whose only defect is that brass requires so much polishing. These artisans will reproduce or adapt patterns in brass at prices ranging from three dollars to fifteen, according to size and style.

Of course, these modern articles are wholly lacking in that historic element so dear to the hearts of collectors and antiquarians, unless the new ornament has been copied from some model which possesses special interest for the prospective owner. For my own part, I should investigate the nearest antique shop before having a knocker made; for I know to a certainty that fine examples of genuine colonial door-knockers can often be obtained in such places at a figure astonishing low. In fact, they are less expensive than the modern reproductions; for antique brass specimens

can be bought for two dollars or more, and an excellent iron one for a dollar and a half. Very large and elaborate old-time knockers can be purchased for five dollars. This is not because their true value is not known, but because there is, as yet, comparatively little demand for them. Where a person could use twenty candlesticks, she could use, at the most, not more than two knockers, perhaps not more than one.

The horseshoe knocker has been already mentioned as a typical example of the hammer class. Like all truly colonial specimens, it is made of wrought iron, painfully hammered out by hand upon the forge, as even nails had to be hammered out, in the colonies, in the absence of machinery for working iron. This is one of the most quaint and original knockers that I have ever seen, and is on the style of the earliest made. They soon became more elaborate, and colonial craftsmen bestowed upon them their highest skill. Among the more elaborate were purely Greek or



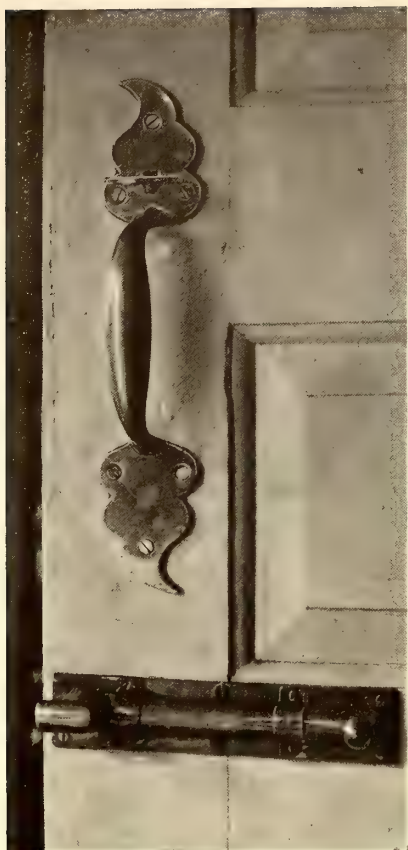
Lion design



A Georgian type



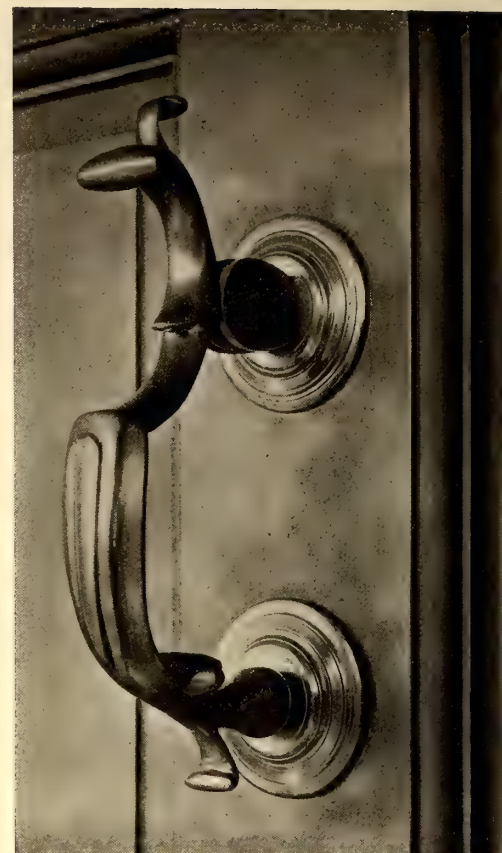
Horseshoe knocker



Bolt and handle



An ornamental form



Thumb-latch knocker

Georgian vases and urns, eagles in all possible and impossible positions, heads of Medusa, Ariadne, and other mythological ladies, and Italian Renaissance ornaments, such as nymphs, mermaids, tritons, and dolphins, with ribbons, garlands and streamers.

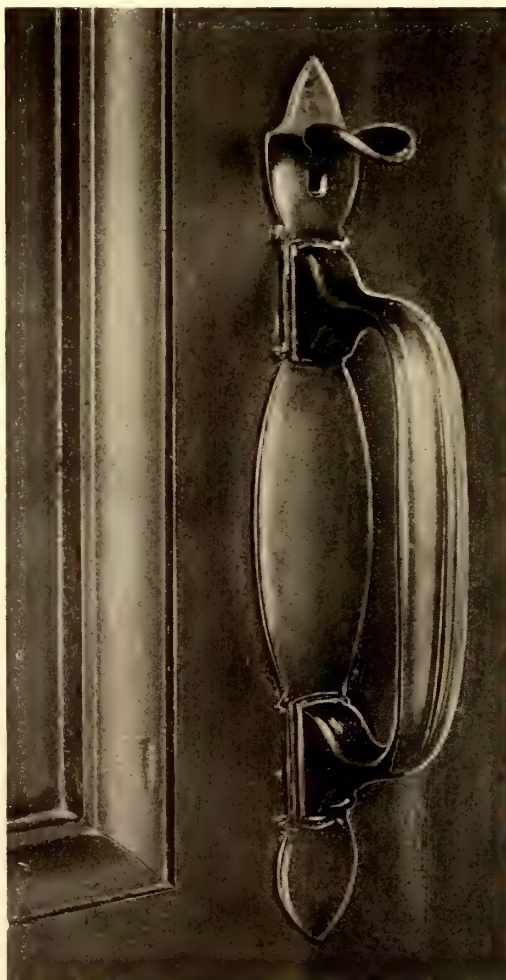
The head of Daphne, with its laurel leaves, combines doorplate with knocker, as well as knocker with door han-

dle. To this same first group of door-ring knockers belong the dog's head, which is an old and favorite device of the smith, the tiger's head, and the lion's head.

The lion's head has been more popular in England than in our own country. There was a time, during the Revolution and for fifty years after, when that object was not venerated, but was superseded by eagles, which are frequent.



A sturdy form



Convenient and expressive



A familiar type

A House at New Haven, Connecticut

By Charles Chauncey



AN interesting house is the one built for Mrs. Clara A. Wilbur, at New Haven, Conn., from plans prepared by Mr. Grosvenor Atterbury, architect, of New York.

It is a simple house, embracing many characteristics which appeal to the builder of small artistic houses. The low, overhanging roof, which slopes down to the first story studding, naturally impresses one with the fact that the second story is low studded, and without the proper head room. The fact is, all the second story rooms have square ceilings and this is brought about by the clever handling of a broad dormer window which extends nearly across the entire width of the house. By this means, the elevations are kept low, not only in effect, but in reality, and at the same time the sleeping rooms are provided with square walls and ceilings.

The underpinning is of red brick laid in red mortar.

The superstructure is of wood and the exterior framework is covered with shingles left to weather finish, and the trimmings are painted brown and the blinds green. The chimney is built of brick, the same as the underpinning, and is a feature of the exterior. A small entrance porch is built in the center of the front, from which a door opens into the hall.

The trim of this hall, as well as all the trim of the first floor, is of cypress, stained and finished in a dark Flemish brown. The length of the hall is divided by a broad platform the full width of the hall, which is two steps above the level of the floor, and from which two steps descend at the rear. A staircase with square newel posts and balusters ascends from this platform. A highboy of rare design is placed on one side of the hall, while a "lover's settle" and antique chairs are placed on the other. The platform contains an old English chest, over which is hung a Queen Anne mirror.

To the left of the hall is the living-room, and nearly opposite the entrance is the open fireplace, built of klinker brick and laid up in a rough manner. A paneled overmantel with mir-

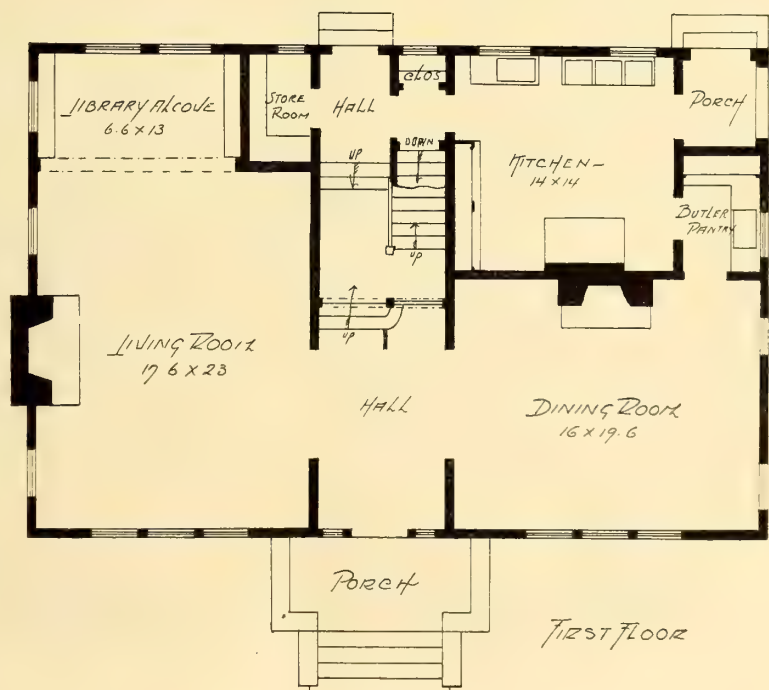
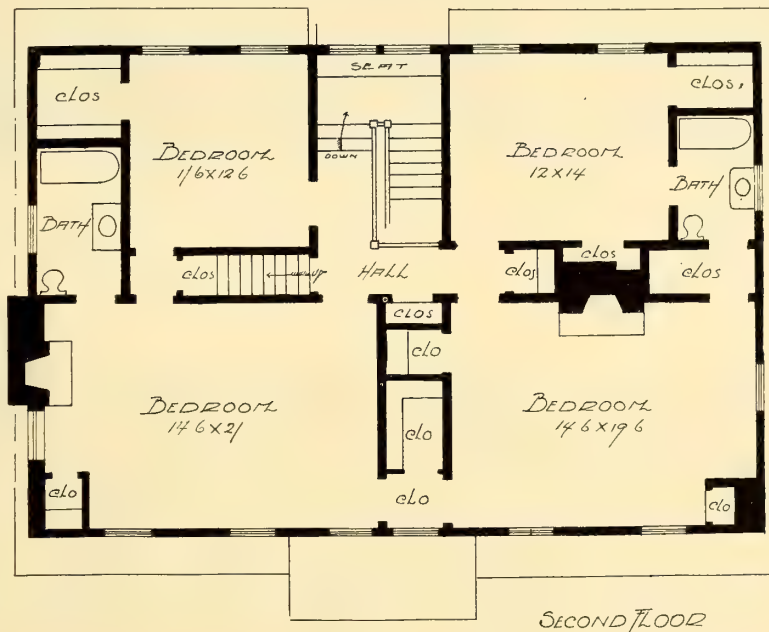
rors extends from the mantel shelf to the ceiling. One of the accessories of the living-room is the library alcove, in which are built bookcases. A Persian rug covers the floor, soft muslin draperies are hung at the windows, and antique furniture supplies the ornaments for the room. Directly opposite the entrance to the living-room is the dining-room, which has a dado of Japanese matting to the height of seven feet, finished with a plate rack. A fireplace with facings and hearth of rough red brick is finished with a mantel shelf on the line with the plate rack, and is supported on corbel brackets. The dining table in the room is one formerly owned by Lester Wallack, the well-known actor.

A butler's pantry forms a connection to the kitchen, and it is supplied with a sink and a dresser for the china. The kitchen is fitted with a large dresser, range, sink, laundry tubs, and porch. A rear stairway has not been provided, but the front stairs are placed in such a position as to exclude the necessity of a rear stairway. The cellar stairs descend under the front stairs and are reached by a door opening from the kitchen. This arrangement permits the owner of the house to reach the cellar without entering the service part of the house.

The second story rooms are arranged in suites, containing two bedrooms and connecting by a bathroom, one on either end of the house. Two of the bedrooms have open fireplaces of brick and neat wooden mantels, and each one is decorated in one particular color scheme. The bathrooms have porcelain fixtures and exposed nickel-plated plumbing. The servants' quarters are in the third floor. There is also ample storage space on this floor. A heating apparatus, fuel rooms, and cold storage space is provided in the cellar.

The house, and the grounds surrounding it, represent all that is best in a modern house of simple character, built on a suburban lot of small dimensions. The house in itself is equipped throughout with all the best modern conveniences which are to be found in a well regulated house.

The grounds are inclosed with a fence in the form of a pergola.





Weathered finished shingles with brown painted trim is the color scheme of the exterior



Flower boxes built in the buttresses



The living-room has an open fireplace of klinker brick



The hall is furnished



the feature of the entrance porch



The pergola fence is an unusual and effective arrangement



with antique furniture



The dining-room has a high wainscoting of Japanese matting



Weathered finished shingles with brown painted trim is the color scheme of the exterior



Flower boxes built in the buttresses are the feature of the entrance porch



The pergola fence is an unusual and effective arrangement



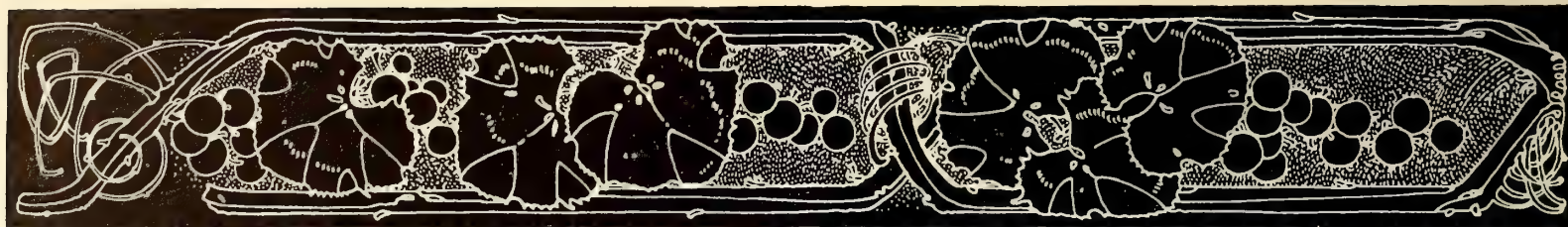
The living-room has an open fireplace of klinker brick



The hall is furnished with antique furniture



The dining-room has a high wainscoting of Japanese matting



A Novel Idea in Decorative Windows

By Dorothy Sythe



A CLEVER idea has recently been evolved for decorative effects in windows. It closely resembles the most beautiful stained glass, and yet its slight cost brings it within the reach of all those who have the skill to make beautiful designs, for it consists only of Japanese tracing upon which decorative sketches have been painted in water color.

The tracing paper is stretched on a drawing board exactly in the same way as water color paper, and then the sketch is made the size of the window pane for which it is intended. In looking at our illustrations, it will be noticed how good and bold all the designs are, but a reproduction gives no idea of the brilliancy of color of these exquisite window lights. The Japanese tracing paper lends itself to this treatment, for it allows the light to come through and yet, owing to its opaque qualities, it is excellent for screening purposes for the lower part of a hall or bathroom window, or for the lower lights of a dining-room which overlooks a neighbor's house. The fact of the light not being obscured makes them available for back windows, especially for studios where the outlook on roofs and chimneys is anything but pleasing.

The introduction of lettering carries out the suggestion of stained glass, and yet they must not be regarded at all in the light of a sham, for they do not pretend to be anything but what they are.

When the sketch is completed, and perfectly dry, it can be pasted on to the window by means of mucilage and water. The best way to do

this is to mix equal parts of water and mucilage and to smear the window pane all over with it. Then place the paper on the window pane, pressing the middle first with a soft cloth and working toward the edges so as to get no creases or bubbles. Great care must be taken not to tear the tracing paper; but a little practise soon makes perfect, and I would certainly advise pasting several sheets of undecorated tracing paper on a window before running any risk of spoiling the decorated tracing paper. One of our illustrations shows nine different designs placed in the lower part of a large studio window. The rich orange of the pumpkins, the bright yellow of the marigolds and the purple of the grapes were a feast of color that riveted my attention as soon as I entered the room. Our three illustrations were done by students at the Pratt Institute, Brooklyn, an art school, where one is always sure to find original work, beautiful in design and praiseworthy for their color value.

One of the charms of a decoration of this kind is that if we find ourselves amidst ugly surroundings, with a depressing outlook, beauty of form and glowing colors can be introduced on the windows, by means of these effective paintings, to cheer our spirits and give an individual touch to the room.

For a new church, where the costly leaded glass cannot at first be afforded, this form of decoration would be an admirable substitute, particularly if the artist members of the congregation were willing to make the sketches gratuitously, for they would make a fine substitute while waiting for the more per-



An effective group of designs



The brilliant color of the painting is seen to great advantage when placed on the windows



Good lettering adds to the design and helps it in many ways

manent leaded windows. Interesting as these windows are, not only to design and make, but to see and enjoy, it should not be forgotten that they have a very certain informal character. They are hardly to be looked upon as perma-

nent and lasting, but rather pleasant decorations that have merit, but which may be changed from time to time as one desires. In any event, they constitute a new form of household decoration that possesses both novelty and interest.

Shall We Hire an Architect?



CERTAINLY, and why not? The question is often asked, and it is sometimes answered as it is put. There are good architects and some not so good, and sometimes one hears of architects that are really bad. Personal experiences are so very varied, however, that instances are not unknown where a client reports very distressful results from the engagement of architects who enjoy the best of reputations. It may be unkind to suggest that in such cases the trouble lies with the client himself rather than with the architect. Simple candor compels the idea.

The fact of the matter is that a man who knows is, in the long run, bound to win out in competition with the man who does not know. It is a mere question of solving problems. The man with the most skill in such work is certainly more apt to succeed than the man with less skill. Brilliant ideas are often obtained from most unlikely sources; but the man who undertakes to build a house for himself or for others and does not take advantage of the very best advice and assistance he can command is taking a big risk.

It is seldom worth while to do this, for the erection of a dwelling, even of small cost, is an expensive undertaking. Everyone knows that this often runs up into the hundreds of thousands of dollars, and those who have these immense amounts to spend are often the best able, financially, to make such experiments in architectural expenditure as may seem desirable to them. The cost to the owner of a small house is often relatively greater than to the builder of a large

one. Not that prices are actually higher, but the small builder is apt to put most of his savings into the venture, and his resources being smaller the risk is proportionately greater.

The architect is the only person who has made a real study of the art and science of building. This study if not complete, is at all events more extended and more profound than the knowledge that a layman may equip himself with when he sets out to build his own house. It is the simple question of expertness. One calls in a physician for sickness, and one should, quite as a matter of course, call in an architect when undertaking a building.

There is never any economy in seeking to save the architect's fee. He not only earns his money, but he saves his client cost and bother. His fee is a legitimate part of the building enterprise, quite as essential as the walls and roof. Commissions and profits of various sorts are necessary accompaniments of every building enterprise; why should the architect be dispensed with simply because he charges a reasonable amount for his expert guidance?

It is quite true that houses, and sometimes good houses, have been built without the aid of the architect. These, however, are the exception. The layman can not possibly make the study of the problem that the architect does; he may advise and suggest; he may propose and dictate; but the architect is the one person to digest, absorb and arrange all these matters and put them into concrete, definite building form. He is more than worth trying; he is exactly the person to consult in home building.

Vines for Window Boxes, Vases and Baskets

By Ida D. Bennett



THAT nature had a definite purpose in the production of vines seems well attested by the infinite variety and adaptability of the varieties. Vines for every purpose are available, and where their use proves inartistic or unsightly it must be because of lack of discretion in selecting, planting or caring for them, or from real indifference.

With the novice in floral matters a vine is apt to be a vine and nothing more, and to be used with little or no regard for the position in which it is placed, and it is only a lucky accident that saves the planting from artistic disaster.

There are many fine, hardy vines and many robust growers of the annual varieties which give excellent returns when planted on the sides of buildings, pergolas, summer-houses and the like which would be sadly out of place if used in vases, window boxes or other positions calling for a small-leaved, moderate-growing vine. At the same time many of the annual climbers are so dwarfed by confinement in a limited space as to be tractable and useful, but as a general thing choice should be made of the more delicate house and greenhouse vines where available.

The successful stocking of window boxes calls for a more or less profuse use of vines, and the selection of these will greatly depend upon the plants which are used in combination with them. Where plants with conspicuous and variegated foliage are used it is better that the vines should be of plain foliage, but with plain-leaved flowering plants such variegated plants as the vincas and glechomas may be adopted. The vinca is a favorite florist's plant, much used in boxes, vases and baskets. It grows to considerable length if left untrimmed, but will be far more profuse if cut back more or less severely, as it throws two new branches at every shortening of the sprays. This is a trailer pure and simple, as is also the silver-edged glechoma, and quickly masks the sides of the box over which it falls.

Less thrifty in growth, rarely exceeding eighteen inches in length, the variegated trailing abutilon is a most effective drooping plant for boxes and baskets, especially when covered with its striking bells of red and yellow and of black. Unfortunately, this blooms only in early summer, so can not be depended upon for anything but beautiful foliage later in the season.

The trailing fuchsia, on the other hand, is a most persistent bloomer and remains laden with its beautiful purple and crimson bells until frost. It is equally useful for any position where a drooping plant is required, but prefers a partially shaded position, as a north window or a partially shaded east one; for soil it prefers a liberal mixture of leaf mold and sharp sand and well rotted manure, but will do well in any good soil. I prefer to fill boxes which are to hold mixed plants with a good compost rather than any one particular soil, and by using a good, warm garden loam or soil from rotted sod as a basis and adding a proportion of leaf mold, sharp sand and well-rotted manure, a soil is produced which will grow almost anything. To this may be added a little ground bone, as the soil in these small repositories becomes quite exhausted by midsummer and needs reinforcing with something of slower assimilation.

Less robust in growth, but very effective in outline and coloring, the trailing begonia—*Cissus discolor*—and the trailing geranium or saxifraga may be employed with plain-

leaved plants. The former is somewhat difficult to grow successfully and should be given a rather protected but sunny position, but the saxifraga is of the easiest culture. We used to find this plant in almost every collection of plants, along with the farfugium and the calla lily, but of late years it is little seen, and should be brought forward and given the attention so good and useful a plant deserves.

Among the various climbing vines which may be twined to drape the sides of their receptacles is the bright little manettia vine, with its cigar-shaped blossoms of fiery red, tipped with yellow. This little vine blooms equally well either summer or winter, and at the end of the season may be taken up and potted off for winter use in the house. I like to grow it, indoors or out, in combination with the white solanum—*Solanum seaforthianum*—whose sprays of delicate white blossoms, so freely produced, are delightful with the stronger-colored manettia. The solanums are freer growers than the manettia vine and may be used alone with excellent effect, but take more to an upright position than to a recumbent one. *S. azureum* is a very free grower, with large graceful sprays of purplish blue flowers freely produced throughout the summer, but *S. wedliandi* is too rank a grower to be useful in small spaces, though excellent on trellises or pergolas.

A large growing vine which still is most useful for window boxes is found in the passion flower—Southern Beauty. This has large leathery leaves, which in themselves are highly ornamental, but when it opens its large striking flowers of white, blue and pink—which are produced from the axils of almost every leaf—the effect is beautiful indeed and never fails to call forth the admiration of every beholder. There are many fine varieties of the passiflora, but none is so free-blooming as this, which blooms when but a few inches in length. Plants for use may be purchased already budded of the florists in the spring; they will do well in almost any position or exposure, and I have grown them with equal success on the north and on the east side of buildings. Planted out in full sunshine in a spent hotbed in summer they make a wonderful growth, while in the more restricted confines of a window box they keep fairly within bounds.

Another attractive small vine is found in the *Clerodendron balfouri*, with its scarlet flowers inclosed in a calyx of white. This also works well with the manettia vine or with the *Solanum seaforthianum*.

In north window boxes, in vases and baskets, outside or indoors, there is no more satisfactory plant than the *Asparagus sprengeri*; it does especially well in a north exposure, but may be grown in a not too sunny position. The other varieties of the asparagus fens will do well in shady positions, but will not endure as much exposure as *A. sprengeri*. This is especially fine for cemetery use, being beautiful in large wrought-iron vases in combination with the *S. A. Nutt* geranium and a few trailing scarlet nasturtiums, especially the bulbous double varieties.

One of the prettiest climbers is found in the graceful *maurandia*—a delicate vine with dark green, heart-shaped leaves and tubular flowers of pink, of white and of mauve. It is a very robust grower when once established, clinging to everything in sight—the plants in the box, the window screens and the like—and for this reason needs some training to keep it in bounds, but it is so dainty and thrifty that it well repays a little extra care.

“Indian Hill”

By Esther Singleton



ABOUT thirty-five miles from Boston, and four from Newburyport, there stands one of the most picturesque, unique and oldest houses in this country of beautiful homes. It may be compared in interest only with Mount Vernon, and we are tempted to mention Sir Horace Walpole's "little jewel-box," "Strawberry Hill," on the same page.

Beautiful indeed is this house—low, rambling and irregular, that bursts upon the sight, crowning the hill where the red men once gathered for their folk-motes. Emerald lawns, graveled roads, masses of blooming flowers, turrets, low roofs, jutting-out corners, chimneys crowned with chimney-pots, casement windows with tiny panes, and clumps of trees, make one think of an English manor house; but above the clock-tower stands a figure on the weather-vane which we should never see on the other side of the ocean—the figure of an Indian with drawn bow in hand.

This estate consists of four hundred acres, and there are no less than eighty rooms within the house. These lead from one to another in the strange fashion one would expect from looking at the exterior, down unexpected flights of stairs, through archways, up quaint staircases, down narrow L-shaped passages—all with low ceilings that delight the heart and render each room a cozy retreat. Many of the rooms are paneled, and all are furnished with oak, mahogany or rosewood of Colonial and Revolutionary times.

The original grant of this estate was from the Indians to an ancestor of the celebrated Major Ben: Perley Poore

about 1670, and has remained in the family ever since. The reason for this grant was that the original Poore, a refugee from political persecution in England, and who was engaged in driving a sort of stage wagon between the colonies below and above Boston, was attacked by Indians, who destroyed his wagon and killed his oxen; and, as an indemnity for this violation of the right of carriers, they were compelled to grant Mr. Poore a tract of land on the Merrimac River. This quaint document, signed by several Indian chiefs, granting Indian Hill to the Poore family, is still among the archives in this historic house.

Indian Hill is the highest point of land along the coast, and was famous as the gathering place of the Massachusetts tribes, the red blaze of whose signal fires lit up the sky from the White Mountains to Cape Cod. A beautiful view is had from its summit: Newbury, Newburyport, Plum Island, the Isle of Shoals, and the dim outlines of Cape Ann, on the east; beautiful farms and the towns of Rowley, Ipswich and Georgetown, on the south; the distant hills of New Hampshire, on the west; and the hills that half conceal the towns of Amesbury and Salisbury on the north.

The Indians made a reservation of land for themselves; and for years continued to be the peaceful neighbors of the Poore family. Mr. Poore took his family to dwell there in the newly built stone house on the hill; and ever since that time the Poores have resided here. We can learn the appearance of the first home on Indian Hill from the pen of Major Ben: Perley Poore, the last male owner. He says: "Let me invite you to go back in imagination two hundred



Vines, wall and trees



Arches are cut through leafy aisles



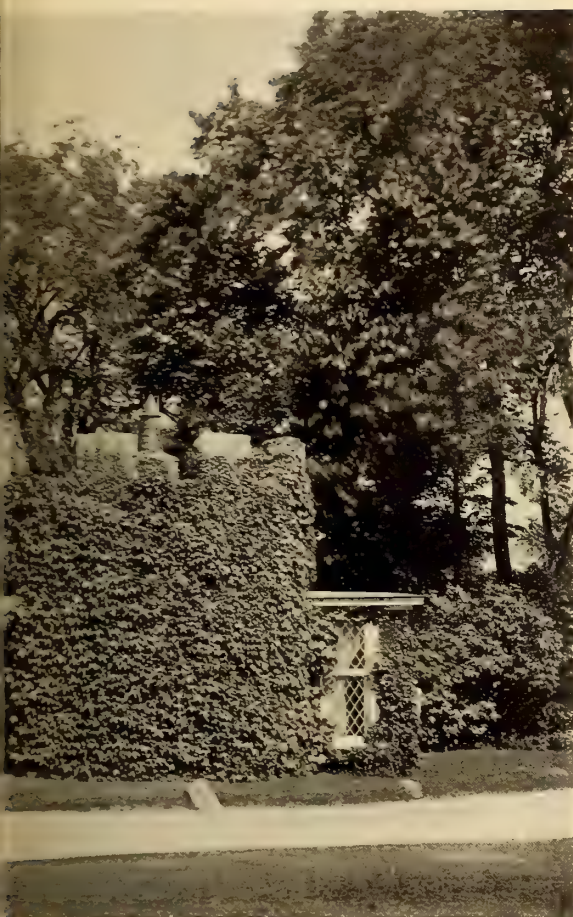
Porch arbor laden with vines



Much of the walls are smothered



The picturesque mansion is an irregular conglomeration of roofs,



th honeysuckles, roses and clematis



The old-fashioned posies dear to the true lover of gardens



, porches, bay windows, chimneys, gables, dormers, doors and windows



Porch arbor laden with vines



Much of the walls are smothered with honeysuckles, roses and clematis



The old-fashioned posies dear to the true lover of gardens



The picturesque mansion is an irregular conglomeration of roofs, wings, porches, bay windows, chimneys, gables, dormers, doors and windows

years and visit one of the homesteads of our ancestors in this pleasant country. Riding along a forest path or trail indicated by large notches cut in the trees, we find Goodman Poore's house and cattle-shed standing near an old Indian clearing. The house is of logs or a massive frame filled in with brick, with a thatched roof and a huge chimney. The small win-

Stairs from
the Tracy mansion
at Newburyport

dows are covered with oiled paper, and the massive door is thick enough to be bullet-proof. Pulling the latch-string we enter, and find that the floor and the floor of the loft above, which forms the ceiling, are boards split from large pine trees



and roughly smoothed with an adze. In the keeping-room is an immense fireplace, in one corner of which yawns the mouth of a capacious oven. Two or three high-backed chairs, a massive table with many legs, an oaken chest with a carved front, and a ponderous settle, are ranged around the walls, while on a large "dressing-soir" are wooden bowls, earthen platters, horn drinking cups and pewter tankards, porringers, plates and spoons. On the high mantel-shelf, with a cresset lamp on one side and the time-marking hour-glass on the other, is the well-thumbed family Bible, while from a peg hangs the year's almanac. As we enter we hear from an adjoining lean-to the whirr of the spinning-wheel and the clang of the loom; but the latter is silenced when Mrs. Poore leaves it and advances to meet



The low ceiled dining-room has chairs of the Chippendale model

her kinsfolk. . . . Mrs. Poore wears, as the ladies will observe, a woolen short gown, over a quilted woolen petticoat, short enough to show her blue yarn stockings. Her entire wardrobe, with the exception of her shoes, her horn comb and her gold beads, had been carded or spun by herself, or her daughters — woven, dyed, and made up by herself. The life of this Puritan mother was a busy one. She and her daughters milked, cooked, washed, mended, carded, spun, wove and knit. The fare provided was frugal, but wholesome. What is now termed the menu was pease-porridge for breakfast, bread and cheese, with beer or cider, for luncheon; a boiled dish or salt fish or broiled pork or

baked beans for dinner; hasty pudding and milk for supper, and, at every meal, according to the season, apple, berry, quash, pumpkin, or meat, pies. Swedish turnips were the staple vegetable; the bread was generally made of corn, barley or rye meal; and if the diet was rather farinaceous than animal, there was less demand for medicine, and a larger, longer-lived growth of men and

The hall and galleries are hung with family portraits

women than in these degenerate days."

From the present and gracious owner of Indian Hill we learn that the first house was erected about 1700, but was struck by lightning about 1740 and



One of the four square parlors

burned to the ground. Another house was then built and deserted after a time for a new dwelling near the spot on which a fine old elm tree stands. The other house was used as a barn; but when Mr. Benjamin Poore returned from England in 1832 he determined to restore the old barn and use it for his home. He added a wing (the present study), which he connected with the main house by a one-story room with a glass front, which was used as a greenhouse for flowers. In 1852 this room was changed by Major Benjamin Perley Poore into its present form.

The other wing was begun by Mr. Benjamin Poore in 1848, and also completed by his son Benjamin Perley Poore in 1850 or 1851. The "Colonial" wing of the house was

delicious with fragrance and always satisfying. Passing through the stone gateway, the carriage soon drives into a graveled courtyard framed in on three sides by the barn, stables, clock-tower and house, with its wings, the lines of which are broken by jutting out windows, low spreading roofs and vine-wreathed porches.

Entering through a bower of roses and honeysuckle, the guest finds himself in a square hall surrounded by a gallery hung with family portraits and containing specimens of oak and mahogany furniture. Here also is a fine old japanned clock, while a suit of armor and many relics and curios attract the eye.

At the end of the hall is the family dining-room, with low



The parlors are furnished with rosewood and mahogany

built by Mr. Benjamin Perley Poore from parts of old and famous houses, which he had been collecting for a long time. On a visit made by him and his father to Sir Walter Scott at Abbotsford, the former was fired with the idea of making a home for himself on the same plan, and gathering a collection of native relics.

The picturesque mansion stands, as we have said, on the crest of the hill, an irregular conglomeration of roofs, wings, porches, bay windows with quaint diamond-shaped panes, chimneys adorned with English chimney-pots, towers, gables, doors—all wreathed and framed and almost smothered with honeysuckle, ivy, roses, clematis, and all the beautiful flowering creepers known to the latitude, adorning a beautiful home with graceful festoons of blossoms bright with color and

ceiling and a bay-window with little diamond-shaped panes of glass imported from England many years ago. A sideboard, chairs of a Chippendale model and a very chaste mirror are notable among the furnishings of this room.

Across the hall are four square parlors which are furnished with rosewood and mahogany of a past age. Every piece of furniture and china in these home-like and delightful rooms has its history: four of the chairs, for example, were owned by Washington at Mount Vernon.

Among the valuable specimens of china is a set that was given by the Society of the Cincinnati to Martha Washington, and a series of White House dinner plates representing a plate from the dinner service of every President from Washington to Hayes, including, of course, a specimen of

the china that Ogle described in his attack upon Martin Van Buren.

Leaving the entrance hall and parlors, the visitor is taken into the museum and the series of "Continental Rooms," filled with old furniture, curios and rare treasures. One of these is the "Indian Room," devoted to Indian relics of all kinds.

Beyond this is a hall, the stairs of which were in the old Tracy mansion of Newburyport, visited by Washington, Lafayette, Talleyrand and other celebrities. The chandelier came from the first Senate Chamber in Washington, and here are also preserved family portraits, old pictures and some of the Colonial and Revolutionary relics in which the house is so rich. Here is also a collection of firearms, some of which did duty at Gettysburg, and an old clock imported by one of Major Poore's ancestors and which has marked the time for six generations of Poores.

Beyond this is a room fitted up in the style of an ancient kitchen, containing an enormous fireplace, huge logs, pot-hooks and trammels, dressers filled with pewter platters, and a corner cupboard filled with china that belonged to the Poores before the Revolution. In another corner cupboard is an entire dinner set that belonged to the first British Minister to Washington.



The bedstead once slept in by Washington

Here also is a "sink-room," with its roller and old towel spun at least a hundred years ago. Here also may be seen a collection of firearms: blunderbusses, powder horns, cutlasses and patterns of all varieties of guns used in the Revolutionary War, also a bugle and a drum to the beats of which Captain Lunt's "Minute Men" of Newbury marched to the battle of Bunker Hill, and swords worn in the same battle by Colonel Robert Dodge and Colonel Jacob Gerrish, ancestors of the Poore family.

Above the museum are four bedrooms furnished with old-fashioned articles that would break the heart of a dealer in antiques. One contains, for example, a high-post bedstead in which Washington once slept.

The third room is lined with white wooden panels that

were originally in the old Province House in Boston. The mirror over the mantelpiece belonged to Governor Winthrop.

The suite of rooms used by Major Poore for his own include a bed-chamber, a dressing-room, and, down a short flight of steps, a study that opens directly upon the lawn. The study is an octagonal room, and is preserved as he left it. The walls are filled with books on agriculture, history, travel, military subjects and innumerable scrapbooks. The desk was used by John Quincy Adams in the old Hall of Representatives in Washington, from which he fell when he died.

The bedroom here contains a rare piece of furniture—an



The old-time kitchen

Empire bed of mahogany, which was owned by Napoleon Bonaparte. Swans' heads appear at the four corners. The gilded wreath that formed the canopy for the curtains was used to frame a mirror that now hangs in the hall.

The woodwork of the "Continental Rooms" is all from notable buildings, including panels from the Province House of Boston and Dearborn House of Roxbury, a fireplace from the old Stuyvesant house in New York, and panels from Edward Everett's house in Boston, etc.

Behind the house to the left is a famous grove of trees for which Major Poore took a prize offered by Essex County.

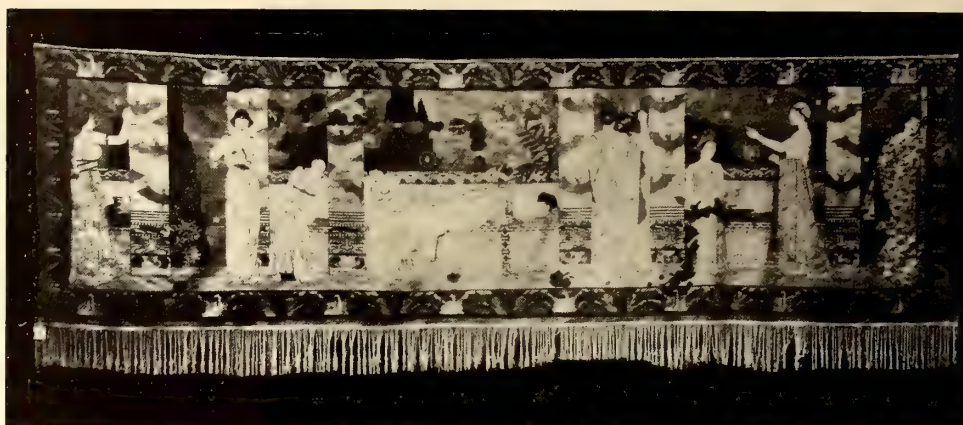
Many of the trees here were named for and planted by his friends. Inside this grove is an exact representation of a Masonic lodge; for Major Poore was a prominent Mason.

The gardens are laid out on the other side of the house, and are a worthy accompaniment to the mansion. Forest trees and imported shrubbery vie with each other in guarding the graveled walks and flower beds. Arches are cut through leafy aisles, walks are edged with box or walled in with lilac bushes that are practically trees, while all the splendid colors of hollyhocks, peonies, asters, lilies, roses, marigolds, poppies and all the old-fashioned posies dear to true lovers of gardens, burn and blaze in riotous clumps of blossom or in formal beds. Major Poore was a great lover of flowers and trees, and devoted much attention to tree-planting.

The Weaving of Norwegian Tapestry in America



By Mabel Tuke Priestman



The Foolish Virgins, a panel, eight by three, made by a lady of the Norwegian nobility, and sold to the Contessa de Asarta of Italy

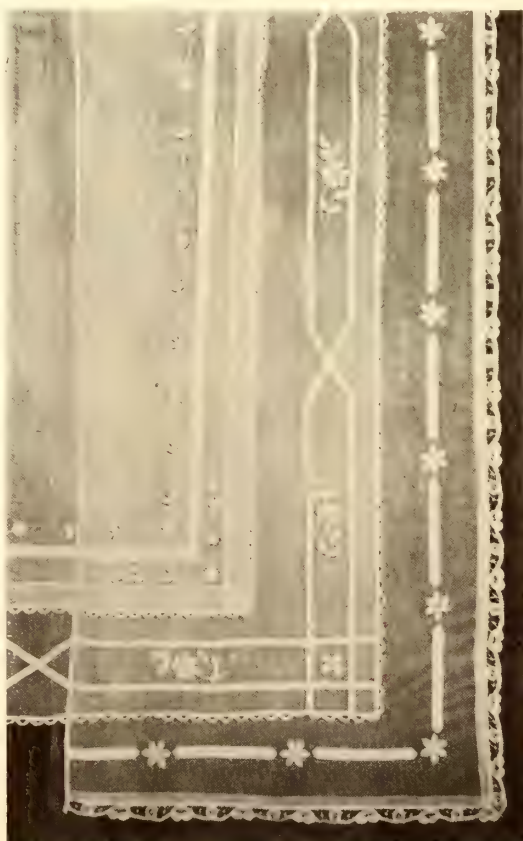


IT IS significant of the growth of Old World industries that the ancient and beautiful craft of Norwegian tapestry weaving should now be creating an interest in American homes. This has come about through the enterprise of one or two Norwegian women, who are trying to interest American craftworkers in reproducing the famous Norwegian hangings, for which there is a great demand in Europe.

It is still to-day, in Norway, not permissible for other than Norwegian women of noble birth to weave these tapestries, but permission has been granted by the Norwegian Government to make use in other countries of the original designs from which they are woven. This privilege has been granted for the purpose of encouraging a greater production, because of the difficulty of securing a sufficient supply from Norway.

It is to Madame Freda Hansen that the greatest credit is due for reviving an interest in the ancient tapestry weaving of Norway, which had formerly been a valued means of earning money for the ladies of the nobility, who were often very poor. Madame Hansen visited other European courts, obtained orders and distributed these among these gentlewomen.

Norwegian tapestry differs somewhat from Gobelin and Bayeux tapestries, as they were done almost entirely with the needle, and it would seem better to class them under the head of embroidery. Tapestry and embroidery have always been confounded, but the distinction should be clearly understood. Embroidery is worked on a woven texture having both warp and weft, but has no weft, whereas tapestry is woven in a loom upon a warp



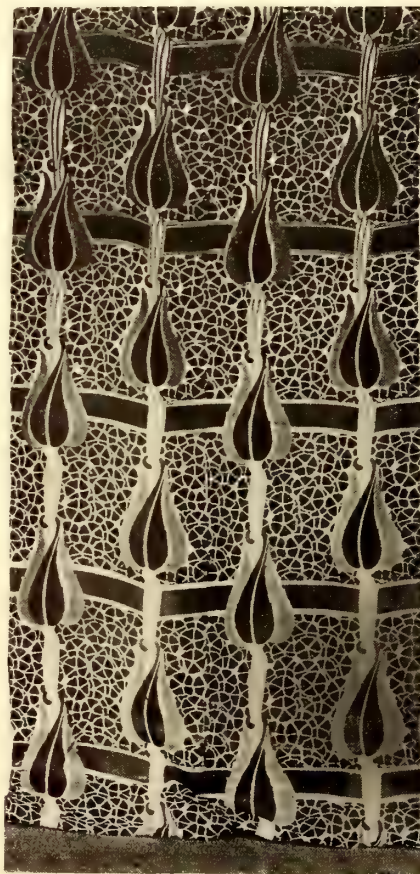
Bobinet curtains, ornamented with designs of braid applique

stretched along its frame, but has no weft thrown across in the shuttle. The weft is done with short threads variously colored, and is put in by the needle.

The Norwegians have a plan of their own, for they use the shuttle for the plain parts of the weaving, and the needle for taking up the alternate threads of the figured parts. Their beautiful picture weavings are not sufficiently known to the public, and it seems remarkable that hardly any references are made to their art among all the literature pertaining to ancient and modern weaving. They are, however, well known in the art centers of Europe,

and keenly sought after for the leading museums. They are also found in the royal houses of England, Germany, Italy and Sweden, as well as in Norway.

Norwegian weaving is always done in an upright loom, and the colored picture to be reproduced is placed behind the warp threads, so that the weaver has only to look through the warp threads to see what colors to use. A good Norwegian weaver knows just how much wool will be required for each textile, and spins and dyes just the right amount as a painter would mix his colors on a palette. The wools are all dyed with long-tried vegetable dyes, and as many



Figured cretonne makes an effective hanging. A bead design of this kind lends itself to applique. Cut away the background and apply the flowers and bands to a plain surface

of the old tapestries are as perfect in coloring as when they were woven, the buying of the best Norwegian wool is a necessity if real Norwegian tapestry is to be devised. It is dyed in the most exquisite art shades, and it does not seem expensive when compared with the

prices of ordinary wools.

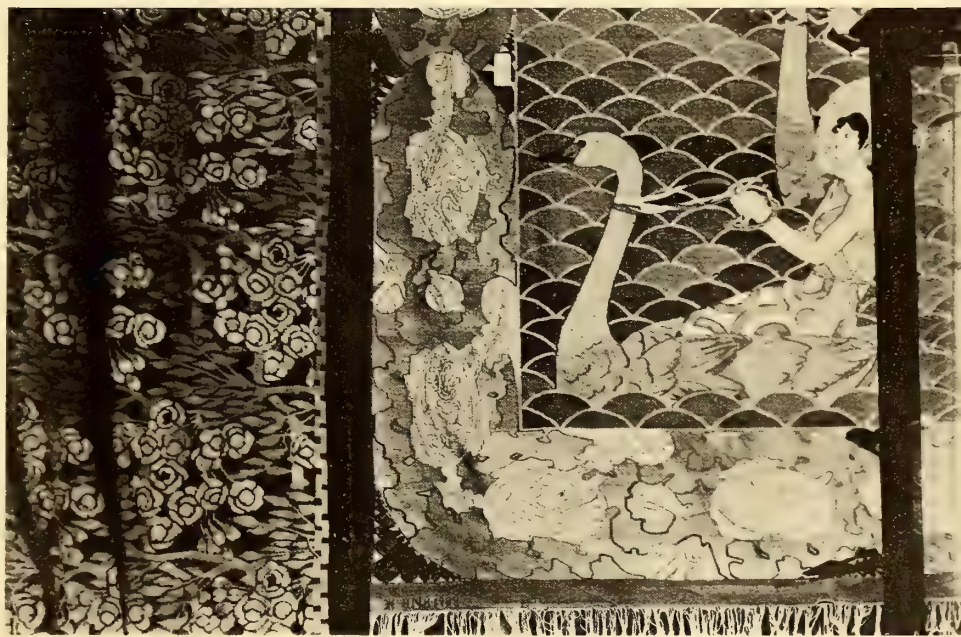
It would be impossible to teach skilled Norwegian weaving in an article of this kind, but the principles can be learned by practising in a small home-made loom such as we have shown in our illustration.

The women who are teaching this craft in New York can supply Norwegian looms, such as have been used in the making of the tapestries which were exhibited at the recent exhibition of the National Society of Craftsmen. They also supply the wool. This is hand-carded and hand-spun. It is then dyed, each skein being matched to the design, shading also being resorted to to get the soft, subtle effect noticed in all Norwegian tapestries.

When weaving, the first part is usually in solid color, so that the shuttle can be used to throw the wool backward and forward through the warp threads, until the design is reached, and then comes the interesting part of the weaving. Large needles are threaded with the various colored wools and the worker darns backward and forward perhaps half way up the loom, and then leaves the needle hanging by the wool to be finished later. Then another color is introduced, until each part of the design is woven; the actual work is more like painting than weaving, as the skill is in the correct blending of the colors, rather



The panel on the left depicts the story of the Goose Girl and the King's Son of England. The one on the right represents a Norwegian fable



Transparent tapestry portiere and wall panel woven by Mrs. Oskar Von Irgens Bergh of New York, and designed by Madame Frida Koehler-Hansen of Christiania, Norway



The Milky Way, woven with a blue background dotted with gold stars. The silver robes of the goddesses holding up the veil, draped over the flesh tones, are very beautiful. "And God said, let there be light," is woven in Hebrew at the bottom of the panel

than the technic of the shuttle.

There are two distinct kinds of Norwegian tapestry, a firmly woven, heavy kind, somewhat resembling the Gobelins and Bayeux tapestries, and the transparent weavings, with open spaces arranged to form part of the design. The illustration of a girl driving the swans shows an effect of sunlight, as the transparencies have warp threads of gold, which allow the light to filter through. When hung in a doorway the effect of the light seen through it is very beautiful. This beautiful hanging and the transparent flowered portiere in the same illustration were woven by Mrs. Oskar Von Irgens Bergh from one of Madame Frida Koehler-Hansen's designs. A pair of curtains of this weave costs \$150, while the price of the wall hanging of the girl driving the swans is \$1,500.

In order to appreciate Norwegian tapestry it is necessary to become familiar with Scandinavian history and the wild, barbaric religion of Norway. Viking history and old sagas and (after Christianity had become known) religious subjects were depicted in the weavings. Owing to the loneliness of the position of Norway its art has been kept pure and free from all imitations, so that French or Italian culture has had no influence upon it.

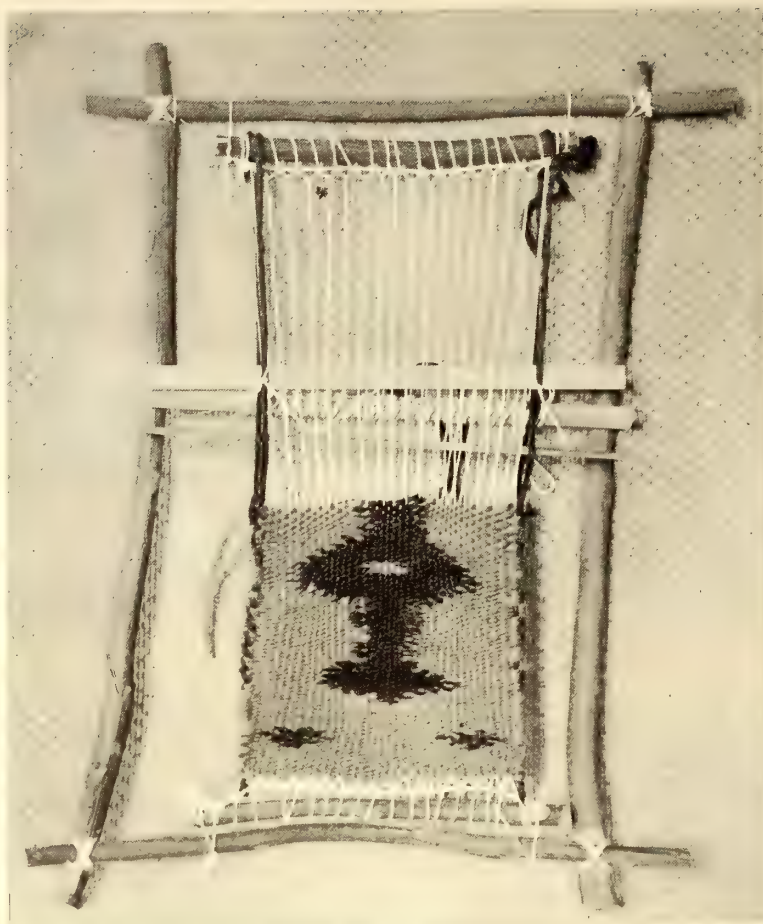
It is not strange that a country with

its grand and lonely mountains should have inspired such a weird mythology. One of their most famous hangings is called the "Maid of Lecoe." Tradition tells us, in ancient times the maid was beloved by a giant horseman, who inhabited a nearby mountain. Alas! his love was unrequited, and this giant of primeval times was taught the lesson, sometimes learned to-day, that it is painful to love and not to be loved in return. When he found out his love was not returned, he shot an arrow at the Maid of Lecoe, but another giant, Toye, rushed to the assistance of the maid and flung his hat to ward off the shot from the angry horseman. This hat, tradition tells us, measured a thousand feet in height. As the arrow pierced it the sun god arose, and, with his eyes, turned the entire group into stone.

The arrow stands to this day on a little island not far from the mountain Toyehattan (Toye's hat). The hole in the hat caused by the arrow is about 75 feet wide and rises 700 feet above the fiord. Not far away the horse and rider can be seen, petrified while riding through the water.

Those who wish to make a good income out of tapestry weaving would do well to take up this craft seriously, and go to New York for a few lessons. It would be best to confine themselves to the use of the Norwegian cartoons, with their historical association, and as there is such a demand for Norwegian tapestry, they would find a profitable market through the Norwegian Government. But if a girl only wants to create a charming industry, which she could carry out after her own ideas, she can work on the same lines on an inexpensive hand loom with ordinary wools, or even cotton yarns.

Many beautiful pieces of tapestry are woven from Japanese designs, and any of these can be copied by those who are not clever enough to make their own designs. There is no reason why this industry should not be developed into a community industry, if women with splendid energy would start such an undertaking. What a boon such an industry would be to those who are far removed from their kind, in lonely districts or among the villagers on the Eastern coast,



The principles of tapestry weaving can be learned on an improvised loom

where so many people spend their vacations and where already much good work has been done in the revival of various hand crafts!

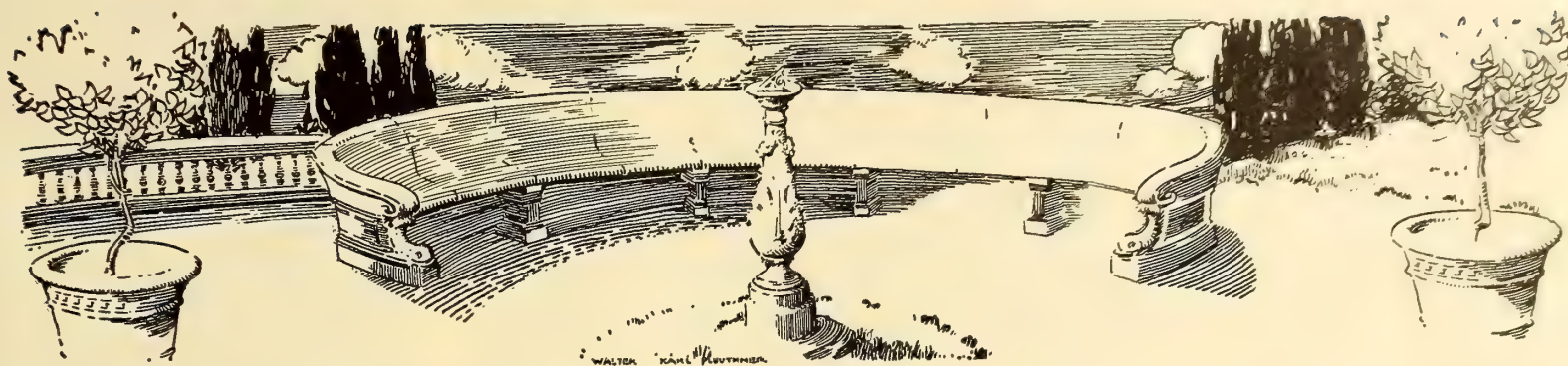
The opportunity having arisen for the knowledge of this beautiful craft being obtained, it is to be hoped that American women will take it up with their usual enthusiasm and develop it into a common industry, especially in the isolated mountain regions, where wool is readily obtained and can be carded and spun by hand by mountaineers. The need for directing misplaced energy was never greater than it is at the present time. What a boon such a craft as this would be to a farmer's wife, who has also to provide her quota to keep the home going! If such an industry could be introduced it would be a good substitute for the cheap garments given out to the farmers' wives to

make, and paid for at starvation prices, they being obliged to accept the work, as there is little else they can do in connection with their other duties. At present this field is untouched, so that this is an excellent opportunity for pioneer work in this direction.

The value of such work scarce needs argument nor urging, yet there are other aspects of it, quite as useful in their way as the monetary returns that may be gained from much of it. One of the most important of these is the development of the sense of beauty. Mere residence amid beautiful surroundings does not always develop a sense of beauty appreciation. The broadest fields, the grandest hills, the most superb outlooks, are often unappreciated by those who live among them for the simple reason that they are always there, have always been seen, and are, in sad truth, somewhat over-familiar. But put the loneliest soul at the work of creating beauty and there is a personal change that is often of the most far-reaching effect, and which is ever delightfully wholesome. Tapestry weaving offers exactly this opportunity, offers it in charming form, offers it in a remunerative way. It is a work that needs more than simple looking into, but which cries aloud for deliberate encouragement and actual working. At all events, here is a novel style of craft work that affords interesting opportunities.



Ancient Norwegian panels



House Built for F. Murray Forbes, Esq., Wellesley, Mass.

By Francis Durando Nichols



HE delightful house of Mr. Forbes, at Wellesley, Mass., was designed and built after plans prepared by Mr. James Purdon, of Boston, Mass.

To obtain an attractive exterior in stucco construction, and a spacious and well arranged interior, is to achieve a great success

in house building at the present time, and the house, as illustrated, herewith, shows what the architect has been able to do along these lines. It is built on a promontory overlooking the valley of the Charles River, and is about three miles from Wellesley Station. The grounds include many acres of land extending back of the promontory, and on one side following the wooded land and on the other the contour of the river. Below the house and across the river is a storage dam which holds in reserve a water supply, presenting the effect of a chain of lakes, which are formed by the contour of the river bank. Only a part of the ground which is in close proximity to the house is cultivated; the remaining portions being so thickly wooded that only a clearing up has been done to

what was really a primeval forest. The house clings close to the ground upon which it is built, and its broad sweeping lines follow the contour of its site. The rear of the building is shown in one of the illustrations with the living porch facing the south, and is planned so that the view up and down the river is unobstructed from any portion of it.

An idea of the interior of the house is best conveyed by a

look at the ground plans, which show the arrangement of the various rooms and the entrance, which is reached by the carriage driveway. The style of the house exhibits an Italian feeling, and the outside walls are of frame construction covered with a heavy coat of stucco mortar and cement.

The roof is covered with shingles and stained a moss green, blending well with the tall pine trees which overhang it. All the woodwork, including the sash, is painted white. The porch floors are only one step above the ground level. As will be seen by a look at the floor plans, the living-room at the south side of the house extends the full depth of it. Both it and the dining-room open on to the porch at the south side of the building. The service and servant quarters are given



The house clings close to the ground as shown by the entrance porch



The living-hall has an old English oak wainscoting, with mustard-yellow Japanese grass cloth above



The living porch in the rear afford

over to one end of the house. The upper story is conveniently laid out, and so planned that the entire space is utilized.

The living-hall occupies the central portion of the first floor, and is finished in old English oak. The walls above the paneled wainscoting are covered with Japanese grass cloth, mustard yellow in tone. Draperies of yellow and white are hung at the windows. A sweeping staircase of oak with its ornamental iron balustrade rises up to a broad landing, under which is the vestibule fitted with a glass door in

one panel. Opposite the entrance is a fireplace built of brick with sandstone facings, and a glazed brick hearth. The mantel is of oak with a paneled over-mantel extending to the ceiling, in the center of which is placed a mirror inclosed in a gold frame, adding a touch of color to the dark woodwork of the room. On either side of the fireplace are French windows opening on to the porch. The wall space at either side of the room has bookcases built in with open shelves.

To the right of the entrance is the living-room, which has



The living-room is finished with ivory white trim and a yellowish gray Japanese grass cloth



The staircase, with an ornamenta



unobstructed view of the Charles River



The living-room is furnished with antique furniture; the brass banded chest is unique

an ivory-white trim. The walls are covered with a yellowish gray Japanese grass cloth, which is finished with a heavy dentalled cornice. The floor is covered with a Persian rug in the colors of blue, old rose and white. The furniture is all antique, including the old chairs and tables, which are handsomely inlaid, the old chest with its ornamental brass bands, and the old mirrors, especially the one over the mantel. Opposite the entrance to the living-room is the fireplace, which is built of brick with gray brick facings and hearth. The

mantel is handsomely paneled, extending to the ceiling with a paneled over-mantel.

The dining-room is furnished with a white enameled wainscoting in panels, above which the walls are covered with a Delft blue burlap. At the windows are hung blue latticed cloth draperies. The floor is covered with a rug with a red body and a blue and yellow border. The furniture, of good style, is of mahogany.

The service end of the house, with its large pantries,



railing, rises over the entrance



The dining-room has a white enameled wainscoting and walls covered with Delft burlap



The living-hall has an old English oak wainscoting, with mustard-yellow Japanese grass cloth above



The living porch in the rear affords an unobstructed view of the Charles River



The living-room is furnished with antique furniture; the brass banded chest is unique

over to one end of the house. The upper story is conveniently laid out, and so planned that the entire space is utilized.

The living-hall occupies the central portion of the first floor, and is finished in old English oak. The walls above the paneled wainscoting are covered with Japanese grass cloth, mustard yellow in tone. Draperies of yellow and white are hung at the windows. A sweeping staircase of oak with its ornamental iron balustrade rises up to a broad landing, under which is the vestibule fitted with a glass door in

one panel. Opposite the entrance is a fireplace built of brick with sandstone facings, and a glazed brick hearth. The mantel is of oak with a paneled over-mantel extending to the ceiling, in the center of which is placed a mirror inclosed in a gold frame, adding a touch of color to the dark woodwork of the room. On either side of the fireplace are French windows opening on to the porch. The wall space at either side of the room has bookcases built in with open shelves.

To the right of the entrance is the living-room, which has

an ivory-white trim. The walls are covered with a yellowish gray Japanese grass cloth, which is finished with a heavy dentailed cornice. The floor is covered with a Persian rug in the colors of blue, old rose and white. The furniture is all antique, including the old chairs and tables, which are handsomely inlaid, the old chest with its ornamental brass bands, and the old mirrors, especially the one over the mantel. Opposite the entrance to the living-room is the fireplace, which is built of brick with gray brick facings and hearth. The

mantel is handsomely paneled, extending to the ceiling with a paneled over-mantel.

The dining-room is furnished with a white enameled wainscoting in panels, above which the walls are covered with a Delft blue burlap. At the windows are hung blue latticed cloth draperies. The floor is covered with a rug with a red body and a blue and yellow border. The furniture, of good style, is of mahogany.

The service end of the house, with its large pantries,



The living-room is finished with ivory white trim and a yellowish gray Japanese grass cloth



The staircase, with an ornamental iron railing, rises over the entrance

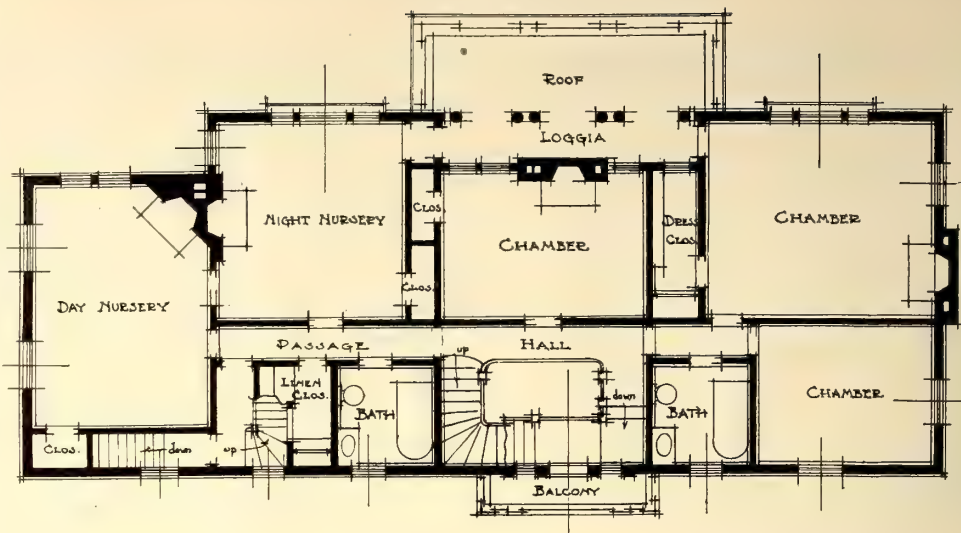


The dining-room has a white enameled wainscoting and walls covered with Delft burlap

servants' hall and kitchen, is fitted with all the best modern conveniences.

The second floor is divided with sleeping-rooms, consisting of the owner's suite of two rooms and bath, a guest-room, and a day and night nursery. There is also an additional bath for the latter rooms. Each of the bed-rooms has an open fireplace with brick facings and Colonial mantels.

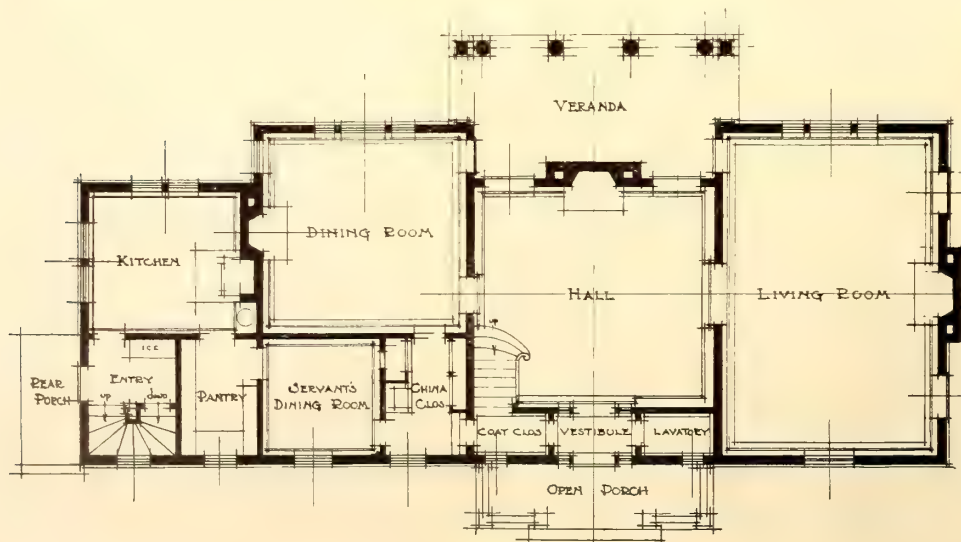
The upper hall has mustard-yellow wall covering and a white painted trim. Mrs. Forbes' room has a blue and white wall covering and an old rose border, while Mr. Forbes' room is in yellow and white. The trim of both rooms, as well as the entire floor, is in white enamel. The guest-room has a blue and white wall covering, white enamel furniture, and a gray and white rug. The day nursery is in lavender, with educator



- SECOND - FLOOR - PLAN -



The stuccoed house stands on a knoll overlooking the Charles River



FIRST FLOOR PLAN

borders and frieze extending around the room. The bathrooms have a tile wainscoting and porcelain fixtures and exposed nickel-plated plumbing.

There are two guest-rooms and bathroom, besides a large trunk room, on the third floor. A cellar under the entire house contains the heating apparatus, fuel rooms and cold storage.

The exterior design of the house, the interior arrangements of the various rooms, combined with the artistic decorations and furnishings, form a most complete whole with a superb artistic value.

The house is fitted with all the best modern appointments to meet the requirements of the owner and his family.

A Problem in Sanitation

By Lewis W. Hine

Illustrations by the Author



TYPHOID Epidemic Due to Impure Ice,"
"Disease Germs in the Water Supply."

When the average citizen has come to read these announcements without alarm, because they are an old story, it is time for an awakening of public sentiment. Cities and villages continue to pour their poisonous sewage into streams from which ice is harvested or drinking water obtained. Even the fish find it necessary to move on to more hygienic surroundings.

For example, a large part of the ice supply of New York City comes from the Hudson River, near Albany. The sewage from two hundred thousand persons is emptied into the river within a distance of six miles above the city. In addition to this, the waste from hundreds of large farms and dairies, and many manufacturing plants as well, increases this menace to health. Another instance is found in the wholesale deposit of sewage and other waste products, from the millions of inhabitants living in New York City, into the Hudson and East Rivers. This is washed out a little way by the ebb tide, then brought back in a few hours by the flood tide and carried up stream. In all these instances the unspeakable filth lies around under the wharves and near the shore, no one knows how long.

It becomes, meanwhile, a constant offense to travelers, who naturally object to such odors, to vessel owners, whose boats are greatly damaged by this pollution, and also to owners of docks and property near by. Some of the sediment drops to the bottom of the river and bay, there to decay slowly, sending off, meanwhile, its noxious gases. Moreover, the natural reduction of this waste material is greatly retarded by the mineral salts in the ocean water, which help it the longer to contaminate the water. Often the fish are killed, and in some cases, like those of Baltimore Bay and Long Island Sound, the great oyster industries have been seriously affected. On account of these results, this sewage can not be other than a menace to health, especially in the hot summer months when the processes of decay are so much accelerated and contagion more easily spread.

It seems incredible that the legislatures of New York and New Jersey

should add untold difficulties to the solution of the vexing question of sanitation for the great metropolis. They have, nevertheless, during the past year, approved the construction of two great sewers which will divert the sewage from the valleys of the Bronx and the Passaic Rivers into the Hudson. A local physician, commenting upon the practise of supplying his city with drinking water from the lake into which all the sewage was being deposited, caustically remarked, "The Indians were certainly very wasteful. They used their drinking water only once."

The foregoing practises are clearly the result of the "laissez faire" method of sanitation. Many efforts have been made, however, to meet this great problem. Thousands of years ago Moses saw the need for stringent sanitary rules in dealing with the children of Israel, and he put into effect a most efficient method of disposal of waste products. This had undoubtedly been worked out by mere "rule of thumb," for he certainly did not understand the nitrifying processes that took place. At the present day our great boast is that we know why certain effects follow certain causes; yet in these matters of sanitation we have delegated the responsibility for so long that comparatively few ever give a thought to this most important of problems. Pioneers and country people

at first put this waste wherever it happens to go, until a severe lesson of typhoid or the like forces them to greater care. Then the refuse will be drained off a little farther from the house and the well for a time into cesspools. As the community becomes crowded, of course this is not practicable, and the constantly recurring cry is, "What shall we do with all this dirty water and filth? How dispose of it without danger to our neighbors and ourselves?"

Can we ever realize how much prejudice has done to retard civilization? About twenty years ago the citizens in the little town of New Rochelle were horrified by a proposal to make a scientific disposition of their sewage. "Ugh, the idea. Well, you can't have such a thing in our part of the town; it'll kill all the property in the neighborhood. No new-fangled notions for me. What the eye doth not see, the heart will not grieve." With the predictions of these croakers in mind, I have visited the disposal works at vari-



A glimpse of the works

ous seasons of the year, and have found in this well-settled neighborhood, with some of the homes only six hundred feet from the works, no disposition whatever to complain. Entering the grounds, I wandered along the winding roads, in and out among the luxuriant verdure, with foliage and flowering plants tastefully arranged along the border of the roads and paths, these reinforced by shrubs, and the whole backed by masses of evergreens and maples. Here and there a vista disclosed some noble horsechestnuts with their crowning glory of leaves, or a lofty elm brushing the sky. It is a regular park. In fact it is often used by the public school, which by the way is only two blocks distant, whose teachers take their classes over to these grounds for lessons in nature study.

Here and there I had caught glimpses, through the trees, of an ivy-covered building surrounded by shrubs and bushes, and at the next turn in the road came full upon it. What a surprise to discover that this is the much-maligned disposal works! It is just such a revelation to every newcomer to find such a discrepancy between the appearance of the place and the use to which it is put. A traveler, passing on the railroad, was overheard asking his neighbor, "What is that red building with the square ponds about it?" "Oh," was the reply, "that's the fish hatchery." In fact, had he but known it, instead of a breeder of life it was a lowly disposer of waste material. Is it necessary, then,



A turn in the drive



An ivy covered building in the trees



Carting off the dried "sludge"

for such an institution to be ugly? "Why not have it beautiful?" said the commissioner, who was himself interested in landscape gardening, and so when the grounds were laid out he was given free rein. And here were the astonishing results. In place of the unsightly thing with the dreadful suggestions that had been anticipated, there grew up a thing of beauty, a very park. Naturally this helps greatly to minimize its unpleasant features and has been a great factor in overcoming the ungrounded prejudices.

Of course I was interested in the practical working of the scheme. The process is known as the method of sewage purification by chemical precipitation. Here is the sewage as it comes in from the city to be treated. It is much less

offensive than I had imagined, for it had not had time to decompose. As this flows along in an open channel, a mixture of lime and copperas is added by means of a simple machine, and this precipitates, in solid form, the organic matter in the water. Passing on into a series of large vats, the heavy precipitate that was formed carries down the finer particles in the water to the bottom, and the water flows slowly off (cleared of over fifty per cent. of its organic matter) out into the Sound. This effluent, which even in the hot summer is odorless and clear, with but little tendency toward further decomposition, the experts told us, may be safely turned into a river or lake, or even into tidewater, unless the body of water serves as a public water supply. Then

it needs further treatment. From time to time the water is all drained off from first one vat and then another, and the wet sediment on the bottom is pumped out. The water is evaporated by the sun and the dried "sludge" is carted off.

The farmers and gardeners of the vicinity are only too glad to make use of this by-product for fertilizing their land. For several reasons this product is not so valuable as one would suppose. In the first place, human waste does not contain so much material needed by plants as does that of animals. Then the chemical treatment impairs it somewhat, but those who use it mix the sludge with other forms of manure and find it extremely valuable. These gardeners have demonstrated that it transforms the miserable peat soil of that region, that was originally almost impossible to work, into remarkably productive gardens. The same results have been experienced in other places, and the universal testimony has been that the demand greatly exceeds the supply. Some day it may be possible to derive considerable income from these products.

Then we went over to the "dump" and walked all over the place where two years ago, before the neighbors used this sludge, it had been spread out upon the ground. Left to itself for a few months, nature quickly reclaimed it with a carpet of grass and wild flowers, and surrounded by beautiful willow trees it was quite an attractive spot, with not a suggestion of odor nor any kind of unpleasantness.

The grounds are inclosed by a great wall of evergreens and deciduous trees and shrubs. Beds and jars of flowering plants have been tastily placed here and there, giving to the visitor the pleasing sensation of an up-to-date park.

Although in its fifteen years of success it has proven its efficiency, the history of this establishment, like that of many another public benefit, has been one of patient overcoming of blind prejudice. It was 1888 before the little town realized that it needed sewers. Some of the more enterprising of its citizens then took the matter into their own hands, determined to lay a solid foundation for this system so that it should not become contaminated by politics. As a result a Citizens' Committee succeeded in getting the Legislature to pass a special act appointing a commission, and seven commissioners were straightway elected. The topography of the region is so peculiar that it was with considerable difficulty that a plan was decided upon. This was to treat the sewage with chemicals and pipe the affluent out into the Sound. On account of blind sentiment and prejudice, it is always difficult to get a place in any settled community where the citizens will be willing to permit the erection of such a plant. "We were," a commissioner told me, "the most abused persons in the community. How we did catch it!"



The dump



The grounds are inclosed by walls of evergreens and deciduous trees and shrubs



The dumping ground proved rather attractive



The Summer Home of Mrs. C. J. Mills

Bridgehampton, Long Island

By Paul Thurston



MESSRS. Mann & MacNeille, of New York, accepted a simple and inexpensive form of construction when they designed the summer home of Mrs. Mills, at Bridgehampton.

The soil upon which the house is built is very dry and sandy, consequently it was permissible, since it was a house to be used only in summer, to eliminate the usual excavations and stone cellar and build the house on brick piers. The house is raised considerably from the ground, and the intervening space is enclosed with lattice work, thus insuring plenty of ventilation under the house. The superstructure is of frame, and the exterior is covered with shingles stained a silver gray color. The trimmings are painted ivory white. The roof is also covered with shingles and left to weather finish. It is planned with a large living-hall extending across the entire front of the house, from which the stairs ascend to the second floor. A large living-hall, with ample piazza space, is all the general living-room required for a summer home. The remainder of the main floor is utilized for a separate dining-room, which is far more preferable than having the living and dining-rooms as one apartment, which is sometimes used in houses of this class.

The kitchen is off the dining-room, beyond which is the servants' hall. This servants' hall is inclosed with lattice work, thereby forming a screen from the outside and at the same time an openness that insures perfect ventilation.

The studs and ceiling joists of the living-hall are exposed to view and are stained a soft brown. The outside sheathing is put on in a smooth finish,

the same as the dressed studs, and is stained and finished in a similar manner. The fireplace, built of red brick laid in red mortar, gives a pleasant note of contrasting color to the living-hall. The staircase, which is at one end of the hall, is screened with turned and twisted balusters. A group of three windows, in front of which is placed a window seat, is on the main landing. The windows have soft white muslin curtains, hung from white enamel rods and pulled back with white silk cords. The other windows in the living-hall, as well as those throughout the house, have similar curtains at the windows.

The dining-room is finished off the same as the living-hall, with exposed studs and joists, but is stained with a forest green effect.

Just off the dining-room is the kitchen, which is finished the same as the lower floor. No butler's pantry is provided, but there is ample cupboard room for all utensils and provisions. The rear stairs to the second story are in combination with the front stairway. Beyond the servants' hall, which is placed back of the kitchen, is a shed for the storage of wood and coal. The upper story has the same woodwork and color scheme as the lower.

In all the bedrooms, five in number, the timber work is exposed. The third floor contains the servants' quarters and ample storage space.

There is a quietness and sobriety in this house—in its design and furnishing, both within and without—that is extremely satisfying and entirely restful; it is a house of distinguished modesty and quiet, and yet entirely ample both as a dwelling and as an architectural study. It is,



The studs and floor joists are exposed to view and are stained a soft brown color



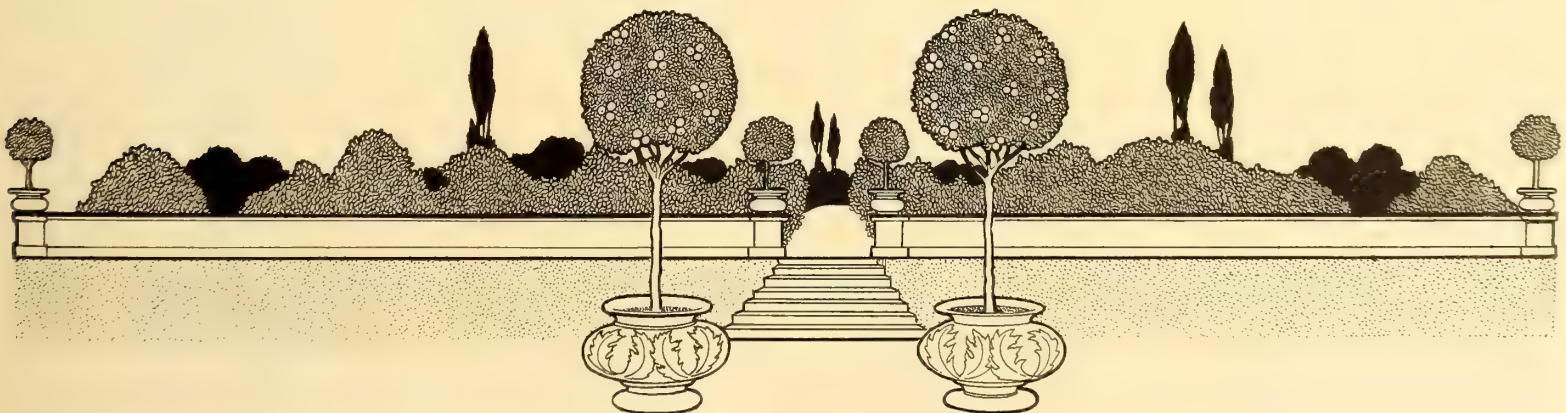
The house is covered with shingles, finished with weathered stain, and the trim in painted white



The lean-to roof at the side of the house forms the cover to the piazza, which extends across the front

in short, a simple little home adequately expressed in competent architectural form, and this is, indeed, precisely the most that is to be asked of any dwelling house. The house is interesting, too, by reason of its decided inexpensiveness. This,

it is true, is only disclosed by a structural study such as has been given in this description. Yet it is a house that has nothing to conceal, and which is very frankly a modest home of distinct charm.





CORRESPONDENCE



The Editor of *American Homes and Gardens* desires to extend an invitation to all its readers to send to the Correspondence Department inquiries on any matter pertaining to the decorating and furnishing of the home and to the developing of the home grounds.

All letters accompanied by return postage will be answered promptly by mail. Replies that are of general benefit will be published in this Department.

Problems in Home Furnishing

By Alice M. Kellogg

Author of "Home Furnishing: Practical and Artistic"

HOLDERS FOR FIRE PIECES

"IS THERE any way," writes T. H., of Indiana, "to fasten my fire pieces to the fireplace? The poker and tongs keep slipping on the smooth tiles of the hearth with unpleasant frequency. Please suggest something practical."

There are two ways of holding the fire pieces. One is shown in the illustration, where brass braces are fastened against the wooden uprights of the mantel. With bricks or tiles at this point,



Holders for fire pieces

however, it becomes necessary to drill holes, and if this process is objectionable the second method may be preferred. This is to use a brass holder or stand for the fire pieces. The construction of this piece of furniture may follow the general lines of the andirons and fire pieces, as well as their material.

DRAPING A BRASS BED

E. M. B., of Massachusetts, writes: "Can you give me any instructions as to how a canopy for a brass bed should be draped? There are projecting rods from the top with a bar that runs horizontally, like the foot of the bed. Should the top space that is above the bed be covered? If so, how?"

The heavy festoons, elaborate rosettes and ornate materials that were in vogue a hundred years ago for dressing the bed have gradually disappeared and simpler, more sanitary ideas now prevail. A light-weight material, like madras, organdie, etamine, muslin or grenadine, in white or ecru, gives a dainty effect without the need of a lining. If cretonne or a figured material is preferred there are cretonnes and muslins, printed or woven on both sides. The space at the top of the canopy is usually covered by shirring the goods, and the rod across the front is then hung with a straight valance or frill, carrying it around to the sides where a long length hangs from the top below the mattress. The space at the back is filled with a length of the material gathered on the top back rod. If something more finished looking than a plain hem is desired, a cotton edge or fringe may be added.

(Continued on Page xii)

Garden Work About the Home

By Charles Downing Lay

PLANTING ABOUT A BUNGALOW

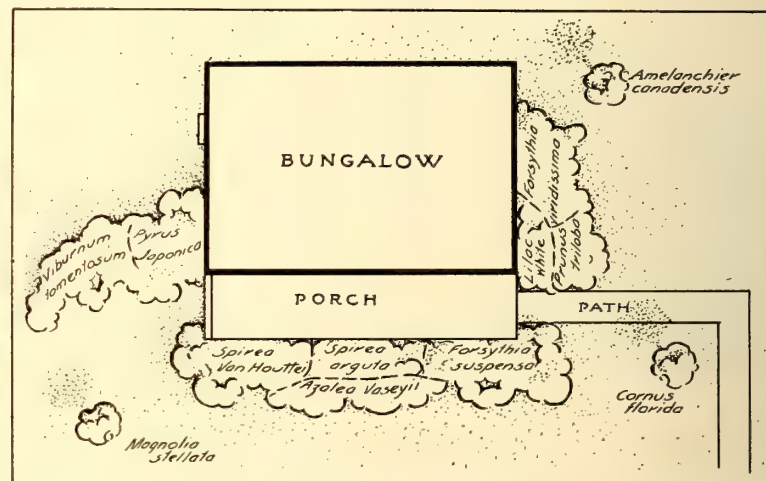
"I ENCLOSE a photograph of a bungalow at my farm, which I use in May chiefly," writes C. J. M., of Boston. "I intend setting out the following shrubs about it: *Pyrus japonica*, *Spiraea arguta*, *Forsythia* and common lilac.

"I am uncertain whether the colors should be in rows against each other or in masses by the sides of each other. What is the most effective grouping for these shrubs, and can you suggest any others which bloom in May?"

I should use *Pyrus japonica* with great restraint as it is a rampant grower, reaching ten to twelve feet in height and spreading by underground shoots until it is twenty feet or so in diameter. It is often attacked by scale. When in bloom it is striking and brilliant but after that it is stiff and lacks charm.

Spiraea arguta is one of the best spiraeas; *S. Van Houttei* is similar, but larger. *S. Thunbergii* is a good low shrub.

Instead of the common lilac you might plant the variety *Souvenir*



Planting about a bungalow

de Ludwig Spaeth (deep reddish purple), or *Marie LeGray* (white), which have larger flowers in bigger racemes.

The *Forsythias* all flower about the same time. Either *F. suspensa*, *F. intermedia*, or *F. viridissima* would do, though *F. suspensa*, and its varieties, *fortunei* and *sieboldi*, could be tied on the walls or on the piazza.

The pink flowering plum, *Prunus triloba*, or even the beach plum, *P. maritima*, are beautiful and make a pleasing contrast with the yellow *Forsythias*.

The Shad bush, *Amelanchier canadensis*, has white, starlike flowers before the leaves. It is a common shrub or small tree, but it is infrequently seen planted about houses.

Azaleas are always brilliant and charming in May. The Ghent and Mollis sections range in color from whites and yellows to pinks and salmons. The native *Azalea vaseyi* is the most beautiful of all. It has medium sized pink flowers. All deciduous azaleas have rather poor foliage, but you will not mind this if you see them only in May.

The Dogwood, *Cornus florida*, should never be left out of any ornamental planting. I can't imagine its being overdone.

Magnolias are the most astonishing of all our flowering trees. *M. stellata* is a small one which does not look exotic in the summer as some of the others do. It blooms with the *Forsythia*.

(Continued on Page xiv)

Index to AMERICAN HOMES AND GARDENS

Volume V—January to December, 1908

Alsop, Thomas, Tokeneke, Rowayton, Conn.	281	Carriage stable under the trees, the, E. C. Converse, Greenwich, Conn.	423	Dining-room, the, Cecilia Beaux, East Gloucester, Mass.	292
Annapolis, glimpses of old, by Esther Singleton	319	Carvel Hall, Annapolis, Md.	322	Dining-room, the, William A. Bein, Woodbridge Hills, Conn.	393
Application of stencil work in home decoration, the, by Edward Fesser, Kensico, N. Y.	151	"Casa-del-Ponte," the entrance front, Tokeneke, Rowayton, Conn.	217	Dining-room, the, H. E. Bishop, South Norwalk, Conn.	64
Applique, well designed, by Mabel Tuke Priestman	332	Casino, the, Tokeneke, Rowayton, Conn.	278	Dining-room, the, Louis Bruguere, Newport, R. I.	302
Arcade and terrace, the, Edward Vassallo Hartford, Deal, N. J.	369	"Cedar Cliff," a Dutch Colonial house at Tokeneke, Rowayton, Conn.	280	Dining-room, the, John A. Burnham, Wenham, Mass.	89
Architect, modern.	44	Chanler, L. S., Tuxedo, N. Y.	459	Dining-room, the, L. S. Chanler, Tuxedo, N. Y.	463
Architect, shall we have an.	473	Chapman, John M., Montclair, N. J.	238	Dining-room, the, John M. Chapman, Montclair, N. J.	240
Archway beneath the double stairway, the, F. C. Beach, Stratford, Conn.	141	Children, neighbors'	218	Dining-room, the, Chase House, Annapolis, Md.	319
April cover, "The terrace," M. P. Slade, Mount Kisco, N. Y.	157	"Chuckles," the house in the woods, "Ross-Fenton Lodge," Deal Lake, N. J.	162	Dining-room, the, Edward K. Cone, Colonia, N. J.	271
"Arrowmink," Villa Nova, Pa.	361	Cloisters, the, Cecilia Beaux, East Gloucester, Mass.	289	Dining-room, the, E. C. Converse, Greenwich, Conn.	424
Arts and crafts, an experiment in, by Mary H. Northend	72	Clock and water tower, E. C. Converse, Greenwich, Conn.	420	Dining-room, the, B. B. Crowninshield, Marblehead, Mass.	449
Asparagus in France, the forced culture of, by Jacques Boyer	154	Coachman's house at "Orchard Lea," Villa Nova, Pa.	364	Dining-room, the, F. S. Duncan, Englewood, N. J.	23
Aspidistra, the	21	Collecting of old pewter, the, by Phebe Westcott Humphreys	52	Dining-room, the, F. Murray Forbes, Wellesley, Mass.	487
August cover, "Fountain in the garden of Howard L. Clark."		Colonnade and terrace of the ocean front, "Castlewood," Louis Bruguere, Newport, R. I.	296	Dining-room, the, G. W. Graham, Bronxville, N. Y.	72
Bark cabin, the, by Dorothy Sythe	367	Colonial house, a remodeled, Frederick Converse Beach, Esq., Stratford, Conn.	135	Dining-room, the, William H. Gray, Dedham, Mass.	31
Bartlett, A. C., Lake Geneva, Wis.	339	Colonial house, H. E. Bishop, South Norwalk, Conn.	63	Dining-room, the, Edward Vassallo Hartford, Deal, N. J.	371
Beach, Frederick Converse, Stratford, Conn.	135	Colonial house, John A. Burnham, Wenham, Mass.	85	Dining-room, the, "Indian Hill," Newburyport, Mass.	478
Beaux Cecilia, East Gloucester, Mass.	289	Colonial house, Edward K. Cone, Colonia, N. J.	268	Dining-room, the, Reginald Jaffray, Tokeneke, Rowayton, Conn.	223
Bein, William A., Stillwood Park, Woodbridge Hills, Conn.	392	Colonial house, F. S. Duncan, Englewood, N. J.	22	Dining-room, the, Thomas E. Kirby, Mount Kisco, N. Y.	438
"Beinhurst," the summer home of William A. Bein, Esq., Stillwood Park, Woodbridge Hills, Conn., by Samuel Sherman	392	Colonial house, a, William H. Gray, Dedham, Mass.	30	Dining-room, the, Henry M. Kneedler, Chestnut Hill, Pa.	231
Bedroom, the, "Indian Hill," Newburyport, Mass.	481	Colonial house, a, Tokeneke, Rowayton, Conn.	280	Dining-room, the, Philip Leyman, Deal, N. J.	383
Bedroom, the, John Hays Hammond, Gloucester, Mass.	171	Colonial house at Wayne, Pa.	114	Dining-room, the, Henry G. Lord, Brookline, Mass.	406
Bedroom, the, Edward Vassallo Hartford, Deal, N. J.	372	Comment, monthly. 4, 44, 84, 124, 164, 218, 258, 298, 338, 378, 418, 458	458	Dining-room, the, "Maxwell Court," Francis T. Maxwell, Rockville, Conn.	264
Bedroom, the, Henry G. Lord, Brookline, Mass.	404	Concrete garage, a.	242	Dining-room, the, "Orchard Lea," Villa Nova, Pa.	363
Billiard-room, the, Phillip S. Sears, Prides Crossing, Mass.	8	Concrete houses	4	Dining-room, the, Lucien Oudin, Water Mill, L. I.	148
Billiard-room, the, Wentworth House, Portsmouth, N. H.	109	Cone, Edward K., Colonia, N. J.	268	Dining-room, the, bungalow at Pasadena, Cal.	14
Bishop, H. E., South Norwalk, Conn.	63	Converse, E. C., Greenwich, Conn.	419	Dining-room, the, H. C. Register, Haverford, Pa.	388
Blabon, Walter, Tokeneke, Rowayton, Conn.	280	"Conyers Manor," the estate of E. C. Converse, Esq., Greenwich, Conn.	419	Dining-room, the, Charles H. Roberts, Wynnewood, Pa.	331
Boathouse, the, William Curtis Demorest, Loon Lake, N. Y.	312	Correspondence. 120, 160, 214, 254, 294, 334, 374, 414, 454, 494	494	Dining-room, the, Ross-Fenton lodge, Deal, N. J.	166
Boudoir, the, Edward Vassallo Hartford, Deal, N. J.	372	Corridor looking into the dining-room, the, "Maxwell Court," Francis T. Rockville, Conn.	261	Dining-room, the, Van Wyck Rossiter, Nyack, N. Y.	91
Bric-a-brac, disposal of, by Nellie Smithers.	90	Corridor in studio, the, A. C. Bartlett, Lake Geneva, Wis.	343	Dining-room, the, house at St. Davids, Pa.	112
Brice house, Annapolis, Md.	324	Costly life, the.	418	Dining-room, the, Philip S. Sears, Prides Crossing, Mass.	8
Brick house, a, L. S. Chanler, Tuxedo, N. Y.	459	Cottage for employees, E. C. Converse, Greenwich, Conn.	426	Dining-room, the, M. P. Slade, Mount Kisco, N. Y.	129
Bridges, garden streams and appropriate, by Phebe Westcott Humphreys.	131	Council-chamber, the, Wentworth House, Portsmouth, N. H.	108	Dining-room, the, Gerit Smith, Tokeneke, Rowayton, Conn.	284
Brooklyn, character of.	84	Country house, the	4	Dining-room, the, E. B. Stratton, Newton Centre, Mass.	159
Bruguere, Louis, Newport, R. I.	299	Country, movement to	124, 258	Dining-room, the, Burt L. Syms, Greenwich, Conn.	252
Building, time to do it.	378	Country quiet	338	Dining-room, the, house at Wayne, Pa.	115
Built-in furniture for the home, by Louise Shrimpton	78	Courtyard, the, A. C. Bartlett, Lake Geneva, Wis.	339	Dining-room, the, H. G. Taintor, Tokeneke, Rowayton, Conn.	27
Bulb culture, indoor, by S. Leonard Bastin.	390	"Covesend," the fountain on the terrace, by H. D. Tainter, Tokeneke, Rowayton, Conn.	275	Dining-room, the, George Towle, Misery Island, Mass.	189
Bungalow, the.	164	Craft of block printing, the, by Mabel Tuke Priestman	411	Dining-room, the, Wentworth House, Portsmouth, N. H.	107
Bungalow at Bryn Mawr Park, N. Y., by Ellis A. Linden.	196	Crowninshield, B. B., Marblehead, Mass.	447	Dining-room, the, at "Westfield," Villa Nova, Pa.	360
Bungalows, some California, by Helen Lukens Gaut	190	Decoration, the application of stencil work in home, by Edward Fesser, Kensico, N. Y.	151	Dining-room, the, Clara A. Wilbur, New Haven, Conn.	471
Bungalow of John Hays Hammond, Gloucester, Mass.	169	Demorest, William Curtis, Loon Lake, N. Y.	308	Domestic service	84
Bungalows, two New England, by Mary H. Northend	169	Den, the, H. E. Bishop, South Norwalk, Conn.	65	Door, the, "Chase House," Annapolis, Md.	320
Bungalow in Pasadena, California, a, by Helen Lukens Gaut	13	Den, the, John A. Burnham, Wenham, Mass.	89	Doorway, the, "Harwood House," Annapolis, Md.	324
Bungalow of C. W. Parker at Marblehead Neck, Mass.	169	Den, the, John M. Chapman, Montclair, N. J.	240	Door, the entrance, L. S. Chanler, Tuxedo, N. Y.	459
Bungalow made from railroad ties, by Mary Truman	202	Den, the, Philip Lehman, Deal, N. J.	381	Doorway, the entrance, Philip S. Sears, Prides Crossing, Mass.	6
Bungalow, a, Ross-Fenton Lodge, Deal Lake, New Jersey	166	Den, the Dutch, Burt L. Syms, Greenwich, Conn.	251		
Bungalow of George Towle, at Misery Island, Mass.	187	Den, the, bungalow at Pasadena, Cal.	14		
Burglary, rural	458	Dining-room, the, Thomas Alsop, Tokeneke, Rowayton, Conn.	283		
Burnham, John A., Wenham, Mass.	85	Dining-room, the, A. C. Bartlett, Lake Geneva, Wis.	342		
Butterfly farm, the world's largest, by Joseph Heighton	25	Dining-room, the, F. C. Beach, Stratford, Conn.	137		
Cabin, the bark, by Dorothy Sythe	367				
Camp at Arden, the summer, by Mabel Tuke Priestman	180				

INDEX—Continued

- Drainage problems for the bungalow, plumbing and, by John A. Gade 184
- Draperies for the bungalow, rugs and, by Alice M. Kellogg 176
- Drawing-room, the, H. E. Bishop, South Norwalk, Conn. 65
- Drawing-room, the, John A. Burnham, Wenham, Mass. 88
- Drawing-room, the, L. S. Chanler, Tuxedo, N. Y. 462
- Drawing-room, the, E. C. Converse, Greenwich, Conn. 424
- Drawing-room, the, Washington Irving, Irvington-on-the-Hudson, N. Y. 398
- Drawing-room, "Orchard Lea," the, Villa Nova, Pa. 363
- Drawing-room, the, M. P. Slade, Mt. Kisco, N. Y. 127
- Drawing-room, the, Gerit Smith, Tokeneke, Rowayton, Conn. 284
- Drawing-room, the, at "Westfield," Villa Nova, Pa. 361
- Duncan, Frederick S., Englewood, N. J. 22
- Dutch Colonial house, Burt L. Symms, Greenwich, Conn. 249
- Dutch Colonial house at Tokeneke, Rowayton, Conn. 280
- Dutch Colonial house at Wayne, Pa. 114
- "Eastdene," a house at Villa Nova, Pa. 366
- Economic methods in mushroom growing. . . 318
- Endicott, W. C., Danvers, Mass. 349
- Endicott garden, the, Danvers, Mass., by Sarah May Londer 349
- English house, an, G. W. Graham, Bronxville, N. Y. 69
- English house, an, Henry M. Kneedler, Chestnut Hill, Pa. 229
- English house at H. C. Register, Haverford, Pa. 387
- English house, an, Van Wyck Rossiter, Nyack, N. Y. 92
- English house, an, at Wayne, Pa. 113
- Entrance, the, Spencer Hall, Water Witch, N. J. 96
- Entrance to Tokeneke Park, Rowayton, Conn. 279
- Etching on copper and brass, by Mabel Tuke Priestman 272
- Experiment in arts and crafts, an, by Mary H. Northend 72
- Exterior of the house, the, John M. Chapman, Montclair, N. J. 239
- Farm barn, the, E. C. Converse, Greenwich, Conn. 422
- Farm, the world's largest butterfly, by Joseph Heighton 25
- Farm, a New England stock, by Mary H. Northend 16
- Farm at Crichel, the white, by W. G. Fitzgerald 56
- Farms, speculation in abandoned, a, by A. S. Atkinson 384
- Farming experiment of a woman, the, by Annette Bradshaw 432
- Fences in towns and villages, by Ada March 93
- Fire, losses by. 42
- Fireplace, the, Berkeley Hills, Cal. 77
- Fireplace, the, Chase House, Annapolis, Md. 321
- Fireplace in the "Chuckles," the house in the woods, Ross-Fenton Lodge, Deal Lake, N. J. 168
- Fireplace, the massive, John Hays Hammond, Gloucester, Mass. 169
- Fireplace, the, house at St. Davids, Pa. 111
- Fireplace with old Italian brackets, the, Reginald Jaffray, Tokeneke, Rowayton, Conn. 223
- Fireplace in the inglenook, H. D. Taintor, Tokeneke, Rowayton, Conn. 277
- Flower garden, a Minnesota, by Henrietta P. Keith 427
- Fly-trap, new facts about Venus, by W. C. Purdy 28
- Forbes, F. Murray, Esq., Wellesley, Mass. 485
- Forced culture of asparagus in France, the, by Jacques Boyer 154
- Forecourt and entrance front, "Maxwell Court," Francis T. Maxwell, Esq., Rockville, Conn. 257
- Formal garden, the, John A. Burnham, Wenham, Mass. 90
- Fountain, the, "Covesend," H. D. Taintor, Tokeneke, Rowayton, Conn. 275
- Fountain, the wall, "Maxwell Court," Francis T. Maxwell, Rockville, Conn. 260
- French rhea and cassowary farm, a, by Jacques Boyer 352
- Front, the entrance, "Overloch," John A. Burnham, Wenham, Mass. 83
- Front, the entrance, Philips S. Sears, Prides Crossing, Mass. 7
- Frontispiece, "A country creek in spring-time" 122
- Frontispiece, the fountain in the formal garden of "Overloch," the estate of John A. Burnham, Esq., at Wenham, Mass. 82
- Frontispiece, "Homeward bound" 216
- Frontispiece, Jerseys of the "World's End Farm" herd 2
- Frontispiece, "Maxwell Court," the vista from the pergola looking toward the house 256
- Frontispiece, "Seeking shelter in the water" 376
- Frontispiece, studio end of the courtyard, A. C. Bartlett, Lake Geneva, Wisconsin. 336
- Frontispiece, "Where peace and sunshine reign" 416
- Frontispiece, "Morning shadows and reflections" 456
- Furnishing, problems in home, by Alice M. Kellogg, 120, 160, 214, 254 294, 334, 374, 414, 454, 494
- Furniture for the bungalow, by Esther Singleton 204
- Furniture in the home, built-in, by Louise Shrimpton 78
- Garage, the, E. C. Converse, Greenwich, Conn. 422
- Garden of Winthrop Sargent, Esq., at Fishkill-on-Hudson, N. Y. 234
- Garden, the, at the Paca House, Annapolis, Md. 326
- Garden, the, L. S. Chanler, Tuxedo, N. Y. 464
- Garden, the, "Maxwell Court," Francis T. Maxwell, Rockville, Conn. 265
- Garden, the, Miss Tower, Lexington, Mass. 394
- Garden, the formal, John A. Burnham, Wenham, Mass. 90
- Garden, the formal, Winthrop Sargent, Fishkill-on-Hudson, N. Y. 236
- Garden, the flower, M. P. Slade, Mt. Kisco, N. Y. 126
- Garden, the house and the, "Maxwell Court," Francis T. Maxwell, Rockville, Conn. 264
- Garden, the house roof and its, by Esther Matson 101
- Garden, the Japanese, Charles Pfizer, Esq., Bernardsville, N. J. 304
- Garden gates for the bungalow 174
- Garden joys of a country house, the, by Abbie I. Johnson 142
- Garden path, the, Maxwell Court, Francis T. Maxwell, Rockville, Conn. 260
- Garden room, the, by Carine Cadby 211
- Garden streams and appropriate bridges, by Phebe Westcott Humphreys 131
- Gardens of California, sunken, by Charles Frederick Holder 59
- Garden work about the home, by Charles Downing Lay. 120, 160, 214, 254, 294, 334, 374, 454, 494
- Gardener's Cottage, the, E. C. Converse, Greenwich, Conn. 420
- Garden in France, summering, by Jacques Boyer 285
- Gardening under ground, winter, by Jacques Boyer 20
- Garrages, private automobile, by Benjamin A. Howes 242
- Gates for the bungalow garden 174
- Glimpses of old Annapolis, by Esther Singleton 319
- Glimpses of Tokeneke, some attractive homes at Rowayton, Conn., by Francis Durando Nichols 275
- Graham, G. W., Bronxville, N. Y. 69
- Gray, William H., Dedham, Mass. 30
- "Gulphmount," Villa Nova, Pa. 359
- Half-timber and stone house, Edward A. Schmidt, Radnor, Pa. 45
- Half-timber house, Van Wyck Rossiter, Nyack, N. Y. 92
- Half-timbered house, H. C. Register, Haverford, Pa. 387
- Hall, Spencer, Water Witch, N. J. 97
- Hall, the, Frederick Converse Beach, Stratford, Conn. 135
- Hall, the, H. E. Bishop, South Norwalk, Conn. 64
- Hall, the, Louis Bruguere, Newport, R. I. 299
- Hall, the, John A. Burnham, Wenham, Mass. 88
- Hall, the, L. S. Chanler, Tuxedo, N. Y. 462
- Hall, the, Chase House, Annapolis, Md. 320
- Hall, the, Edward K. Cone, Colonia, N. J. 270
- Hall, the, F. S. Duncan, Englewood, N. J. 22
- Hall, the, G. W. Graham, Bronxville, N. Y. 69
- Hall, the, William H. Gray, Dedham, Mass. 31
- Hall, the, "Gulphmount," Villa Nova, Pa. 359
- Hall, the, Spencer Hall, Water Witch, N. J. 99
- Hall, the, Edward Vassallo Hartford, Deal, N. J. 371
- Hall, the, "Indian Hill," Newburyport, Mass. 479
- Hall, the, Thomas E. Kirby, Mount Kisco, N. Y. 438
- Hall, the, Henry M. Kneedler, Chestnut Hill, Pa. 231
- Hall, the, Philip Lehman, Deal, N. J. 377
- Hall, the, "Maxwell Court," Francis T. Maxwell, Rockville, Conn. 263
- Hall, the, Mount Vernon, Villa Nova, Pa. 358
- Hall, the, "Orchard Lea," Villa Nova, Pa. 363
- Hall, the, Lucien Oudin, Water Mill, L. I. 149
- Hall, the, bungalow at Pasadena, Cal. 15
- Hall, the, M. P. Slade, Mount Kisco, N. Y. 130
- Hall, the, E. B. Stratton, Newton Centre, Mass. 158
- Hall, the, Wentworth House, Portsmouth, N. H. 109
- Hall, the, Clara A. Wilbur, New Haven, Conn. 470
- Hall, the, house at Wayne, Pa. 115
- Hall, the entrance, Cecilia Beaux, East Gloucester, Mass. 289
- Hall, the entrance, Van Wyck Rossiter, Nyack, N. Y. 91
- Hall, the great, E. C. Converse, Greenwich, Conn. 424
- Hall, the main, Edward A. Schmidt, Radnor, Pa. 48
- Hall and staircase, the, Thomas E. Kirby, Mt. Kisco, N. Y. 440
- Hartford, Edward Vassallo, Deal, N. J. 369
- Harwood house, Annapolis, Md. 324
- "Heartease," the summer home of J. D. Sawyer, Jr., Tokeneke, Rowayton, Conn. 281
- Heating and lighting with alcohol, by John R. Waley 407
- Hermes, a marble, Edward A. Schmidt, Radnor, Pa. 50
- Historic Wentworth House, the, Portsmouth, N. H., by Mary H. Northend 106
- Home, planning a country, by E. P. Powell. . . 100
- Home life, State regulation of 84
- Home shrubbery, a, by E. P. Powell 318
- Homes, notable American, by Barr Ferree, the house of A. C. Bartlett, Lake Geneva, Wis. 339
- Homes, notable American, by Barr Ferree, "Castlewood," the villa of Louis Bruguere, Esq., Newport, R. I. 299
- Homes, notable American, by Barr Ferree, "Overloch," the country seat of John A. Burnham at Wenham, Mass. 85
- Homes, notable American, by Barr Ferree, the home of Lieutenant-Governor Chanler, Tuxedo, N. Y. 459
- Homes, notable American, by Barr Ferree, "Conyers Manor," the estate of E. C. Converse, Esq., at Greenwich, Conn. 419
- Homes, notable American, by Barr Ferree, the seaside home of Philip Lehman, Esq., Deal, N. J. 379
- Homes, notable American, by Barr Ferree, "Maxwell Court," residence of Francis T. Maxwell, Esq., Rockville, Conn. 259
- Homes, notable American, by Barr Ferree, estate of Edward A. Schmidt, Radnor, Pa. 45
- Homes, notable American, by Barr Ferree, estate of Philip S. Sears, at Prides Crossing, Mass. 5
- Homes, notable American, by Barr Ferree, the country seat of M. P. Slade, at Mt. Kisco, N. Y. 125
- Homes, movable, by Ernest Myer 68
- House at Berkeley Hills, Cal., a, by John Sherman 76
- House at Newton Centre, Mass., a, by Edward T. Wills 157
- House at St. Davids, Pa. 110
- House at Wayne, Pa. 113, 114
- House at Wynnewood, Pa., by Charles Chauncey 430
- House built for F. Murray Forbes, Esq., Wellesley, Mass. 485
- House built for William H. Gray, Esq., at Dedham, Mass., by Paul Thurston. 30
- House for H. C. Register, Haverford, Pa. 387
- House of Frederick Converse Beach, Esq., Stratford, Conn. 135
- House of Cecilia Beaux, East Gloucester, Mass. 289
- House of H. E. Bishop, Esq., at South Norwalk, Conn., by Francis Durando Nichols 63
- House of Mr. Walter Blabon, Tokeneke, Rowayton, Conn. 280
- House of John A. Burnham, Wenham, Mass. 85
- House of L. S. Chanler, Tuxedo, N. Y. 457
- House of John M. Chapman, Montclair, N. J. 238
- House of Edward K. Cone at Colonia, N. J. 268
- House of E. C. Converse, Greenwich, Conn. 419

INDEX—Continued

- House of B. B. Crowninshield, Marblehead, Mass. 447
- House of F. S. Duncan, Englewood, N. J., Margaret Higgins Lane. 22
- House of Spencer Hall, Water Witch, N. J. 97
- House of John Hays Hammond at Gloucester, Mass. 169
- House of Reginald Jaffray, Tokeneke, Rowayton, Conn. 219
- House of Sullivan W. Jones, Bryn Mawr Park, N. Y. 196
- House of Thomas E. Kirby, Mount Kisco, N. Y. 437
- House of Henry M. Kneeder, Esq., at Chestnut Hill, Pa. 229
- House of Henry G. Lord, Esq., Brookline, Mass., by Paul Thurston. 404
- House of Francis T. Maxwell, at Rockville, Conn. 259
- House of Mrs. C. J. Mills, Bridgehampton, L. I. 492
- House of Lucien Oudin, Water Mill, L. I. 147
- House of C. W. Parker, at Marblehead Neck, Mass. 169
- House of Van Wyck Rossiter, Esq., at Nyack, N. Y., by Walter Williams. 91
- House of Philip S. Sears, at Prides Crossing, Mass. 5
- House of M. P. Slade, at Mount Kisco, N. Y. 125
- House of Gerit Smith, at Tokeneke, Rowayton, Conn. 283
- House of Edward B. Stratton, at Newton Centre, Mass. 157
- House of Burt L. Syms, Greenwich, Conn. 249
- House of H. D. Taintor, Tokeneke, Rowayton, Conn. 276
- House of S. P. M. Tasker, Esq., at Wynnewood, Pa. 430
- House for Mrs. Clara A. Wilbur, at New Haven, Conn., by Charles Chauncey. 469
- House roof and its garden, the, by Esther Matson. 101
- House, the moderate. 258
- Houses, three Pennsylvania, by Francis Durando Nichols. 110
- How I built my log bungalow, by Edward Fesser. 199
- How the problem of building a house on a hillside was solved, by a New York architect. 76
- "Huckweek Lodge," the summer camp of William Curtis Demorest, Esq., at Loon Lake, N. Y. 308
- Illumination at Mount Vernon, by Paul Beckwith. 94
- "Indian Hill," by Esther Singleton. 475
- Inner porch, the, Philip S. Sears, Prides Crossing, Mass. 6
- Irving, Washington, "Sunnyside," Irvington-on-the-Hudson, N. Y. 397
- Italian villa, an, Reginald Jaffray, Tokeneke, Rowayton, Conn. 219
- Jaffray, Reginald, Tokeneke, Rowayton, Conn. 219
- January cover, "Cows seeking shelter of the cooling stream."
- Japanese garden of "Yademos," the country seat of Charles Pfizer, Esq., Bernardsville, N. J., by John Foster Carr. 304
- Jones, Sullivan W., Bryn Mawr, N. Y. 196
- July cover, "Country scene."
- June cover, "Entrance of Casa-del-Ponte," Tokeneke, Rowayton, Conn.
- "Kinnekort," the residence of Edward K. Cone, Esq., at Colonia, N. J., by Paul Thurston. 268
- Kirby, Thomas E., Mount Kisco, N. Y. 437
- Kitchen, the, by John A. Gade. 36
- Kitchen, the, "Indian Hill," Newburyport, Mass. 481
- Kneeder, Henry M., Chestnut Hill, Pa. 229
- Knockers, old-time latches and, by Mary H. Northend. 466
- Lamps and candle shades, something about, by Mabel Tuke Priestman. 10
- Landing on stairway, Chase house, Annapolis, Md. 322
- Lantern, a bronze Japanese, Thomas E. Kirby, Mount Kisco, N. Y. 437
- Leaded glass windows for domestic use, by Charles M. Shean. 266
- Lehman, Philip, Deal, N. J. 379
- Library, the, F. C. Beach, Stratford, Conn. 137
- Library, the, Louis Bruguere, Esq., Newport, R. I. 301
- Library, the, E. C. Converse, Greenwich, Conn. 425
- Library, the, Washington Irving, Irvington-on-the-Hudson, N. Y. 399
- Library, the, Henry M. Kneeder, Chestnut Hill, Pa. 231
- Library, the, "Maxwell Court," Francis T. Maxwell, Rockville, Conn. 262
- Library, the, Philip S. Sears, Prides Crossing, Mass. 9
- Library, the, M. P. Slade, Mount Kisco, N. Y. 129
- Life, the happy. 44
- Life on great vineyards, by Charles F. Holder. 33
- Lights, old-time, by Mary H. Northend. 450
- Living-room, the, Thomas Alsop, Tokeneke, Rowayton, Conn. 282
- Living-room, the, Cecilia Beaux, East Gloucester, Mass. 292
- Living-room, the, William A. Bein, Woodbridge Hills, Conn. 393
- Living-room, the, H. E. Bishop, South Norwalk, Conn. 64
- Living-room, the, John M. Chapman, Montclair, N. J. 241
- Living-room, the, Edward K. Cone, Colonia, N. J. 270
- Living-room, the, William Curtis Demorest, Loon Lake, N. Y. 310
- Living-hall, the, F. Murray Forbes, Wellesley, Mass. 486
- Living-room, the, F. Murray Forbes, Wellesley, Mass. 487
- Living-room, the, G. W. Graham, Bronxville, N. Y. 71
- Living-room, the, William H. Gray, Dedham, Mass. 31
- Living-room, the, Spencer Hall, Water Witch, N. J. 98
- Living-room, the, Edward Vassallo Hartford, Deal, N. J. 371
- Living-room, the, Reginald Jaffray, Tokeneke, Rowayton, Conn. 222
- Living-room, the, Sullivan W. Jones, Bryn Mawr Park, N. Y. 197
- Living-room, the, Thomas E. Kirby, Mount Kisco, N. Y. 439
- Living-room, the, Philip Lehman, Deal, N. J. 381
- Living-room, the, Henry G. Lord, Brookline, Mass. 406
- Living-room, the, Lucien Oudin, Water Mill, L. I. 149
- Living-room, the, C. W. Parker, Marblehead Neck, Mass. 173
- Living-room, the, H. C. Register, Haverford, Pa. 389
- Living-room, the, Charles H. Roberts, Winnewood, Pa. 330
- Living-room, the, "Ross-Fenton Lodge," Deal Lake, N. J. 166
- Living-room, the, Van Wyck Rossiter, Nyack, N. Y. 93
- Living-room, the, Gerit Smith, Tokeneke, Rowayton, Conn. 283
- Living-room, the, E. B. Stratton, Newton Centre, Mass. 158
- Living-room, the, Burt L. Syms, Greenwich, Conn. 251
- Living-room, H. D. Taintor, Tokeneke, Rowayton, Conn. 277
- Living-room, the, S. P. M. Tasker, Wynnewood, Pa. 431
- Living-room, the, George Towle, Esq., at Misery Island, Mass. 187
- Living-room, the, Clara A. Wilbur, New Haven, Conn. 470
- Living-room, the, Wentworth House. 107
- Living-room, house at St. Davids, Pa. 111
- Living-room, the, house at Wayne, Pa. 115
- Living-room, the, bungalow at Pasadena, Cal. 15
- Loggia, the, A. C. Bartlett, Lake Geneva, Wis. 340
- Log house, W. A. Bein, Woodbridge Hills, Conn. 393
- Lord, Henry G., Brookline, Mass. 404
- Mantel in the Brice house, Annapolis, Md. 324
- March cover, "Rocks and vines."
- Maxwell, Francis T., Rockville, Conn. 259
- May cover, "Ross-Fenton Lodge," Deal Lake, N. J.
- Mills, Mrs. C. J., Bridgehampton, L. I. 492
- Minnesota flower garden, a, by Henrietta P. Keith. 427
- Mission house, a, Spencer Hall, Water Witch, N. J. 97
- Monthly Comment. 4, 44, 84, 124, 164, 218, 258, 298, 338, 378, 418, 458
- Morning-room, the, Lucien Oudin, Water Mill, L. I. 148
- Mount Vernon, illumination at, by Paul Beckwith. 94
- "Mount Vernon," Villa Nova, Pa. 357
- Movable homes, by Ernest Myer. 68
- Mushroom growing, economic methods of. 318
- Music-room, the, "Ross-Fenton Lodge," Deal Lake, N. J. 165
- New England stock farm, a, by Mary H. Northend. 16
- New facts about Venus fly-trap, by W. C. Purdy. 28
- Norton, E. H., Tokeneke, Rowayton, Conn. 280
- Notable American homes, by Barr Ferree, the house of A. C. Bartlett, Esq., Lake Geneva, Wis. 339
- Notable American homes, by Barr Ferree, "Castlewood," the villa of Louis Bruguere, Esq., Newport, R. I. 299
- Notable American homes, by Barr Ferree, "Overloch," the country seat of John A. Burnham, Esq., Wenham, Mass. 85
- Notable American homes, by Barr Ferree, "Casa-del-Ponte," summer home at Tokeneke, Rowayton, Conn. 219
- Notable American homes, by Barr Ferree, the home of Lieutenant-Governor Chandler, at Tuxedo, N. Y. 459
- Notable American homes, by Barr Ferree, "Conyers Manor," the estate of E. C. Converse, Esq., at Greenwich, Conn. 419
- Notable American homes, by Barr Ferree, the seaside home of Philip Lehman, Esq., Deal, N. J. 379
- Notable American homes, by Barr Ferree, "Maxwell Court," the residence of Francis T. Maxwell, Rockville, Conn. 259
- Notable American homes, by Barr Ferree, the house of Edward A. Schmidt, Esq., Radnor, Pa. 45
- Notable American homes, by Barr Ferree, "The Pines," estate of Philip S. Sears, Esq., at Prides Crossing, Mass. 5
- Notable American homes, by Barr Ferree, the country seat of M. P. Slade, at Mount Kisco, N. Y. 125
- Novel scheme for a suburban house proposition, by Charles Chauncey. 387
- November cover, "Pond lilies and swans."
- October cover, "The garden walk with hydrangeas."
- Old-time lights, by Mary H. Northend. 450
- "Orchard Lea," a house at Villa Nova, Pa. 362
- Outlook across the pond and meadow, an. 219
- Oudin, Lucien, Water Mill, L. I. 147
- "Overloch," the country seat of John A. Burnham, at Wenham, Mass. 85
- Parks, water, by Charles Downing Lay. 444
- Parlors, the, "Indian Hill," Newburyport, Mass. 479, 480
- "Peargrove," a house at Villa Nova, Pa. 360
- "Pennacre," a house at Villa Nova, Pa. 365
- Pergola, the, Edward K. Cone, Colonia, N. J. 268
- Pergola, the, "Ross-Fenton Lodge," Deal Lake, N. J. 163
- Pergola at the end of the formal garden, the, "Maxwell Court," Francis T. Maxwell, Rockville, Conn. 259
- Pergola of the terrace and its outlook, Reginald Jaffray, Tokeneke, Rowayton, Conn. 220
- Pergola porch, William H. Gray, Dedham, Mass. 30
- Pergola well-curb, the, F. C. Beach, Stratford, Conn. 136
- Pewter, the collecting of old, by Phebe Westcott Humphreys. 52
- Planning a country home, by E. P. Powell. 100
- Plant and the season, the, by S. Leonard Bastin. 116
- Planting for the small house grounds, a simple, by George S. Wickham. 75
- Plumbing and drainage problems of the bungalow, by John A. Gade. 184
- Porch and pergola of the dining-room, the, E. C. Converse, Greenwich, Conn. 423
- Porch on the south front, "Rocksym," Burt L. Syms, Esq., Greenwich, Conn. 248
- Porch overlooking the garden, the, "Maxwell Court," Francis T. Maxwell, Rockville, Conn. 261
- Porch, the, John M. Chapman, Montclair, N. J. 240
- Porch, the, John Hays Hammond, Gloucester, Mass. 170
- Porch, the, "Indian Hill," Newburyport, Mass. 476
- Porch, the, Thomas E. Kirby, Mount Kisco, N. Y. 438
- Porch, the, Philip Lehman, Deal, N. J. 380
- Porch, the, "Mount Vernon," Villa Nova, Pa. 356
- Porch, the, Edward A. Schmidt, Radnor, Pa. 49

INDEX—Continued

- Porch, the, Philip S. Sears, Prides Crossing, Mass. 5
- Porch, the, M. P. Slade, Mount Kisco, N. Y. 128
- Porch, the, Burt L. Syms, Greenwich, Conn. 251
- Porch, the, George Towle, Misery Island, Mass. 189
- Porch, the carriage, E. C. Converse, Greenwich, Conn. 426
- Porch, the entrance, F. Murray Forbes, Wellesley, Mass. 485
- Porch, the entrance, Charles H. Roberts, Wynnewood, Pa. 331
- Porch, the entrance, bungalow at Pasadena, Cal. 14
- Porch, the enclosed, H. E. Bishop, South Norwalk, Conn. 63
- Porch, the garden, L. S. Chanler, Tuxedo, N. Y. 460
- Porch, the living-room, William Curtis Demorest, Loon Lake, N. Y. 310
- Porch, the open, John A. Burnham, Wenham, Mass. 86
- Porch, the semi-circular, John A. Burnham, Wenham, Mass. 85
- Portable garage, a. 247
- Portal, the side, Philip S. Sears, Prides Crossing, Mass. 6
- Porte-cochere, the, Edward A. Schmidt, Radnor, Pa. 46
- Portico, the great, F. C. Beach, Stratford, Conn. 134
- Pool and terrace, the, the country seat of M. P. Slade, Mount Kisco, N. Y. 123
- Poore, Mr., "Indian Hill," Newburyport, Mass. 475
- Poultry breeding, scientific, by Day Allen Willey 225
- Printing, the craft of block, by Mabel Tuke Priestman 411
- Problems in home furnishing, by Alice M. Kellogg. 120, 160, 214, 254, 294, 334, 374, 414, 454, 494
- Property rights 258
- Pump house, the, E. C. Converse, Greenwich, Conn. 426
- Raffia in the normal school, by Mary H. Northend 346
- Reception-hall, Washington Irving, Irvington-on-the-Hudson, N. Y. 399
- Reception-room, the, Henry G. Lord, Brookline, Mass. 404
- Register, H. C., Haverford, Pa. 387
- Remodeled Colonial house, a, the country seat of Frederick Converse Beach, Esq., at Stratford, Conn., by Charles Chauncey. 135
- Residence of John M. Chapman, Esq., Montclair, N. J. 238
- Residence of Henry M. Kneeder, Esq., Chestnut Hill, Pa., by Walter Williams. 229
- Residential park near Philadelphia, Pa., by Ralph de Martin. 356
- "Rocksym," the summer home of Burt L. Syms, Esq., Greenwich, Conn., by C. W. Whiteway 249
- Rose as a summer bedder, the, by Eben E. Rexford 232
- Ross-Fenton, Deal Lake, N. J. 165
- "Ross-Fenton Lodge," by Francis Durando Nichols 165
- Rossiter, Van Wyck, Nyack, N. Y. 91
- Rugs and draperies for the bungalow, by Alice M. Kellogg. 176
- Rugs from the scrap bag, making, by Mabel Tuke Priestman. 442
- Salon, the, Louis Bruguere, Newport, R. I. 300
- Sanitation, a problem in, by Lewis W. Hine. 489
- Sargent, Winthrop, Fishkill-on-Hudson, N. Y. 234
- Scientific poultry breeding, by Day Allen Willey 225
- Sculpture garden under the trees, the, Reginald Jaffray, Tokeneke, Rowayton, Conn. 221
- Sears, Philip S., Prides Crossing, Mass. 5
- September cover, "Poplars on the river bank." 84
- Servants, domestic 84
- Sheep homeward bound, a flock of Highland. 355
- Shingled bungalow, Sullivan W. Jones, Bryn Mawr Park, N.Y. 197
- Shingled house, Berkeley Hills, Cal. 76
- Shingled house, Thomas E. Kirby, Mount Kisco, N. Y. 438
- Shingled house, A. D. Knickerbacker Boyd, St. Davids, Pa. 111
- Shingled house, Mrs. C. J. Mills, Bridgehampton, L. I. 492
- Shingled house, Lucien Oudin, Water Mill, L. I. 147
- Shingled house, Edward B. Stratton, Newton Centre, Mass. 157
- Shingled house, a, Mrs. Clara A. Wilbur, New Haven, Conn. 470
- "Shing-wak," the home of Thomas Alsop, Esq., Tokeneke, Rowayton, Conn. 281
- "Shorewood," the summer home of E. H. Norton, Tokeneke, Rowayton, Conn. 280
- Shrubbery, a home, by E. P. Powell. 318
- Simple planting for small home grounds, a, by George S. Wickham. 75
- Slade, M. P., Mount Kisco, N. Y. 125
- Smith Gerit, Tokeneke, Rowayton, Conn. 283
- Some California bungalows, by Helen Lukens Gaut 190
- Something about lamps and candle shades, by Mabel Tuke Priestman. 10
- Speculation in abandoned farms, a, by A. S. Atkinson. 384
- Springhouses, old and new, by Phebe Westcott Humphreys 401
- Stable at "Orchard Lea," Villa Nova, Pa. 304
- Stable, the, Lucien Oudin, Water Mill, L. I. 150
- Staircase, the, Thomas Alsop, Tokeneke, Rowayton, Conn. 282
- Staircase, the, Edward K. Cone, Colonia, N. J. 271
- Staircase, the, B. B. Crowninshield, Marblehead, Mass. 449
- Staircase, the, F. Murray Forbes, Wellesley, Mass. 487
- Stair-hall, the, E. C. Converse, Greenwich, Conn. 424
- Stair-hall, the, Edward A. Schmidt, Esq., Radnor, Pa. 42
- Stairway, the, Chase House, Annapolis, Md. 321
- Stairs, a glimpse of the, S. P. M. Tasker, Wynnewood, Pa. 431
- Stairs, the, "Indian Hill," Newburyport, Mass. 478
- Stairs to the second floor, the entrance passage and, Reginald Jaffray, Tokeneke, Rowayton, Conn. 222
- Stairs, the, Philip Lehman, Deal, N. J. 382
- Stairway, Washington Irving, Irvington-on-the-Hudson, N. Y. 399
- State house, the old, Annapolis, Md. 326
- Steps and doorway, the entrance, Edward Vassallo Hartford, Deal, N. J. 369
- Steps to the Italian garden, Reginald Jaffray, Tokeneke, Rowayton, Conn. 221
- Stone and half-timber house, Edward A. Schmidt, Radnor, Pa. 45
- Stone garage, a. 245
- Stone house, a, E. C. Converse, Greenwich, Conn. 419
- Stone house, Henry M. Kneeder, Chestnut Hill, Pa. 229
- Stone house, S. P. M. Tasker, Wynnewood, Pa. 430
- Stratton, Edward B., Newton Centre, Mass. 157
- Stucco bungalow, Ross-Fenton Lodge, Deal Lake, N. J. 165
- Stucco house, Cecilia Beaux, East Gloucester, Mass. 289
- Stucco house, John A. Burnham, Wenham, Mass. 85
- Stucco house, a, F. M. Forbes, Wellesley, Mass. 485
- Stucco house, a, G. W. Graham, Bronxville, N. Y. 69
- Stucco house, Spencer Hall, Water Witch, N. J. 97
- Stucco house, a, Edward Vassallo Hartford, Deal, N. J. 369
- Stucco house, Reginald Jaffray, Tokeneke, Rowayton, Conn. 223
- Stucco house, Philip Lehman, Deal, N. J. 379
- Stucco house, Philip S. Sears, Prides Crossing, Mass. 5
- Stucco house, M. P. Slade, Mount Kisco, N. Y. 125
- Stucco house at Wayne, Pa. 113
- Studio, the, A. C. Bartlett, Lake Geneva, Wis. 341
- Studio, the, Cecilia Beaux, East Gloucester, Mass. 288
- Study, the, L. S. Chanler, Tuxedo, N. Y. 463
- Study, the, E. C. Converse, Greenwich, Conn. 425
- Study, the, Washington Irving, Irvington-on-the-Hudson, N. Y. 398
- Suburban home of G. W. Graham, Esq., at Bronxville, N. Y., by Walter Williams. 69
- Summer camp at Arden, the, by Mabel Tuke Priestman 180
- Summer gardening in France, by Jacques Boyer 285
- Summer home of B. B. Crowninshield, Esq., at Marblehead, Mass., by Francis Durando Nichols 447
- Summer home of Spencer Hall, Esq., Water Witch, N. J., by Charles Chauncey. 97
- Summer home of Mrs. C. J. Mills, Bridgehampton, L. I., by Paul Thurston. 492
- Summer home of Lucien Oudin, Esq., at Water Mill, L. I., by Samuel Ward. 147
- Summerhouse, the, L. S. Chanler, Tuxedo, N. Y. 461
- Sun-dials, by Randolph I. Geare. 327
- Sunken gardens of California, by Charles Frederick Holder. 59
- Sun-room, the value of a, by Delia Austrian. 313
- Sun-room, the, F. C. Beach, Stratford, Conn. 136
- Sun-room, the, John Hays Hammond, Gloucester, Mass. 171
- "Sunnyside," a home and a shrine, by Perri-ton Maxwell. 397
- Superintendent's cottage and office, E. C. Converse, Greenwich, Conn. 421
- Syms, Burt L., Greenwich, Conn. 249
- Tainter, H. D., Tokeneke, Rowayton, Conn. 276
- "Tanrackin," the country seat of Thomas E. Kirby, Esq., Mount Kisco, N. Y., by Ralph de Martin. 437
- Tapestry, weaving of Norwegian, by Mabel Tuke Priestman. 482
- Tasker, S. P., Wynnewood, Pa. 430
- Taxes and taxpayers. 298
- Temple of Venus, the, Edward Vassallo Hartford, Deal, N. J. 369
- Temple, the, Winthrop Sargent, Fishkill-on-Hudson, N. Y. 235
- Tennis court, the, Tokeneke, Rowayton, Conn. 278
- Terrace and pergola, the, Reginald Jaffray, Tokeneke, Rowayton, Conn. 221
- Terrace at "Westfield," the, Villa Nova, Pa. 361
- Terrace, the, John A. Burnham, Wenham, Mass. 86
- Terrace, the, "Maxwell Court," Francis T. Maxwell, Rockville, Conn. 262
- Terrace, the, Edward A. Schmidt, Radnor, Pa. 46
- Terrace, the, Philip S. Sears, Prides Crossing, Mass. 5
- Terrace, the main, E. C. Converse, Greenwich, Conn. 426
- Terrace, the pool and, the country seat of M. P. Slade, at Mount Kisco, N. Y. 123
- "The Bunker," a bungalow built for George Towle, Esq., at Misery Island, Mass., by Walter Williams 187
- The home and studio of an artist at East Gloucester, Mass., by Charles Chauncey. 289
- "The Pines," estate of Philip S. Sears, Esq., Prides Crossing, Mass. 3
- "The Terraces," the summer home of Edward Vassallo Hartford, at Deal, N. J., by Francis Durando Nichols. 369
- Three Pennsylvania houses, by Francis Durando Nichols 110
- Tokeneke, glimpses of, by Francis Durando Nichols 275
- Tower, Miss, Lexington, Mass. 394
- Towle, George, Misery Island, Mass. 187
- Trees, a half dozen great. 312
- Trees, an avenue of, W. C. Endicott, Danvers, Mass. 348
- Two New England bungalows, by Mary H. Northend 169
- Types of bungalows, by Roy M. Smith. 198
- Value of a sun-room, the, by Delia Austrian. 313
- Vestibule, the, Edward A. Schmidt, Radnor, Pa. 51
- Vines for window boxes, vases and baskets, by Ida D. Bennett. 474
- Vineyards, life on great, by Charles F. Holder 33
- Water garden at Easthampton, L. I. 445
- Water parks, by Charles Downing Lay. 444
- "Wayside," Gerit Smith, Esq., Tokeneke, Rowayton, Conn. 283
- Weaving of Norwegian tapestry in America, by Mabel Tuke Priestman. 482
- Well-curb, the pergola, F. C. Beach, Stratford, Conn. 136
- Well designed applique, by Mabel Tuke Priestman 332
- Wentworth House, Portsmouth, N. H., the historic, by Mary H. Northend. 106
- "Westfield," a house at Villa Nova, Pa. 361
- White farm at Critchel, the, by W. G. Fitz-Gerald 56
- "White Lodge," the residence of Charles H. Roberts, Esq., Wynnewood, Pa., by Charles Chauncey. 330
- Wilbur, Mrs. Clara A., New Haven, Conn. 460
- Window, the trellised, Reginald Jaffray, Tokeneke, Rowayton, Conn. 220
- Windows, for domestic use, leaded glass, by Charles M. Shean. 266
- Windows, a novel idea in, by Dorothy Sythe. 472
- Winter gardening under ground, by Jacques Boyer. 20
- "Yademos," the Japanese garden of Charles Pfizer, Bernardsville, N. J. 304

Chickering pianos



THE CHICKERING REPUTATION is of far greater value to you, in purchasing a piano, than the most thorough demonstration; for the demonstration only tells you what the instrument is to-day. ☐ The Chickering reputation tells you that the Chickering you buy to-day will be the same Chickering twenty years hence. ☐ The Chickering reputation is your assurance of a lifetime's perfect service. ☐ Chickering Uprights in Chippendale design at our Boston show-rooms, \$500; Quarter Grands, \$600 and \$650. ☐ They may be had of our agents in other cities at the same prices with freights and delivery charges added. ☐ Our literature will be sent at your request. Established 1823.

Made Solely by CHICKERING & SONS
826 Tremont Street PIANOFORTE MAKERS Boston, Mass.

Pinehurst

NORTH CAROLINA

The Center of Winter
Out-of-Door Life in
the Healthiest Section
of the Middle South

No resort offers a greater variety
of wholesome attractions than

PINEHURST

These include

Four Excellent Hotels
Two 18-Hole Golf Courses
One 9-Hole Golf Course
A Country Club House
Livery of Select Saddle Horses
40,000-Acre Private Shooting
Preserve (Good Guides and
Trained Dogs), Tennis Courts
Trap Shooting Grounds, Etc.

Send for illustrated literature and list of
Golf, Tennis and Shooting Tournaments.

No Consumptives Received at Pinehurst

Through Pullman service from New York to
Pinehurst via Seaboard Air Line. Only one
night out from New York, Boston, Cleveland,
Pittsburgh and Cincinnati. Don't fail to send
to nearest railroad offices for literature, illus-
trating the out-of-door features of PINEHURST
and giving full details of attractions, or address

PINEHURST GENERAL OFFICE
PINEHURST, NORTH CAROLINA
or LEONARD TUFTS, Owner, Boston, Mass.

The Aristocrat of Breakfast Fruits

Atwood Grape Fruit

No other fruit at breakfast time is so thoroughly appetizing, so keenly
enjoyable or so highly healthful as a luscious, juice-filled ATWOOD
GRAPE FRUIT.

You have already eaten grape fruits of indifferent kinds—the rough, thick-
skinned, bitter sort, or the little-better, half-dried, small-proportioned
kind; but until you have been served at breakfast with a delicious AT-
WOOD Grape Fruit, filled with its cooling juice, you will never know
how thoroughly refreshing or how delectable grape fruit can really be.

The ATWOOD Grove at Manavista, Fla. is the largest grape fruit grove
in the world. Its 25,000 trees, if set in one row, would extend 80 miles.
A quarter of a million dollars have been expended in producing a grape
fruit superior in quality to any other grown.

The ATWOOD trade-mark is on the wrappers. This is your
guarantee of the perfect product. Look for it when you buy.

To serve—cut in cross sections, remove the core and serve with
or without sugar. Grape Fruit is better when served without ice.

THE ATWOOD COMPANY

KIMBALL C. ATWOOD, President and Treasurer, 290 Broadway, NEW YORK



Concrete Country Residences

Acknowledged by architects and
owners alike as the most durable
and comfortable homes of the day.

Concrete houses are fireproof—
sanitary—warm in winter, cool in
summer, and susceptible to any
architectural treatment.

ATLAS PORTLAND CEMENT

Makes the Best Concrete

It is the highest quality of Port-
land Cement manufactured. This
company makes but one grade—
the same for everybody. Guar-
anteed to be an absolutely pure
Portland Cement and always uni-
form. When you build use
"ATLAS." When you buy
specify "ATLAS." The trade
mark on the head of every barrel and
the side of every bag identifies it.

BOOKS ON CONCRETE CONSTRUCTION FREE ON REQUEST

As a guide to prospective builders we have
published the following books, which
will be sent FREE on receipt of postage.

Concrete Country Residences. For
the home builder and investor. Illus-
trated with plans and photographs of
150 concrete houses. 168 pages.
Postage 25 cents.

Concrete Cottages. For the mechanic
and artisan. A 16-page pamphlet of
photographs, plans, etc., for small
houses. Postage 1 cent.

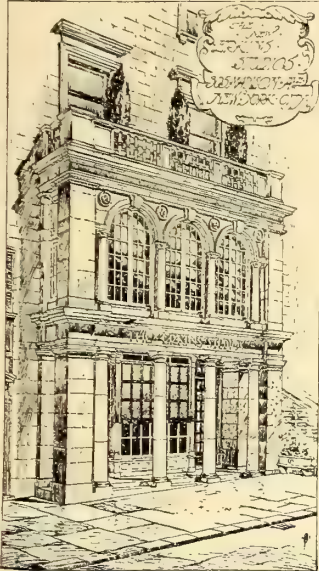
**Concrete Construction about the
Home and on the Farm.** For the
suburbanite and farmer, with photos,
plans and full directions for making
and handling concrete. Postage 4 cents.

**Reinforced Concrete in Factory
Construction.** For the manufacturer
and merchant. Illustrated with photo-
graphs and sectional
drawings, etc. 250
pages. Postage 10 cents.

NONE JUST AS GOOD

THE
ATLAS
Portland Cement Co.
Dept. 10
30 Broad Street
New York





Designed by The Erkins Studios and Executed in their Pompeian Stone.

The Erkins Studios

invite you to an inspection of their new home, conveniently located at No. 305 Madison Avenue, three doors south of Forty-second Street.

A LARGE COLLECTION of imported small objects in Istrian stone finish affords an unusual opportunity for holiday purchasing. The pieces range from \$3.00 upward. Flower Boxes, Vases, Plaques, Ash Trays, etc., in Antique Roman Gold, showing reds, greens and blues worked into the background.

Catalogue showing some four hundred designs of Garden Vases, Benches, Tables, Pedestals, Fountains, Mantels, etc., from Italian and Classical Models, will be mailed upon receipt of 25 cents.

THE ERKINS STUDIOS
305 MADISON AVENUE, NEW YORK CITY
CARRARA, ITALY

RUDYARD KIPLING

"The Adventures of Melissa"

A live, burning story of Socialism—the most biting and trenchant thing out of Kipling's brain within the last half-dozen years.

GOUVERNEUR MORRIS

"The Bride's Dead"

A story of shipwreck and the survival of the fittest, physically and morally.

HARVEY J. O'HIGGINS

"In the Musée"

A story of typical but very human life on the Bowery, with quaint characters and picturesque situations.

These three extraordinary stories complete in the December Fiction Number, issued November 28th.



Collier's
The National Weekly



No More Poorly Fitted Fire-Place Screens



No More Danger or Damage from Flying Sparks

SYRACUSE SPARK GUARD

Not the cheap, flimsy kind that you buy at the hardware store; but a carefully shaped wire guard made to order to fit the opening of your fireplace. Sparks cannot get through or around it. Write for book-let "Sparks from the Fireside," and send dimensions of fireplace opening. Working sketch and estimate free of charge.

SYRACUSE WIRE WORKS, 101 University Ave., Syracuse, N. Y.



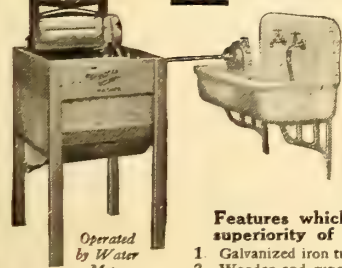
The expense and annoyance of painting will not recur every year or two if you use

DIXON'S SILICA-GRAPHITE PAINT

the "Proven Shield for Steel Work." Durability records in all climates; write for a few.

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.

A Real Washing Machine



There are almost 500 washers that will wash a few of the clothes, but the **Rochester Rotary**

will wash them all thoroughly and in the same length of time.

Features which demonstrate superiority of our machine:

1. Galvanized iron tub—no leaks.
 2. Wooden and zinc cylinder—no rust—no grease.
 3. Continuous motion in one direction, which may be either direction. This means easy operation by hand or simple mechanical construction when operated by any kind of power.
 4. Wings in cylinder—no packing (patented).
 5. Wringer attachment.
 6. Operation of machine and wringer by hand, water motor electric motor, gas engine.
 7. Capacity—7 to 10 sheets or their equivalent.
- Write us for solution of your washing problem in all its phases. This is the washer which drew the crowds at the recent State Fairs. Beware of imitations of our interior cylinder construction (patented).
Rochester Rotary Washer Co., 17 Graves St. Rochester, N. Y.

Harmony in Hardware Trimmings

The matter of hardware for a home is not a detail of small importance—the selection should have your own attention. The right sort of hardware has a distinctive decorative value and the owner of the home should give expression to his own taste so that it may always be a source of pleasure and delight, chosen to harmonize perfectly with style of architecture and general scheme of ornamentation.

Sargent's ARTISTIC HARDWARE

is beautiful and durable—the perfection of hardware art. Over seventy designs are handsomely illustrated in

Sargent's Book of Designs—Free

together with many helpful suggestions and an explanation of the Easy Spring Principle of Sargent's Locks. The *Colonial Book* illustrates this line especially well. Both books are valuable—but sent gladly on request. Write at once for them.

SARGENT & CO., 156 Leonard St., New York

Holiday Suggestions in Useful Books

MAGIC STAGE ILLUSIONS AND SCIENTIFIC DIVERSIONS, INCLUDING TRICK PHOTOGRAPHY

Compiled and Edited by **ALBERT A. HOPKINS**

With an Introduction by **Henry Ridgely Evans**

8vo. 568 Pages. 420 Illustrations. Price, \$2.50, Postpaid



THIS unique work appeals to the professional and amateur alike and will prove a welcome addition to any library. It is the acknowledged standard work on magic. The illusions are illustrated by the highest class of engravings, and are all explained in detail, showing exactly how the tricks are performed. Great attention is paid to the exposes of large and important illusions, in many cases furnished by the prestidigitateurs themselves. Conjuring is not neglected, a selection of some of the best known of these tricks having been made. The work cannot fail to be of interest to young and old, and there is hardly anyone who is in anyway interested in either science or magic to whom it will not appeal. It is beautifully printed and attractively bound. An illustrated circular and table of contents will be sent on application.

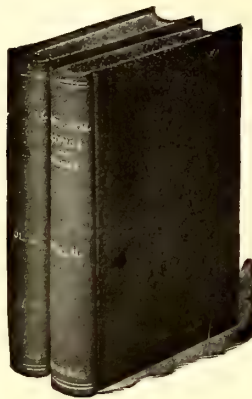
EXPERIMENTAL SCIENCE

By **GEORGE M. HOPKINS**

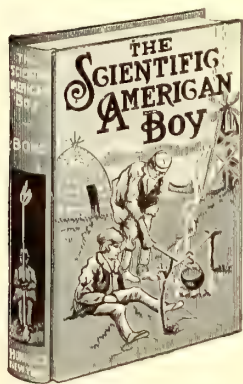
Twenty-fifth Edition, Revised and Greatly Enlarged

1,100 Pages, over 900 Illustrations

Two Octavo Volumes; Price in Cloth, \$5.00; Half Morocco, \$7.00, Postpaid



THIS book treats on the various topics of physics in a popular and practical way. It describes the apparatus in detail, and explains the experiments in full, so that teachers, students and others interested in physics may readily make the apparatus without expense, and perform the experiments without difficulty. The aim of the writer has been to render physical experimentation so simple and attractive as to induce both old and young to engage in it for pleasure and profit. All intelligent persons should have at least an elementary knowledge of physics to enable them to understand and appreciate what is going on in the world. This can be acquired by reading "Experimental Science." As a gift from employer to employee, from parent to child, from student to teacher, nothing could be more appropriate or acceptable. It is the most thoroughly illustrated work ever published on Experimental Physics, and its unprecedented sale shows conclusively that it is the book of the age for teachers, students, experimenters, and all others who desire a general knowledge of Physics or Natural Philosophy. Illustrated and descriptive circular on application.



The Scientific American Boy

By **A. RUSSELL BOND**

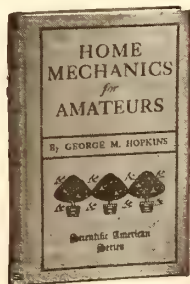
12mo. 320 Pages. 340 Illustrations. Price, \$2.00, Postpaid.

THIS is a story of outdoor boy life, suggesting a large number of diversions which, aside from affording entertainment, will stimulate in boys the creative spirit. In each instance complete practical instructions are given for building the various articles. The needs of the boy camper are supplied by the directions for making tramping outfits, sleeping bags and tents, also such other shelters as tree houses, straw huts, log cabins and caves. The winter diversions include instructions for making six kinds of skate sails and eight kinds of snowshoes and skis, besides ice boats, scooters, sledges, toboggans and a peculiar Swedish contrivance called a "rennwolf." Among the more instructive subjects covered are surveying, wigwagging, heliographing and bridge-building, in which six different kinds of bridges, including a simple cantilever bridge, are described.

The Scientific American Cyclopaedia of Receipts, Notes and Queries

In Three Bindings. Price, Cloth, \$5; Sheep, \$6; Half Morocco, \$6.50, Postpaid

THIS is a careful compilation of the most useful receipts which have appeared in the *Scientific American* for more than half a century. Over 15,000 selected formulas are here collected, nearly every branch of the useful arts being represented. It is the most complete volume on the subject of receipts ever published. It has been used by chemists, technologists and those unfamiliar with the arts with equal success, and has demonstrated that it is a book which is useful in the laboratory, factory or home. An alphabetical arrangement, with abundant cross references, makes it an easy work to consult. The Appendix contains the very latest formulas as well as 41 tables of weights and measures and a dictionary of chemical synonyms. A full table of contents will be sent on application.



Home Mechanics for Amateurs

By **GEORGE M. HOPKINS**, Author of "Experimental Science"

12mo, 370 Pages, 320 Illustrations. Price, \$1.50, Postpaid

THE book deals with wood-working, household ornaments, metal-working, lathe work, metal spinning, silver working; making model engines, boilers and water motors; making telescopes, microscopes and meteorological instruments, electrical chimes, cabinets, bells, night lights, dynamos and motors, electric light, and an electrical furnace. A thoroughly practical book by the most noted amateur experimenter in America. For the boy and the more mature amateur. Holidays and evenings can be profitably occupied by making useful articles for the home or in building small engines or motors or scientific instruments. Table of contents furnished on application.

PROBLEMS IN HOME FURNISHING

(Continued from page 494)

PAPERING TWO PARLORS

H. J. S., of West Virginia, in a letter about her parlor, inquires how to change the wall paper to improve its appearance. "My rooms are rather small and dark," she writes, "and the green paper now on the walls has intensified these disadvantages. I hear so much about the good results of proper wall papering that I would like to know if it is worth while to change mine. What color would be the best to use with my green velour curtains?"

The slight expense of changing the wall paper in these rooms would be fully compensated by the general appearance it would create of space and light. To accomplish this an ecru color or buff should be selected, preferably in a two-toned pattern. A stripe could be used, but would be less interesting than the design. A very good paper may be had in this style for sixty cents a single roll.

DECORATION FOR A MANTEL

J. C. N., of Oregon, writes: "We are building a new house and are discussing the two mantels in living and dining-room. My husband and I disagree on having some kind of decoration put in with the woodwork. He would have the space left plain above the mantel. I have seen some illustrations of pictures fitted into a paneling, and also of some plaster casts, and would like something of this kind. We are each willing to abide by the decision of the Home Furnishing department of our magazine."

A set decoration above a mantel (that is, one that is incorporated with the architectural finish of the room) should be chosen with great deliberation, as it is a permanent feature, and, at the same time, a very conspicuous one. For the home described by this correspondent it would be better to keep the space free above the living-room mantel for an interesting picture, one that, when there is no fire on the hearth to enjoy, will still center the attention pleasingly at the fireplace. In the dining-room, a good plan would be to hang an upright mirror, framed in Colonial fashion with a picture fitted into the upper panel. With this size of mirror there will be space left on either side to hold a pair of brass candlesticks or flower vases.

BRUSSELS CURTAINS FOR THE LIVING-ROOM

Two questions on the same subject have come in this month from different subscribers. In one letter the writer, L. G., speaks of a recent removal from one house to another and finding that the curtains of Brussels lace fit into the living-room, where there is Mission furniture and roughly woven rugs. Another letter, from D. E. R., inquires about the advisability of buying curtains of this kind for her dining-room.

Curtains of Brussels lace are the most delicate that are manufactured and seem to find their appropriate setting among fine mahogany or gold pieces of furniture, Aubusson or Savonnerie rugs, and over-curtains of silk or brocade with finely finished white woodwork. Their character, in fact, is so essentially that of the formal drawing-room, that rather than use them in the living or dining-room it would be better to substitute one of the simple filet nets in ecru or white. This material comes in a great variety of designs, and may be finished with hems or a lace edge.

In still better keeping with the living-room of L. G. is a heavy scrim that can be finished with hemstitching along the sides and bot-

tom, adding the spider-web stitch to give a little more style.

RUG FOR A LIBRARY

"Kindly advise me about a rug for my library," writes an Ohio correspondent, A. J. B. "I would like something in a plain color, but do not want carpet sewed into strips, nor do I like the smooth finish of the plain-colored Axminster rugs with shaded borders. The size of my room is out of the ordinary so that the stock sizes do not fit."

A new hand-made rug of wool in a plain color, with the ends finished with contrasting lines of color, would be appropriate for this room. There are various widths in which this rug is made, with any required length. The price is three dollars a square yard. At the same price a Scotch rug can be made in a plain center with a border of different tones of the same color, or two contrasting colors. Either of these rugs would give the substantial effect desired by this writer.

BUYING TABLE CHINA

"As an inexperienced housekeeper I would like some help in choosing my table china. I would, of course, prefer the French ware, but it is too expensive. On the other hand, while the earthenware is cheap it is heavy, and the shapes are not very good. Another consideration is whether to buy a complete set or to select only the pieces I shall actually use for my small family. I have absolutely nothing to start with for my table, and do not know how to begin.—E. C. B."

To meet the two needs of economy and refined taste in the selection of table china, one may plan this way: For dinner service choose a good quality of earthenware, decorated with a very narrow, simple edge of one color. The soup and meat plates, platters and vegetable dishes may all be of this pattern. The salad plates may be of a different pattern, one that is used for the breakfast and luncheon. The dessert plates may be of a fine china, matching the tea cups, and the latter may be used for luncheon and afternoon tea. With three patterns there will be enough variety to make the table attractive at all of the meals, yet buying only the quantity that is for actual use. For breakfast there will be the plates, cereal dishes and coffee cups, sugar dish and cream pitcher, with a platter and open dish, and, usually, bread and butter dishes. The same pieces may appear again at luncheon. By selecting three patterns that look well together each one may be drawn from for the extra occasions. For preserve dishes a plain glass decorated with etching, or the optic glass may be chosen, and for the after-dinner coffee service a gold-edged white china.

Another combination that appeals to those who are fond of gold-and-white china is to buy the earthenware in this pattern for the main pieces, and the French china for the tea and after-dinner coffee cups, dessert and salad plates. The special advantage of the gold-and-white china is that it lends itself to any flower or candle shade decoration.

In buying china for the table, if one decides to keep to a certain pattern it is well to inquire if it is in "open stock," so that broken pieces may be replaced.

A LITTLE BOY'S ROOM

"My little boy, nine years old, is taking a great interest in what he calls fixing up his room. He shows a decided preference for certain colors, and dislikes very much the paper now on his wall. Do you think it advisable to gratify so young a child in these matters?"



This is where we manufacture our Monarch Porcelain Ware
Trenton, New Jersey

Uniformity of Design

Architects DO appreciate the fact that by specifying Wolff Plumbing Material exclusively they are protecting their clients from the annoying confusion of design and mechanical standards that is sure to creep into even the most carefully selected line of "assembled" plumbing equipment.

L. WOLFF MANUFACTURING COMPANY

Established 1855

Manufacturers of PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

Showrooms: 91 Dearborn St.
Denver CHICAGO Trenton



The "GLOBE"

IS BUILT ON HONOR
& SOLD ON MERIT

Patented and
Trade-Mark
Reg. U. S. Pat. Off.

THE "GLOBE" VENTILATOR

IN GALVANIZED IRON, BRASS AND COPPER
ALSO WITH GLASS TOPS FOR SKYLIGHT

Simple, Symmetrical, Storm-proof, Effective. For perfectly ventilating buildings of every character. Send for model and pamphlet. Smoky Chimneys Cured

"Globe Ventilated Ridging"

Mfd. by GLOBE VENTILATOR CO., TROY, N. Y.

No More Chilly Receptions



It's positively humiliating to have to greet your guests in a chilly house. Spoils what would otherwise be an enjoyable visit. And the very time you do want the house cozy and warm the furnace fails you. Suppose you make a change—let the JEWELL TEMPERATURE CONTROLLER with Time Clock Attachment actually tend your heater for you, and so do away with the worry. Keeps the temperature at exactly any desired degree. Automatically opens and shuts drafts. Keeps up the heat—keeps down the coal bills. Sixteen full ounces of heat for every pound of fuel. Does everything but shovel coal. Gets you up warm in the morning by actually turning on the heat before waking time. In fact, you have no idea what comfort, convenience, economy and satisfaction it gives. Never forgets. Never takes a day off. Never goes on strike. Never sleeps. Pays for itself in a season or two in saving of fuel. Easily installed. For furnace or boiler. Write for booklet "The House Comfortable" and free trial offer.

JEWELL MFG. CO., 48 N. Green St., Auburn, N. Y.

FREE A Book of Valuable Ideas for Beautifying the Home



WE will send you free of charge our book "The Proper Treatment for Floors, Woodwork and Furniture," two sample bottles of Johnson's Wood Dye and a sample of Johnson's Prepared Wax.

This text book of 50 pages is very attractive—80 illustrations—44 of them in color.

The results of our expensive experiments are given therein.

There is absolutely no similarity between

Johnson's Wood Dyes

and the ordinary "stain." Water "stains" and spirit "stains" raise the grain of the wood. Oil "stains" do not sink below the surface of the wood or bring out the beauty of the grain. Varnish "stains" are not stains at all. They are merely surface coatings which produce a cheap, shiny, painty finish. Johnson's Wood Dye is a dye. It penetrates the wood; does not raise the grain; retains the high lights and brings out the beauty of the wood.

For artistic coloring of all woods in the following shades:

- No. 126, Light Oak
- 123, Dark Oak
- 125, Mission Oak
- 130, Weathered Oak
- 131, Brown Weathered Oak
- 132, Green Weathered Oak
- 140, Manila Oak
- 128, Light Mahogany
- 129, Dark Mahogany
- 110, Bog Green
- 121, Moss Green
- 122, Forest Green
- 172, Flemish Oak
- 178, Brown Flemish Oak
- 180, Silver Gray

Johnson's Prepared Wax

will not scratch or mar. It should be applied with a cloth; dries instantly—rubbing with a dry cloth gives a velvety protecting finish of great beauty. It can be used successfully over all finishes.

We want you to try Johnson's Wood Dye and Prepared Wax at our expense. Fill out the attached coupon, being careful to specify the shades of dye wanted. We will mail you promptly the booklet and samples. Do not pass this page until you have mailed the coupon.

S. C. Johnson & Son
Racine, Wis.

"The Wood Finishing Authorities"

FREE
Coupon
A.H.-12
S. C. Johnson
& Son
Racine, Wis.

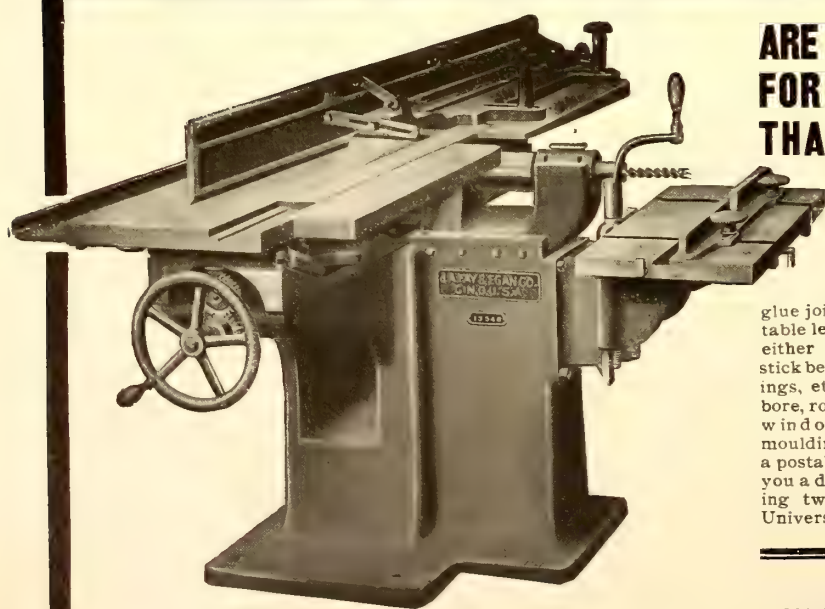
Please send me FREE,
as per your offer, "The
Proper Treatment for Floors
Woodwork and Furniture"—2
sample cans of Johnson's Wood Dyes.
Nos. — and — and one sample can of
Johnson's Prepared Wax. My dealer's

name is.....

Address

My name is.....

Address



ARE YOU LOOKING FOR A MACHINE THAT WILL

plane out of wind, surface straight or tapering, rabbet door frames, rabbet and face inside blinds, joint, bevel, gain, chamfer, plow, make glue joints, square up bed posts, table legs, newels, raise panels, either square, bevel or ogee, stick beads, work circular mouldings, etc., rip, cross cut, tenon, bore, rout, rabbet, joint and bead window blinds, work edge mouldings, etc.? If so, drop us a postal card, and we will send you a descriptive circular showing two views of our No. 62 Universal Wood Worker.

Write

209-229 WEST FRONT STREET
J. A. FAY & EGAN CO.
CINCINNATI, OHIO

No. 62. UNIVERSAL WOOD WORKER

Also, what pieces of furniture are suitable for a boy's room? What kind of wood? At present there are odds and ends from other parts of the house, but I want gradually to give him good articles that suit his requirements."

The interest this boy takes in his own room is only a reflection of the prevailing desire for better and more fitting interiors. It would be well not only to gratify his desire for changing the wall paper, but to direct his attention to harmonious combinations of color and designs.

Some new bedroom furniture on simple lines, made in the natural ash and finished with wax, is the best for a boy's room. A bedstead, bureau (or chest of drawers with a mirror hung above it), washstand, nightstand and two side chairs may begin the outfit for this room, adding, later on, a chiffonier, a study table with a drop light or student lamp, an arm chair and a divan.

GARDEN WORK ABOUT THE HOME

(Continued from page 494)

The Japanese snowball, *Viburnum tomentosum*, is a desirable shrub from every point of view.

Shrubs should certainly be planted in irregular masses and not in rows, one in front of the other, unless a formal arrangement is what we are after. The masses should not be stiff bunches side by side, making a checker board effect, but they should overlap and intermingle so that there are no sharp lines of demarcation between the groups. There should be some harmony between the color, habit and texture of the shrubs which are gathered together in one large mass or, if contrast be desirable, use sufficient control to keep it from being a riot.

A GARDEN OF DWARF FRUIT TREES

A. M., Connecticut: I think dwarf fruit trees will be better for your small place than the standards which you propose, and I should make an effort to have the trees planted in a separate enclosure near the vegetable garden.

Fruit trees are usually thought to be only useful, but they have many beauties at different times in the year. We always enjoy the economic idea of a fruitful tree producing values which did not exist before, and which have come from nothing, so to speak.

Is the country ever lovelier than when the apples bloom? Or more full of rich delights than in September, when the fruit is ripe and waiting to be gathered and stored away for the winter?

Fruit trees that are properly cared for, cultivated, sprayed, manured and pruned, do not lose their leaves in midsummer, but remain green and flourishing through the season.

All the trees in the fruit garden should be dwarf, with low heads, in order that the fruit can be picked from the ground or from a low stepladder, and that the work of pruning, spraying, etc., can be more easily and thoroughly done.

Many commercial growers plant dwarf trees because they are easy to care for, and apparently they find that the yield per acre is as large as it would be with standard trees.

The fruit garden should be enclosed by a wall or hedge or a board fence and should have at one side a convenient fruit house. Inside the wall I would have a walk surrounding a square central plot, well filled with trees. On both sides of the wall I would train pears, peaches, etc., either in the espalier or fan form.

Apples are dwarfed by grafting on Paradise stock, and can be kept down to ten or twelve feet in height. Any variety can be

Copyright 1908 by Life Pub. Co.



ASSETS AND LIABILITIES
Hand Mounted India Print, 22 by 18 in. \$2.00

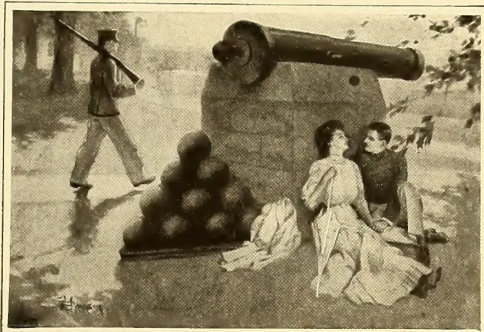


Always a
Welcome
Gift

160 Pictures
for 25 Cents

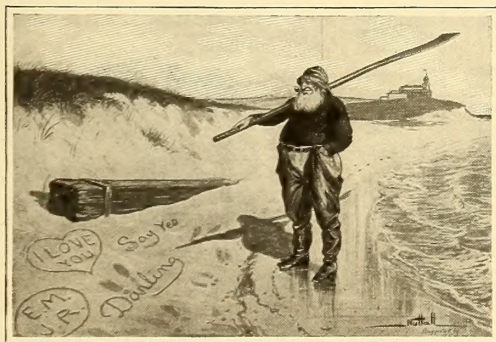


Copyright 1908 by Life Pub. Co.



THE MAN BEHIND THE GUN
India Print, 22 by 18 in. \$2.00

Copyright 1908 by Life Pub. Co.

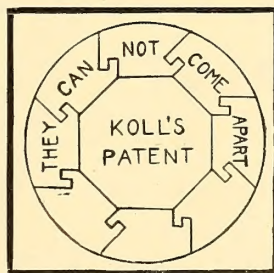
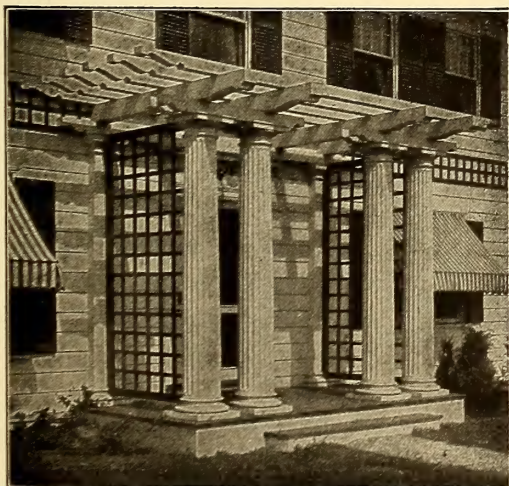


'WON'T BE NOTHIN' LEFT O' THEM THINGS AFTER
THE FUST STORM'

Photogravure, 16 by 13½ in. 50 cents

Have cheerful things about you. On receipt of twenty-five cents, we will send you the richly illustrated catalogue of LIFE'S PRINTS containing 160 reproductions of these famous pictures.

LIFE PUBLISHING CO.,
40 West 31st Street,
New York



KOLL'S PATENT Lock-Joint Columns

Suitable for Pergolas, Porches
or Interior Use
are made exclusively by

HARTMANN-SANDERS COMPANY

Elston and Webster Avenues, CHICAGO, ILL.

Eastern Office, 1123 Broadway, NEW YORK

Send for Catalogue A-19 of Columns, or A-29 of Sun-dials, Pedestals, etc.

grafted on Paradise, but usually the nurseries have only a few kinds.

Pears are dwarfed by working on quince stock. Some varieties are spoiled in flavor by the quince stock; notably the Seckel. Dwarf pears, too, are hard to get in great variety. They need a stronger soil and heavy feeding because of the quince root, but otherwise they are easy to manage.

Cherries are dwarfed by grafting on Mahaleb stock, and the domestic varieties of plum are somewhat dwarfed when on Myrobolan plum.

All orchard trees need careful pruning, but dwarf trees must be pruned to have them look well, and in some cases to preserve their dwarfness. They should branch two to three feet from the ground and be what the growers call vase form.

In England fruit is grown on walls in order to give it all possible heat and sunlight, so that it will ripen in their short season, but here we have no such difficulty and the trees will do better on the north side of the wall, where they are protected from the warm sun in February and March and their growth thus retarded. Then late frosts will not find them too far advanced.

Training trees on a wall is good fun. It requires skill and intelligence and the results are very satisfactory. Think of having a peach tree, like that which used to be at Chatsworth, covering a hundred feet of wall in length and bearing thousands of peaches!

When the wall is once covered they are easy to care for; it is then only a simple matter of pruning every spring.

Apricots are as hardy as the peach, but the fruit is more highly flavored and ripens earlier than the peach or plum. They are grafted on peach and plum stock, according to the soil in which they are to grow, and should be planted on the north face of the wall. They are much bothered by the curculio, which must be shaken from the trees daily.

Almonds too might be tried on the north side of the wall. They are nearly as hardy as the peach, but usually have their buds killed by late frosts.

The wall on one side of the garden might be used for grapes, which will do as well as in the open and they look particularly nice on a wall.

Figs are another possibility in such a garden. They are half hardy, enduring ten degrees of frost, and so in this climate they must be bent to the ground and the branches covered with earth.

The ground about the trees should be cultivated until mid-summer, when a leguminous crop can be sown. In late autumn this is plowed under, improving the condition of the soil and supplying nitrogen.

Strawberries and other small fruits can be grown between the rows for the first few years, but after the fruit trees have grown it will be too shady for any other crop.

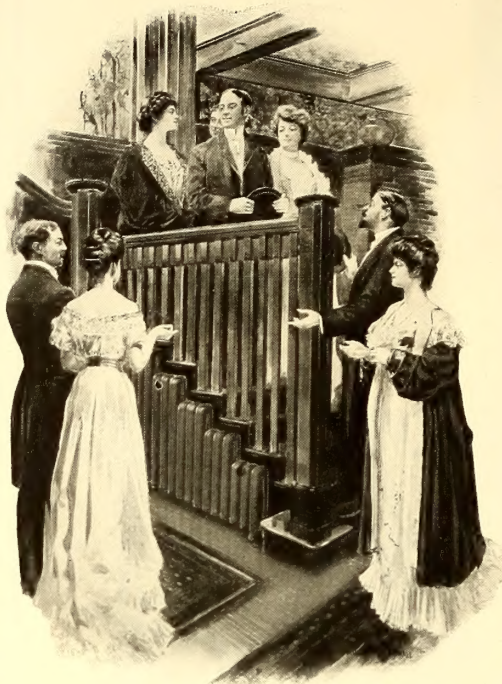
Peaches, of course, will be grown and a few should be planted every year, as they are not long lived and for this reason it would hardly pay to have them trained on the wall. Nectarines can be grown if one cares to bother with a smooth skinned peach, which is attacked by the curculio as badly as the apricot and is said to be inferior. Perhaps the name is the best thing about the nectarine! All trees of the peach family are beautiful when in bloom.

The varieties of tree to plant and the distances apart to set them must be determined by each individual; the general directions in handbooks and nurserymen's catalogues are safe to follow.

When one has the trees satisfactorily started in the way they should go, and after they have borne two or three times so that one can

A warm home makes happy guests

To put the hostess at her best and the guests at their ease, modern hospitality requires that the home shall be comfortably, healthfully, and cleanly warmed. All heating methods other than Hot-Water and Low-Pressure Steam are rapidly passing out of fashion. At the present attractive prices, and the many economies and benefits brought about through their use, no home-lover need longer put off the purchase of



Illustrates special shaped Stairway Radiator



ADVANTAGE 16: IDEAL Boilers are so well controlled by automatic draft and check dampers that there is no overheating or fuel waste in maintaining a low fire for the chill days of early Fall and Spring.

AMERICAN & IDEAL for Steam and Hot-Water warming. Those who newly build cannot afford to put in anything but IDEAL Boilers and AMERICAN Radiators.

Nor can owners of OLD homes neglect to modernize their property with these comfort-producing outfits. When the time comes to sell or rent, these Hot-Water and Low-Pressure Steam outfits assist to bring quicker transaction at a better price—owner gets full money back. Thousands are moving each year into new homes, houses, flats, offices, or stores, solely to enjoy the comforts, conveniences, fuel economy, and labor-saving of these outfits. Ever hear of any one of these wanting to go back to the use of old-fashioned heating methods?

With IDEAL Boilers the indoor weather is made just what you want it to be—no matter what it is outside, calm or storm, day or night. Whether your building is OLD or new, small or large, farm or city, send for our free valuable booklet, which will make you a better judge of heating values. Seven cold months ahead! Write, telephone, or call today.

Sales Offices and Warehouses throughout America and Europe.

Dept. 6

AMERICAN RADIATOR COMPANY

CHICAGO



THE GORTON QUICK-OPENING RADIATOR VALVE

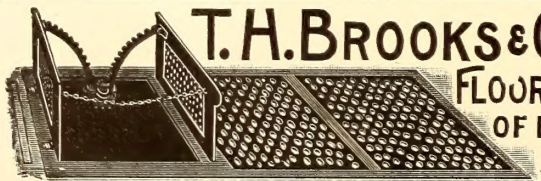


CAN BE USED WITH ANY LOW PRESSURE STEAM, VAPOR OR VACUUM SYSTEMS OF HEATING. ONE-THIRD OF A TURN OF THE LEVER HANDLE WILL OPEN OR CLOSE THE VALVE

Send for Prices

GORTON & LIDGERWOOD CO.

96 LIBERTY STREET, NEW YORK



T.H. BROOKS & CO. CLEVELAND, O.
FLOOR & SIDEWALK LIGHTS.
OF EVERY DESCRIPTION.
SEND FOR CATALOGUE.

Our well-equipped Book Department is prepared to recommend & supply

MUNN & CO.

BOOKS

Relating to Architecture, Ceramics, Decoration, Rugs, Furniture, etc. ::
NEW YORK

judge of the fruit, one might become interested in changing and increasing the varieties by grafting, until at last each branch bears a different kind of fruit.

THE WHITE PINE

In reply to "Starr," Fairfield County: The best evergreen for you to use in quantity is the white pine, which, as far as we can judge, formed a large part of the primeval forests in New England, but now is only seen in a few young groves or standing singly where it has been left at the edge of the clearing.

It was the first tree to go when we began to build houses, and ever since it has been the most used and most valuable soft wood. All that are left are being used for match blocks.

No other tree adds so much to the winter landscape of New England, and in districts where it is too scarce to count (as in Fairfield County), we miss its strong tone in winter and its rugged outline in summer.

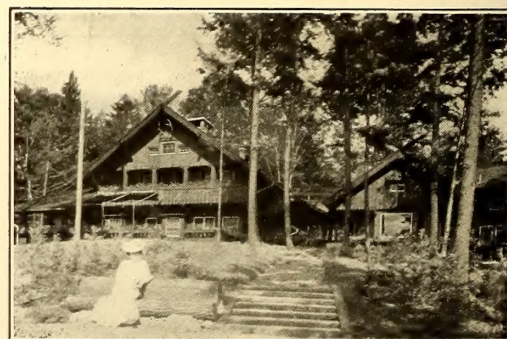
It assumes all characters, from the rugged storm-tossed giant to the small and tender child of the woods. Its color is a pure blueish green; the shadows between its horizontal branches are deep and mysterious.

A grove of pure white pine is wonderfully quiet and peaceful. No footfalls are heard on the soft bed of needles, no branches are shaken and swish back as one passes, and the gentle murmuring of the wind through the branches far above makes the silence more intense, and the multitudinous trunks, ranged row upon row and each like its fellow, are bewildering and overpower one's conceptions of space.

The effect of such a wood at twilight or sunset is grand, the blackness around one makes the fading west ten times more brilliant than under the open sky. As a wind-break nothing is better than the pine, and near the house (at the northwest, of course) they are especially pleasant, because they are never silent. Every zephyr whispers to a pine tree, the fair winds speak joyfully to it, and the gale howls through it in abandon.

The fragrance of the white pine is more delicate than that of the other pines, though no less delightful.

The white pine will grow anywhere; on a sandy plain, a rich meadow, or a rocky hillside, and it is easy to plant, either by sowing the seed or planting nursery-grown trees of almost any size.



COULTER & WESTHOFF, Architects, Saranac Lake

Beautiful **Silver Gray** and **Moss Green**, **Italian Tile Red**, Etc.—These are the artistic colors produced on your **Bungalow** or **Cottage** by using

DEXTER BROTHERS' English Shingle Stains

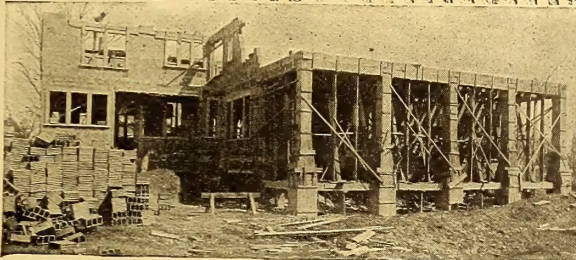
No disagreeable odor.

Samples of colors on wood sent FREE

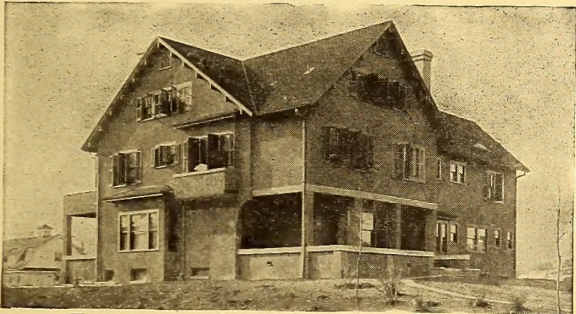
Dexter Bros. Co., 103 & 105 Broad St., Boston, Mass.

AGENTS: H. M. Hooker Co., 128 W. Washington St., Chicago; W. S. Hueston, 6 E. 30th St., New York; John D.S. Potts, 218 Race St., Philadelphia; W. W. Lawrence & Co., Pittsburg, Pa.; F. H. McDonald, 619 The Gilbert, Grand Rapids, Mich.; F. T. Crowe & Co., Seattle, Spokane, Tacoma, Wash., and Portland, Ore.; Klatt-Hirsch & Co., 113 Front St., San Francisco, Cal.

You can Build your House Fireproof with Terra Cotta Hollow Tile



Fireproof House during construction. The walls, floors, roof and partitions are all of Terra Cotta Hollow Tile.



The same house completed, showing coating of Cement Stucco over Hollow Tile Walls.

You can build it absolutely fireproof throughout, by using this standard fireproofing material for walls, floors, roof and partitions, at but little greater cost than a frame building. Or you can use Terra Cotta Hollow Tile for the walls only, at a cost NO greater than the cost of a frame building.

Hundreds of houses are now being built in all parts of the country with materials and methods as used in the house we illustrate.

Besides the inestimable value of their being fireproof, these residence buildings are *better* than frame, brick-and-wood, or concrete-and-wood because they are of

Enduring Masonry Construction Throughout

By reason of the indestructibility of the material and their substantial construction, these houses

Cost Far Less for Maintenance and Repairs

than is the case with buildings of frame or brick-and-wood.

Floors of wooden joist construction warp and crack. Floors of Fireproof Terra Cotta Hollow Tile endure for all time.

Exteriors of frame houses must be painted frequently, walls of Cement Coated Terra Cotta Hollow Tile, never. Walls of wood, stone, concrete or brick absorb, retain and carry to the interior of the house, the frost of Winter and heat of Summer. The air space in walls of Terra Cotta Hollow Tile furnishes complete insulation against atmospheric conditions, thereby reducing the cost of heating to a minimum, and buildings of this material compared with brick, frame, stone, concrete or a combination of all four are

Warmer in Winter—Cooler in Summer

Houses with walls of brick, stone, concrete or frame, must be "furred" or lined with wood to be plastered, and they carry sound vibrations and are subject to the penetration and ravages of vermin. Terra Cotta Hollow Tile Houses require no furring, the plastering being applied direct to the Hollow Tile, and they are

Moisture Proof—Sound Proof—Vermin Proof

When it is considered that a residence with all these advantages and completely Fireproof can be built at as low cost as one of brick, brick-and-wood, stone-and-wood, concrete, or frame, is it not worth while to talk with your architect about this modern construction?

All competent architects are familiar with methods of designing and building houses of Terra Cotta Hollow Tile. A copy of our book showing how houses are constructed of Fireproof Terra Cotta Hollow Tile will be sent upon request.

National Fire Proofing Company

Manufacturers of Terra Cotta Hollow Tile

Contractors for Construction of Fireproof Buildings. The largest firm in the world devoted exclusively to the business of fire-proof construction. Capital—Twelve and one-half Million Dollars.

Pittsburgh, Fulton Bldg.
Philadelphia, Land Title Bldg.
Washington, D. C., Colorado Bldg.
Boston, Old South Bldg.
Cincinnati, Union Trust Bldg.
St. Louis, Victoria Bldg.
San Francisco, Monadnock Bldg.

Chicago, Com'l National Bank Bldg.
New York, Flatiron Bldg.
Minneapolis, Lumber Exchange.
Cleveland, Cuyahoga Bldg.
Los Angeles, Union Trust Bldg.
Toronto, Can., Traders Bank Bldg.
London, Eng., 27 Chancery Lane.

26 Factories throughout the United States.



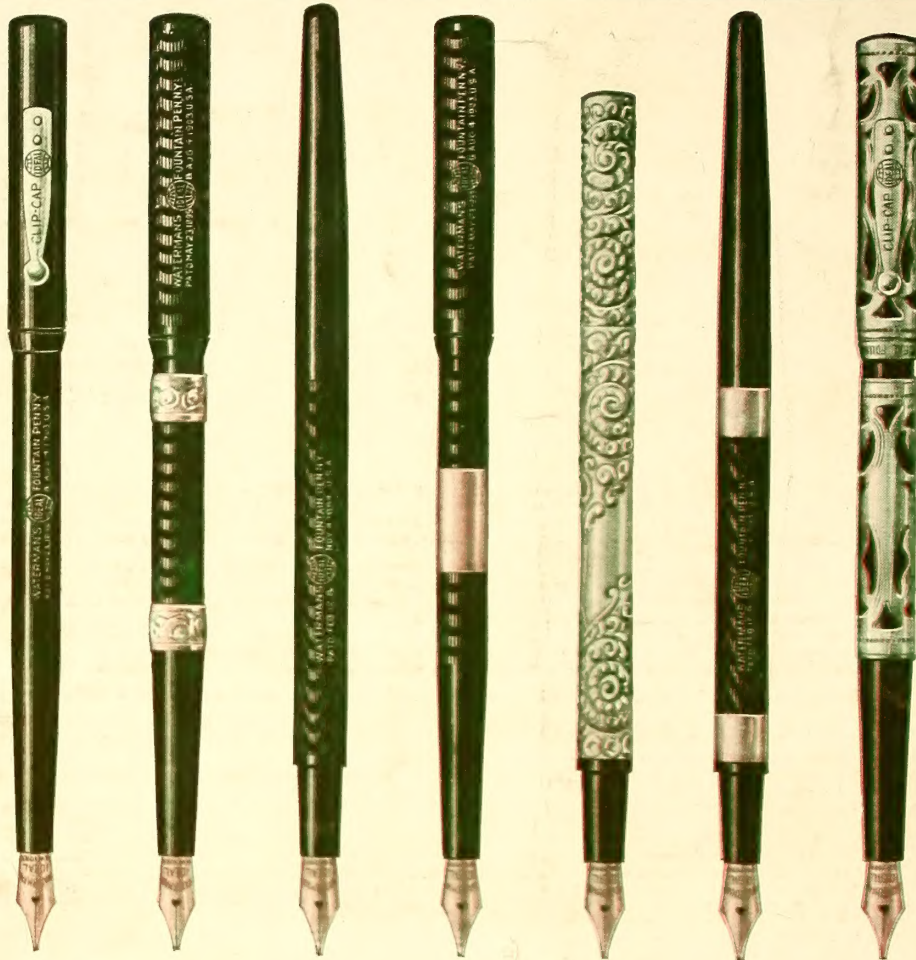
Ask our nearest office for a copy of this book.



Waterman's Ideal Fountain Pen

THE GIFT WORTH GIVING
FOR

CHRISTMAS



PLAIN	CHASED BANDS	CHASED	PLAIN BAND	SILVER CHASED	PLAIN BANDS	SILVER FILIGREE
12.....\$2.50	12, G.M. \$3.50	22.....\$2.50	12, M.M. \$3.50	402.....\$7.50	22, G.M. \$3.50	412.....\$5.00
13.....3 50	14, G.M. 5.00	23.....3.50	14, M.M. 5.00	404.....10.00	23, G.M. 4.50	414.....7.00
14.....4.00	15, G.M. 6.00	24.....4.00	15, M.M. 6.00		24, G.M. 5.00	415.....8.50
16.....6.00	16, G.M. 7.00	26.....6.00	16, M.M. 7.00	Chased Gold	26, G.M. 7.00	416.....9.50
Also Chased and Mottled	Also Plain Gold Bands	Also Plain and Mottled	Also with band on cap	0502. \$10.00 0504. 15.00	Also Chased Gold Bands	Gold Filigree See Booklet

Clip Extra; German Silver 25c, Sterling Silver 50c., Rolled Gold \$1.00, Solid Gold \$2.00

The price of the most inexpensive kind is so low that it makes the cheapest good Christmas present you can give, while in the finer and more ornamented kinds you can pay almost anything that you would pay for a Christmas gift.



Pompeian
Traveler's Ink Filler
\$7.50

Holly Design Boxes are
Supplied with all
gift pens

Pens Exchanged
Until Satisfactory



Traveler's
Filler, 25 cts.

Write for Christmas Book, Free

It is a bit hard to select appropriate gifts for the members of your family or for a circle of friends, especially those who are well equipped. It is a fine thing to know an article which is as acceptable to all kinds of people as a Waterman's Ideal. When making out your list do not forget yourself. Make this a Waterman Christmas for you and everybody else; is the best present to express thoughtfulness, utility and beauty.

Ask any dealer to show you the new Catalogue of Waterman's Ideals and the pens he has in stock.

Look for the globe trade-mark. Beware of imitations.

L. E. Waterman Co., 173 Broadway, N. Y.

8 School Street, Boston 209 State Street Chicago 734 Market Street, San Francisco 136 St. James Street, Montreal 12 Golden Lane, London 6 Rue de Hanovre, Paris