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Building Indestructible Homes in Four Days  
Economical Ways of Using Cement

Aubusson Tapestries  
Winter Trees—A Plea  
The Seductions of Old Silver

Vol. XIV

NOVEMBER, 1908

No. 5

# House & Garden



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THE VILLA BORGHESE

ONE of the most highly prized possessions of the Borghese family has been the well-known and celebrated park and palace at Rome, known by the name of "Villa Borghese." This has been purchased from the trustees of the Borghese bankruptcy by the city of Rome for use as a public park. For three centuries Romans have been allowed to walk and drive in this park on certain days of the week, until custom had made it appear to be public property, which it has until now not been. Indeed, on one or two occasions the heads of the House of Borghese have sought to remind the Romans of their own rights of proprietorship by closing the doors of the park on the public days, almost creating thereby a riot. The fact is that it is not merely one of the show places of the Eternal City, but also the lungs of the latter, and the shutting of the park to the public was just as serious a matter to the people of Rome as the closing of Central Park would be the people of New York or that of Fairmount Park to Philadelphians. The city of Rome has purchased it for the ridiculously small price of 3,000,000 francs, which is about a quarter of what has been offered for the park by several foreign millionaires, the vested rights of the public to visit the park on certain days in the week—rights indorsed by the municipality and by the Government—standing, however, in the way of the sale to any foreigner. It is only fair to add that the 3,000,000 francs are for the park and villa alone, and that before the end of the year the representatives of the Borghese family will have removed, not only the archives, the pictures, statues, furniture and works of art from the villa itself, but also all the beautiful and numerous statues from the park and gardens, which for more than three centuries have done so much to embellish and adorn the grounds.—*The Philadelphia Press.*

A TALE OF ATTEMPTED BRIBERY

COLONEL LUDLOW, of the United States Engineers, an expert in engineering work, was at one time chief of the Philadelphia Water Department. Along in the eighties the Philadelphia Water Works got in such bad shape that the authorities were in despair. The Secretary of War was asked to assign

# 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



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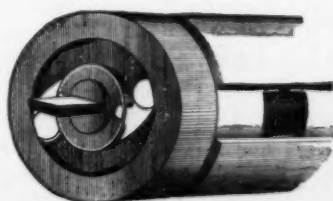
Nor can owners of OLD homes neglect to modernize their property with these comfort-producing outfits. When the time comes to sell or rent, these Hot-Water and Low-Pressure Steam outfits assist to bring quicker transaction at a better price—owner gets full money back. Thousands are moving each year into 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?

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# SCRIBNER'S

## 1909

### A NOVEL BY THOMAS NELSON PAGE

THE serial story of the year will be a novel by Thomas Nelson Page, his first in several years, and one in which he has given a new and very individual manifestation of the traits which have won him his great body of readers. Under the title of "John Marvel, Assistant," he has told with simplicity, in the first person, the manly story of an average young fellow's struggle of life, with the fine effect of exalting to the place of hero in it the man whose unconscious altruism and practical Christianity came to be the admiration and chief help of the narrator.

### LETTERS OF GENERAL SHERMAN TO HIS WIFE AND FAMILY

A MOST important addition to the biography of the great war leaders. Besides the picture of the man, his outspoken judgment and often remarkable prophecies, they supplement formal history in most valuable and interesting ways.

### A MIDNIGHT CABINET CONFERENCE

WHICH made an eventful decision at one of the crucial periods of the Civil War is described in extracts from an unpublished diary of Secretary Salmon P. Chase; and additional light will be thrown on his relations with Lincoln by other passages from the same source and from unpublished letters.

### THE GREAT PUBLIC SCHOOLS OF ENGLAND

A NOTABLE article on the great public schools of England—Eton, Harrow, Rugby and Winchester—by Everett T. Tomlinson. The comparisons of English and American conditions are especially interesting.

### A NOTABLE SERIES BY MRS. WHARTON

MRS. WHARTON will have during the coming year in the Magazine (not necessarily in consecutive numbers) a series of seven or eight stories under the title "Tales of Men." Their originality lies in the fact that not a woman appears in any of them, though of course indirect evidence of the eternal feminine is not wanting. The idea would strongly pique curiosity in any case, but in connection with Mrs. Wharton's powers and brilliant achievements in psychological analysis, gives one of the most interesting prospects in the literature of the year.

### ENGLAND FROM THE AMERICAN POINT OF VIEW

THREE papers on England which will excite much discussion by an anonymous author. They deal with English characteristics, the traits that have made the race the virtual rulers of a fifth of the world; social aspects of England; and with the importance the English attach to "Sport" and the question whether this is a strength or weakness. They are frank and outspoken and show great keenness of observation.

### PAPERS ON PRACTICAL BUSINESS QUESTIONS OF VITAL INTEREST

CONTRIBUTED by Professor Laughlin, chief of the Department of Economics in the University of Chicago, one of the foremost of American authorities. Among the topics treated will be "Government vs. Bank Issues," "Valuation of Railways," "Social Settlements," "Socialism," "Abolition of Poverty."

a member of the Engineer Corps to take charge of the works. He did so and managed them for two years with great success. Philadelphia's politics were evidently not free then from the rottenness which distinguishes them to-day, and the following incident while the Colonel was in charge of the water bureau is said to have been an actual occurrence: On one occasion a citizen whose large establishment consumed a great deal of water, and who had frequent favors to ask of the Water Department, visited the chief's office and found Colonel Ludlow, as usual, very polite. This man, before preferring all his requests, took a \$50 bank-bill from his pocket and tossed it over to the chief, who examined it curiously for a second and then spread it upon the desk before him. He did not utter a word at the moment, but, when his visitor was about to go away, said:—

"Now, my dear sir, what is this for?" holding up the bill.

"Oh, that's to buy cigars for the boys," was the careful reply.

"Yes," said Colonel Ludlow; "then I suppose that you are fond of the weed yourself?"

The man said that he enjoyed nothing better than a good cigar.

"Then allow me," said the colonel, suavely, "to insist upon your trying one of these," moving to a secretary and taking down a box of Henry Clay specials.

Each gentleman took a cigar and bit off the end. Then, with a careless gesture, Colonel Ludlow rolled up the fifty-dollar bill into a paper lighter, reached up to the gas, allowed it to become thoroughly ignited, and slowly lit his own cigar. Every one knows that to light your own weed first is a good test of politeness. It comes from the French, who very sagely reason that whatever fumes or gases are generated in lighting will be absorbed into the first cigar.

This done, the colonel turned with an easy and polite motion and said, "Permit me," and held the blazing bill under the nose and up to the cigar of his amazed and startled visitor, whose eyes had now become almost as big as dinner plates. With two or three gasping inhalations he managed to get a light. He kept his eyes upon the bill until it had burned to the very fingers which held it. Colonel Ludlow watched its last expiring spark, as he idly allowed the smoke of his cigar to escape from his lips. When the bank-

## BOOKS FOR BOYS AND GIRLS

Lost in the Forbidden Land      River and Jungle  
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These new books by the most popular boys' author, comprise the "Foreign Adventure Series," and are sold at \$1.00 each, or \$3.00 for the set, neatly boxed.

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note had been completely reduced to ashes the colonel turned to his visitor and said, carelessly, "How do you like your cigar?" The gentleman admitted its excellence and took his departure, attended to the door by the chief, who, with the utmost courtesy, shook him by the hand, and then closed the door to resume his work at his desk.—*Fire and Water.*

**PROFESSOR TYNDALL'S NEIGHBORS**

**PROF. TYNDALL** at one time got into trouble with his neighbors. Being desirous of having a place where he could work in perfect seclusion, he built a house at Hindhead, but had scarcely settled there when a sign-board was erected in front of his gate offering the land for sale for building purposes.

The fact that it "overlooked the grounds of Prof. Tyndall" was announced as an inducement to purchasers. In self-defence, Mr. Tyndall bought the land, thirty-seven acres in all, but did not enclose it or exercise any rights of ownership. Soon after this, one of his neighbors began to build a stable just in front of his study windows. The Professor offered him a free site and \$500 if he would put the building a little to the north or south, but the offer was curtly refused and the stable was built. The Professor then erected a screen of larch-poles and heather between the stable and his house, and this screen proved the cause of intense local irritation, public opinion being divided on the subject, and lively personalities were exchanged in the local newspapers. The moral seems to be that the country is not always the best place for privacy.—*N. Y. Evening Post.*

**PROTECTING RHODODENDRON BEDS**

**IT** is not too early to consider the protecting of rhododendron plants in winter, and although it will not be necessary to give protection to the plants for some time yet, it will be advisable to make provision for it.

There are two things to be well understood in connection with the preservation of rhododendrons in winter, viz., that darkness is the main object desired, darkness and protection from high winds. With these provided for and with an abundance of moisture in the

# MAGAZINE

1909

**A JOURNEY ABOUT EUROPE WITH F. HOPKINSON SMITH**

**THE Parthenon by Way of Pappendrecht.** "Delightful and entertaining impressions of travel in search of the picturesque through Holland, France, England, Italy and Greece. The illustrations will be from Mr. Smith's own sketches and paintings and will include reproductions in both black-and-white and color.

**IMPORTANT GOLF PAPER BY H. J. WHIGHAM**

**A**n article on the progress of Golf in the last few years, covering especially the radical improvements made and contemplated in the laying out of American links. Illustrated by the former champion and well-known authority.

**AGNES LAUT'S LONG CANOE JOURNEY DOWN THE SASKATCHEWAN**

**MISS AGNES LAUT** will tell the story of her long canoe voyage down this great river of the Northwest. It will be illustrated by a remarkable collection of photographs.

**ARTISTIC FEATURES OF THE YEAR**

**EVERY** number will contain the work of notable illustrators and painters, and the same high standard of color work that has given the Magazine an international reputation will be maintained.

**SHORT FICTION**

There will be stories by *Richard Harding Davis, F. Hopkinson Smith, Arthur Cosslett Smith, Mary R. S. Andrews, James B. Connolly, Katharine Holland Brown, Mrs. W. K. Clifford, Jesse Lynch Williams, Maarten Maartens, Nelson Lloyd, Mary Heaton Vorse, Victor Henderson, Emerson Taylor, Georgia Wood Pangborn, Helen Haines.*

**A NOTABLE GROUP OF DESCRIPTIVE ARTICLES**

**VERNON LEE'S** picturesque "An English Writer's Notes on England" (several papers); a series of French sketches, written by Madame Huard, the wife of the well-known French artist, illustrated by her husband; two out-of-the-way studies by Robert Shackleton on "the Principality of Reuss" and some of the less known parts of the Valley of the Moselle; and E. C. Peixotto's "Unfrequented Chateaux Near Fontainebleau," illustrated by the artist.

**AFRICAN HUNTING ARTICLES BY THEODORE ROOSEVELT**

**THE** exclusive magazine and book rights in whatever Mr. Roosevelt may write about his forthcoming African Hunting Trip have been secured by Messrs. Charles Scribner's Sons. Not only lovers of outdoor life, but all who appreciate the literature of adventure, will be eagerly interested in these articles. They will appear in **SCRIBNER'S MAGAZINE**, possibly one or two articles in the later issues of 1909. A fuller announcement of the project is reserved.

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# THE STRAND MAGAZINE

for November

Contains the second of a charming series of articles, profusely illustrated, entitled

## "English Homes and Gardens"

describing and illustrating the most famous of the beautiful estates in this land of beautiful homes and gardens. These articles will be of particular interest to all who take pleasure in the beautifying of their homes.

The article in the November number is devoted to historic Cawdor Castle, the seat of Earl Cawdor. Accompanying the article are a number of beautiful outdoor views of the castle and its gardens, and some indoor pictures of various halls and rooms in the castle, showing some of the massive fireplaces and antique furniture.

## The Ideal of Child Beauty of Different Nations

Illustrated by Eight full-page Duotone photographs

of types of beautiful children of various nations. Which country's baby makes the prettiest photograph? The subject is one of more than passing interest and will doubtless appeal to all lovers of children.

### Other Prominent Features

include WINSTON SPENCER CHURCHILL'S narrative "My African Journey," which has attracted such wide interest. Under the caption "Stories Strange and True," GEORGES DUPUY, the well-known French writer and traveler, relates a most extraordinary experience in Alaska; "Mr. S. H. Sime and His Work" takes the reader to the studio of one of the ablest draughtsmen of the day; "Up the Schreckhorn in a Storm," describes a thrilling Alpine experience; HARRY PURNISS, the famous caricaturist, tells us more about "The Comic Side of Crime." The fiction includes W. W. JACOBS' humorous serial story "Salthaven," "The House of Arden," by E. Nesbit, and a number of splendid short stories by popular authors. "Curiosities" is a popular and permanent feature.

Hall Caine's Powerful New Serial Story "The White Christ" Commences in the December Number

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soil, it hardly matters how low the mercury falls, the plants will not suffer.

Presuming the plants are in well-drained ground, the first thing to see to in the line of protection is that there is abundance of moisture in the soil. Should there not be, and it were possible, the bed of plants should have a thorough soaking with water. Next should be a thick mulching of the ground with forest leaves, to the depth of even a foot if possible. Then will come the exclusion of sunlight as far as can be done. In the case of a few plants, this is not difficult to do; there are straw mats, hay, leaves and like materials, which can be spread over the foliage and kept on by branches of trees or by other means, and even in the case of large collections but little else can be done excepting that where evergreen boughs are available they are very useful spread over the tops of the plants. The more completely sunlight can be kept from the foliage the better for the plants, for strong light, high winds and dryness at the roots are the main reasons why rhododendrons suffer. It is not uncommon to see gardeners protect the north side of their rhododendron beds with hurdles or straw mats, of undeniable benefit; but whether more than the plants would receive were the mats on the south side is doubtful. High winds are harmful, but not to a great degree when the soil is full of moisture to make good what the plants lose by transpiration, while intense light is known to cause a great call on the moisture of the plants besides preventing their recovery from the effects of heavy freezing.—*Florists' Exchange.*

### THE GOBERT FREEZING PROCESS FOR SHAFT SINKING

A PAPER by M. A. Gobert, of Brussels, on "The Gobert Freezing Process for Shaft Sinking and Tunneling under Rivers," was recently read at a meeting of the British Association at Ipswich by the Recorder of the section, Professor T. Hudson Beare. By this process the water-bearing strata and running sands are frozen by means of liquid ammonia poured into the freezing pipes, which are sunk vertically into the ground to be frozen. The liquid ammonia, changing into gas in the freezing pipes, produces a more intense cold than that obtained by unfreezable liquids, which are themselves rendered



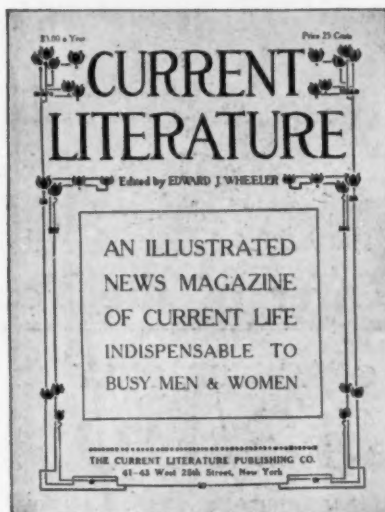
cold by the evaporation of ammonia. By adopting direct evaporation, the danger is avoided of rendering the ground unfreezable in the event of the escape of the unfreezable liquid; the cost of the installation is reduced by dispensing with the unfreezable liquid, and with the apparatus used for rendering it cold; and the power of the refrigerating machine is much better utilized. The process possesses the advantage of being able to freeze the bottom without freezing the upper layers. Thus, when it is necessary to deepen the lined shaft of a mine which has been flooded, the freezing pipes can be placed inside the lining, without any risk of bursting the lining by the freezing of the water which is inside it. In the case of tunnelling under a river, as the evaporation of the ammonia takes place below the water-level, hardly any of the cold is lost in the contact of the pipes with the water, whereas a great quantity would be lost in employing an unfreezable liquid. — *American Architect.*

ARTIFICIAL PRECIOUS STONES

CONSUL William Bardel, of Bamberg, advises that about forty artificial precious stones were recently submitted to the Museum of Natural History at Berlin by an association which claimed to have made these stones, based on the process which recently created so much attention. Several official experts, among whom was the professor having knowledge of gems in the Museum of Natural History, two practical experts and the chief master of the Gold and Silversmiths' Guild of Germany, were requested to make careful examination of the merits of the "so-called" new discoveries. The report submitted by this committee of experts reads as follows:

"Of the great variety of stones we examined, we were favorably impressed only by the artificial rubies. Among these were some of great beauty and worthy of consideration. The white sapphires were of no account at all; they appeared dull and washed out. Well imitated were the yellow precious stones; they really resembled the topaz very closely; but this invention carries with it only very little value, since the real topaz is found in such large quantities that they sell at from two to three marks (47.6 to 71.4 cents) a gramme. Therefore it would seem of little im-

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This magazine is not an organ of personal views or partisan interests. It is absolutely independent of any trammels, political, religious or financial, that might interfere with the impartial presentation of the truth as seen from many angles. The Review of the World (32 pages) is personally conducted by the editor-in-chief, Dr. Edward J. Wheeler, and comprises a comprehensive summing up of the news of the world and its interpretation. This department is of surpassing interest and value to its readers because it brings into proper perspective the big events of the month—the vital things, those that keep the world moving.

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portance to imitate such common stones. Of all the stones we examined, we can only call the artificial rubies a direct success; but the imitation of this latter species of precious stones is no new invention. We therefore declare that there is nothing new or sensational in the claimed invention." — *The Western Architect and Builder*.

A PUBLICATION OF THE T SQUARE CLUB OF PHILADELPHIA

THE T Square Club of Philadelphia announces the publication, in the near future, of Volume Two of "American Competitions." The unusual demand and the splendid reception given Volume One by the architects have proven beyond a doubt the real value of this work in an Architect's library; and the T Square Club with considerable pride has announced the intention to continue its publication.

The Committee which has been appointed by the Club to carry on this work consists of Adin B. Lacey, Editor; Alexander M. Adams, Treasurer; and Virgil L. Johnson, Custodian of Drawings.

The character of the work will be the same as last year, the title fully indicating its contents.

The tentative list of competitions include for this year the Porto Rican Capitol; New York State Prison; Y. M. C. A., Pittsburgh; and the Municipal Office Building of the city of New York.

The successful presentation of the initial issue of this work was highly commended both by the practicing architect and the student.

A USE FOR PERSIMMONS

**KAKI-SIBU** is an antiseptic product prepared by the Japanese from the juice of the unripe fruit of the persimmon or kaki-tree. It is used for the preservation of fishnets and lines, and as an application to packing papers, to tubs and other wooden vessels. They have two kinds of persimmons. One becomes sweet when ripened, the other remains astringent. The astringent variety is very rich in a peculiar tannin that is insoluble in water or alcohol. From this kaki-tree is obtained the kaki-sibu.

When the fruit is fully grown it is



crushed and mixed with water, then allowed to stand three or four days in large tubs, when a kind of fermentation sets in. The juice may be applied fresh or after standing two or three years. The solution leaves, on drying, an insoluble film that fills the pores of fibres and woods, diminishing their water-holding capacity and preventing the entrance of destructive fungi.—*The Country Gentleman*.

**BIOTA AUREA NANA**

**A**N uncommonly beautiful little evergreen and one well suited for florists' trade as a pot plant is the new dwarf golden arbor-vitæ, *Biota aurea nana*. It belongs to the Chinese arbor-vitæ section, having a dwarf, pyramidal growth, just of the shape so many desire plants to be that are grown in pots for decorative purposes. Many florists are acquainted with the common golden arbor-vitæ, a compact grower and of somewhat pyramidal habit. The new one—*B. aurea nana*—is more pyramidal, having less diameter of base in proportion to height, and its color is thought to excel the older one in its bright golden tints.

The thick habit of these golden arbor-vitæ makes them suffer in their southern exposures in severe winters. The sun starts the sap into activity, in the day, then comes the cold, perhaps zero weather, at night, the extremes of temperature causing the injury. Where plants are less bushy the air gets through the foliage easily and in this way the southern fronts do not become so heated in midday as they do otherwise. Because of the injury from the sun, it is a help to give shade on the sunny side whenever it can be done.—*Florists' Exchange*.

**BUILDING MATERIAL LOW**

**I**N nearly all of the middle Western States the price of building material is comparatively low, in some places twenty per cent under last year. Lack of demand, due to economy made necessary by the hard times of last fall, seems to be the chief reason. If you need buildings, now is the time to get your material; but don't build unless you really need to. It is the poorest kind of management to buy anything simply because it is cheap. It is a matter well worth careful attention just now.—*Farm and Home*.


# A Trip 'round the World for \$1.50

An invitation is extended to you, by the Editor of THE TRAVEL MAGAZINE, to join him in a Trip 'round the World, starting in January and extending through the year 1909.

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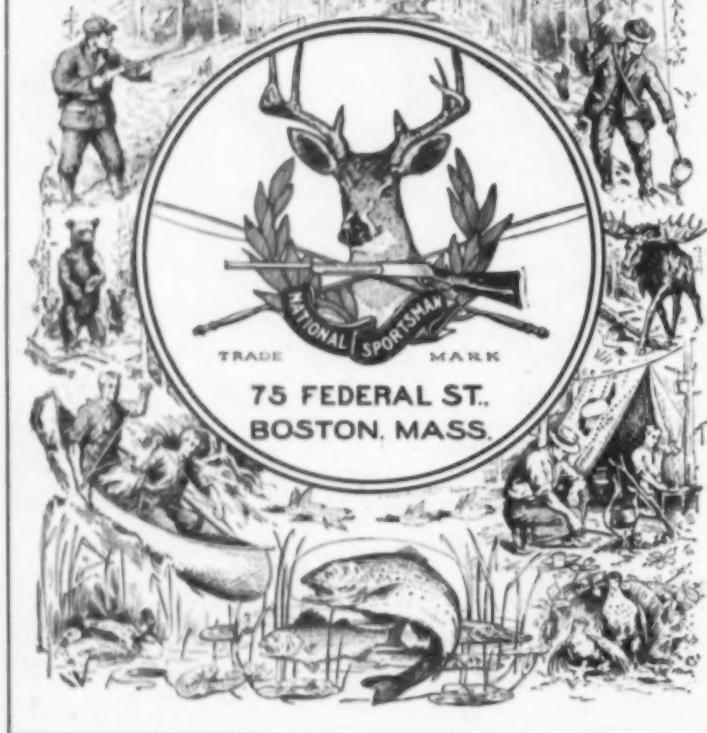
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### A BIG RAFT OF PILES

THE largest raft of piles seen in this port arrived August 2, 1898, says the San Francisco Examiner of that date, in tow of the steamer *Mackinaw*, from Astoria, Oregon, at the mouth of the Columbia River. The raft was of the cigar-shaped pattern, and the long tow was most successfully accomplished. In the big pile were 6,000,000 feet of lumber. The largest raft brought to San Francisco heretofore contained 5,000,000 feet of lumber. The *Mackinaw* dropped her tow at Arch Rock, and three tugboats took her place—one ahead of the raft and one on either side, while the tug *Monarch* brought up the rear in case of mishap. The raft and her escort attracted a great deal of attention as they proceeded up the bay toward Long Bridge. The big bundle of piles appeared to be in excellent condition, and hardly looked as if they had just arrived from a long ocean voyage. They were tied up at Long Bridge without mishap. Only one-half of the raft was seen above water. The piles were bolted together by iron rods passing through them and cross-beams, and the ends were bulkheaded, so as to prevent any disturbance by the action of the sea. In addition to these securities, heavy lashings were tied about the raft at intervals of every ten feet. Some rough weather was encountered on the voyage, but the raft was not broken in the least.

### EDELWEISS IN PAIRS

EDELWEISS, which this year is more fashionable than ever, is mostly grown near Copenhagen and exported to Switzerland, where the flower is so rare now that it is strictly forbidden to gather it. Not to be outdone, Paris gardeners are cultivating edelweiss in the suburbs, and have recently exhibited specimens. Large quantities will appear at the next greenhouse exhibition, and soon the Swiss gardeners will sell only Parisian products.—*N. Y. Herald.*

*Erica vagans* is a good hardy heath for the Northern States. It forms a bush rather more spreading than tall. The flowers are very light pink, almost white when well developed. It is a good one where such evergreens are valued.



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#### "VILLA-AL-MARE"

**A** LONG the north shore of Massachusetts Bay all the way from Beverly to Magnolia, a succession of beautiful homes line the shore, crown the rocky headlands or nestle among the stately old trees of the New England woods. Here a charming villa of Italian design has been built for Mr. George Lee of Boston. The architect, Wm. G. Rantoul, has been most happy in taking advantage of the picturesque features of the setting, and the house seems to have become an integral part of the landscape and not a "thing apart." Very satisfactory photographs of the house and grounds as well as interior views of the several principal rooms have been supplied by Mary H. Northend who also describes the estate and some of the more important art objects with minute and satisfying detail.

#### WASHINGTON—A RESIDENTIAL CITY

Within the last twenty years a new line of expansion and development has manifested itself in Washington, which gives the impression to one returning to it after an absence of a decade or two at most, of a city builded anew. The original plan of the city as contemplated has been followed, but the entire architectural aspect of the city has been recast. To-day Washington is one of the most beautiful residential cities in the world, and if as Mr. John W. Hall predicts, the near future sees the plans and improvements contemplated and in progress crystallize into realities, it will take its place as *the most* attractive city in the world.

#### AUBUSSON TAPESTRIES

The second and concluding part of Mr. George L. Hunter's interesting paper on Aubusson Tapestries will appear in the December issue. Their history from the time of the first recorded mention of them in 1507 down to the product of the modern factories of to-day is followed with accuracy. Interesting incidents and historical facts are so interwoven as to produce a most readable and instructive article.

#### FURNISHING A HOUSE OF SIX ROOMS FOR \$1,500

The second instalment of the series appearing under the caption of Furnishing a Six-Room House for \$1,500, will appear in this number. The dining-room will be considered in this paper. The color scheme is fully described and cuts and prices of the furniture used are given.

#### CUPBOARDS, CABINETS AND CORNER CLOSETS

In every house of to-day of however moderate pretense, there is felt the need of utilizing to full advantage for cupboard and closet space, every available nook or corner possible for such purpose. In very early days the builders seemed also to be imbued with this idea and the numerous little cupboards and closets around chimney-pieces, attest their appreciation of the value of such conveniences. Then came the period when closets seemed to be eliminated and dependence was placed on wardrobes, etc. To-day, however, the house designers are returning to the original idea, to the infinite delight of the housewives. Lillian Harrod gives her ideas on this subject and illustrates both the old and the new ways.

#### AN ORIENTAL GARDEN IN CALIFORNIA

It is not strange that in California the beauties of Oriental gardening methods are esteemed or that their effects are often reproduced. Kate G. Locke describes such a garden in Los Angeles, surrounding the house of Captain and Mrs. Randolph Minor, where mimic lakes, artificial hills, tiny bridges, lanterns and temple gates lend an atmosphere restful and enchanting. Illustrations accompany the paper.

#### TREES

Mr. Will Larrymore Smedley, Special Officer of Forest, Fish and Game Commission, as well as Artist, Illustrator and Writer, is aroused to the importance of the movement looking to the protection of our forest trees. The facts he marshals, the suggestions he presents, are all food for serious thought. So much depends upon each individual in movements of this kind that we bespeak very careful consideration for the subject matter of his article.

#### REGULATING TEMPERATURE IN HOUSES

Samuel K. Pearson, Jr., of the Climatological Service of the Weather Bureau, contributes an instructive paper on the proper temperature, which should be maintained in the several parts of the house. The indoor atmospheric conditions are also considered and the amount of humidity proper for specified degrees of temperature is discussed. The practical use of thermometers and hygrometers is pointed out and interesting information concerning their manufacture is given.

## Free Advice on Decoration

**T**HE unprecedented growth of our Correspondence Department has necessitated the opening of a new Department which will be devoted to the interest of those who are building, decorating or furnishing their homes. *House & Garden* now offers its readers a House Finishing, Decorating, Furnishing and Purchasing Service which is complete in detail, thoroughly practical and absolutely free. Full color suggestions for the exterior of the house will be supplied with recommendations of proper materials to obtain the results. For the interior, the treatment of standing woodwork and floors, the selection of tiles, hardware and fixtures will be considered and specifically recommended, with the addresses of firms from whom these goods may be obtained. Samples of wall coverings and drapery materials will be sent and selections of rugs and furniture made. When desired, the goods will be purchased and shipped to the inquirer; the lowest retail prices are quoted on all materials.

This Department of Decoration is under the direction of MARGARET GREENLEAF, whose successful work as an interior Designer and Decorator is well known.

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### UNBURNABLE WOOD

**U**NBURNABLE WOOD is a new product of France. At an exhibition in Bordeaux, it is reported, pine shavings, wood paper and cotton were treated with a protective preparation and then exposed to fire. A pile of shavings, pine kindlings and wood was set on fire and in the blaze were thrown shavings and sticks of wood impregnated with ignifuge, so called. When the fire had exhausted itself the impregnated shavings and wood were found to be simply blackened and charred; they gave out no flame. Paper and cotton fiber treated with the same solution when exposed to the flames were consumed slowly without a blaze. The formula for ignifuge consists of sulphate of ammonia, 27 oz. avoirdupois; borate of soda, 3 oz.; boric acid, 1 oz.; water 12.5 lbs., or 1 gal.—*Metal Worker.*

### BUDDHIST REMAINS IN JAVA

**T**HE fact is not generally appreciated that there are ruins of Buddhist and Brahmanic temples in middle Java surpassing in extent and magnificence anything to be seen in Egypt or India. There, in the heart of the steaming tropics, in that summer land of the world below the equator, on an island where volcanoes cluster more thickly and vegetation is richer than in any other region of the globe, where earthquakes continually rock and shatter, and where deluges descend during the rainy half of the year, remains nearly intact the temple of Boro Boedor, covering almost the same area as the great pyramid of Gizeh. It is ornamented with hundreds of life-size statues and miles of bas-reliefs presenting the highest examples of Greco-Buddhist art—a sculptured record of all the arts and industries, the culture and civilization, of the golden age of Java, of the life of the seventh, eighth and ninth centuries in all the farther East—a record that is not written in hieroglyphics, but in plainest pictures carved by sculptor's chisel. That solid pyramidal temple, rising in magnificent sculptured terraces, that was built without mortar or cement, without column or pillar or arch, is one of the surviving wonders of the world. On the spot it seems a veritable miracle.—“*Prisoners of State at Boro Boedor,*” by E. R. Scidmore, in the *Century.*



# House & Garden

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RESIDENCE OF MR. FREDERICK PABST ON LAKE OCONOMOWOC, WISCONSIN. VIEW FROM THE SOUTH SHOWING ANGLE ENTRANCE



# House and Garden

VOL. XIV

NOVEMBER, 1908

No. 5

## The Country Seat of Frederick Pabst

AN ESTATE ON LAKE OCONOMOWOC, WISCONSIN

By DAY ALLEN WILLEY

ONE of the most remarkable and interesting country seats in the United States is that of Mr. Frederick Pabst, located near Milwaukee, Wisconsin, on the shores of Lake Oconomowoc. The estate is one of the most extensive in the Northwest, comprising about 1,000 acres, but a special feature is the buildings, which are all constructed of concrete although they comprise no less than thirty structures on the four sections into which the country seat is divided. It is doubtful if any home of this kind in the United States includes so many buildings and so many farm and rural industries. This is why the barns, storage sheds, dwellings and other buildings were needed, yet nearly all of the material for the exterior of the various buildings was obtained on the estate with the exception of the cement needed for the concrete.

The Pabst estate is the outgrowth of a plan of the owner to establish a stock farm in this vicinity. Later he elaborated his ideas and in 1906 began the creation of this remarkable place. As already stated it consists of what are called farms, four in number. The first is devoted to the home of the owner and its surroundings and comprises about thirty-five acres,

but another tract of land has been set aside for the private grounds and dwelling of the general manager. Two farms are allotted to what is called the horse department, while two others are devoted to pasturage and for breeding purposes. The plan of the buildings as decided upon by Messrs. Fernekes & Cramer, Architects, the experts with whom Mr. Pabst consulted, included the following:

**Private Grounds:** Residence, private stable with housing for help, gardener's house, automobile garage, boat-house and a reinforced concrete bridge spanning a canal which must be crossed to give access to the grounds from the main entrance.

**Horse Manager's Grounds:** Residence horse department, general office, club-house for the horse-men, hackney stable, stallion stable, riding school, general stable and wagon shed.

**Farm Department:** Horse barn, cow stable, wagon shed, hog pen, hen houses, brooder house, dairy building, ice house and farm manager's residence.

**Breeding Department:** Six shelter sheds and housing for help and brood mare stable.

This plan indicates the intention of Mr. Pabst not



PRIVATE STABLE AND POULTRY HOUSE ON THE PABST ESTATE

## House and Garden



THE FIREPLACE IN THE LIVING-ROOM  
Note the reinforced concrete beams

only to have a home provided with the latest comforts and conveniences also with beautiful surroundings, but to have it in connection with very large farming operations. While the principal industry is the breeding of horses of various kinds, provision had to be made for other live stock as well as poultry, farming machinery and crop storage. As the dairy industry is to be one of the principal operations, the dairy planned is of unusual size and equipped with the latest apparatus. Consequently the location and character of the various buildings has been a work of much greater magnitude than the group on the ordinary estate which seldom consists of more than the residence, the lodge, the barns and possibly a greenhouse.

Of course the home of the owner is by far the most elaborate structure and is undoubtedly one of the best examples of concrete work which has thus far been completed in America. Its general architectural design is Gothic of the Tudor period, the main portion being thirty by one hundred and sixteen feet in dimensions with a wing for the kitchen and accessory departments of thirty by fifty feet. The residence is in the shape of an "L," the main entrance being at the angle. It opens into a living-room, the main feature of which is an immense fireplace no less than ten by twenty-one feet in dimensions. On the same floor is a spacious children's library and dining-room, while a large covered porch nearly

surrounds the outside of the ground floor. The second floor contains six bedrooms in addition to bath-rooms, toilet-rooms and a dressing-room, the third floor being occupied by the quarters of the owner's personal servants, also a billiard room.

With the exception of the main roof beams, the house construction is entirely of reinforced concrete. The roof beams mentioned are steel with a concrete slab between. The outside of the building was plastered with a rough coat made to adhere properly by using a cement bond. All of the outside walls are furred with hollow tile, and all of the inside partitions are built of hollow tile. This idea was carried out in order to avoid danger from fire originating inside, and the house is so isolated that fire cannot orig-

inate from the outside. The roof is covered with red shingle clay tile. All of the windows are crystal plate glass set in metal, subdivided. The building is lighted by both gas and electricity, and heated by a hot water system. It is provided with an air cleaning system.

The house is approached by a road running over a large meadow skirting the lake, with a view of the boat-house, and then winding to the south so it rises to the top of the hill about 1200 feet from the lake.



THE BOAT-HOUSE ON THE PABST ESTATE



## The Country Seat of Frederick Pabst

On reaching the top of the hill, the private stable, gardener's house, greenhouses and auto garage are seen among the trees. Then the drive continues with occasional glimpses of the lake until it reaches the main entrance. There is a concrete garden wall, shutting off the laundry yard, with one small gate and one for wagons.

In all of the rooms the concrete construction of the ceiling was not covered up; the necessary beams being arranged so as to form an architectural feature of the room. The floor of the rooms over the living-room is carried by large concrete beams, about three feet on centers. These are plastered and appropriately colored and decorated. The end panels between the beams have a plastic ornament, in which the hepatica was used as a decorative scheme. Lavish decorations, woodwork, etc., were avoided, so as to adhere as much as possible to the homelike country house, rather than the stately city mansion. This was also carefully considered in the exterior design.

What is termed the boat-house is one of the novel auxiliary buildings on the personal portion of the estate. Built entirely of concrete it not only has accommodations for boats but is also used as a power-house containing the engine which furnishes electric illumination for the grounds. Another part



A CORNER IN THE DINING-ROOM  
Note the relief decoration of the frieze

of the boat-house is a bathing apartment approached by a pergola which extends to the lake. In spite of the boats for which it is intended, this is one of the most picturesque buildings on the grounds. The pergola, whose cement columns support wooden beams, is one of the most picturesque features of the grounds, the sloping hillside adjacent being covered with forest trees. There is room in the upper part of the boat-house for sleeping apartments, also a lounging room provided with billiard tables and a library.

For the accommodation of Mr. Pabst's private stable a structure forty by one hundred and twenty feet has been completed, containing stables, apartments for carriages, harness, fodder, as well as closets and bath-rooms. The grooms, however, have a home of their own, as will be noted. Adjacent to the owner's home is a building which combines the dwelling for Mr. Pabst's ornamental gardener and the garage for his motor cars. Like the boat-house it is so low that it does not interfere with the beautiful landscape view from the Pabst home.

The house of the farm manager is almost as pretentious as that of the owner of the estate and in architecture is very attractive. It is a two storied house, with a wide covered porch, which is screened. It is entered from the south through the vestibule and large stair hall, all of the rooms opening from this hall. The dining-room is directly opposite,



HOUSE OF THE ASSISTANT MANAGER OF THE STOCK FARM

## House and Garden



1. The wagon shed; 2, the residence looking southwest; 3, the garage and gardener's cottage; 4, stable No. 3 for draft horses



Club house, covered show ring and stable for hackneys

### SOME OF THE BUILDINGS DURING CONSTRUCTION

entered through French doors. It has windows on three sides with a view to the lake.

The living-room is south of the dining-room, and has windows at each end and toward the porch. There are fireplaces, bookcases, etc. The kitchen is divided from the dining-room by a butler's pantry. It has the necessary pantry, pot closet, servant's room, etc. On the second floor there are five bedrooms and a bath-room, and on the third floor two bedrooms and a bath-room. This building is carried out in the same characteristic design as all of the buildings, but is covered with asbestos shingle tile. It is also lighted by gas and electricity.

The buildings on farm No. 1 lie about half a mile

south of the private stable. The club house for stable grooms is a building with fourteen bedrooms, and baths, and a large club room, with brick fireplace, wash-rooms, storeroom, dining-room, and kitchens. The general office of the stock farm is located at one end of the club house. This building stands on a large open court with buildings on two sides, the court being about one hundred and eighty by three hundred feet in size. Directly adjoining the club house and forming a continuous design with it, is the training paddock with an open space seventy-eight by one hundred and eighty feet. The roof is extended far enough to the south to cover the stallion stable, which is arranged with five large



## The Country Seat of Frederick Pabst

stalls. Adjoining the paddock to the west is the hackney horse stable, a square building one hundred by one hundred feet, divided into thirty-six box stalls, of which there are twenty-seven around the outside walls and nine in the inner square, and these surround the feed room. The inner stalls are separated from the outer by a twelve foot side passage. The space on the second floor is used for hay loft and food supply room.

In addition to the general manager is a farm manager who has especial charge of the agricultural and dairy operations. His home, a ten room house of Colonial design, is adjacent to another group of buildings which include the general horse barn, cow stable, wagon shed, poultry and dairy buildings. As already stated these are constructed entirely of concrete as well as the ones of the breeding farm which include six shelter sheds, each of which is thirty-six by fifty feet in dimensions.

Concrete was not decided upon by reason of its cheapness but because in the opinion of the owner and the experts whom he employed, it was most suitable for the various purposes. As already intimated, architecturally the buildings were designed so as not to hide the material they were built of, but if possible to emphasize it. This was carried out both internally and externally and thus the first impression gained of any of the buildings, is that they are monolith concrete. Even the color was left natural without additional toning. All ornamental parts were modeled in clay and cast in concrete. The surface was roughened with a brush, not spattered on, but worked in. This texture of the concrete adds to the warmth and also affords an excellent hold for vines. That the material is durable and little affected by the weather is proved by the fact that some of the buildings have been completed for two years and contain no cracks or other evidences of injury. One of the main reasons for utilizing this construction was that little wood or other inflammable material

was required, thus reducing the cost of insurance to a minimum. By separating the buildings into groups and thus classifying the estate, the landscape architecture can be made a most attractive feature at a small cost since only a comparatively few acres of the country seat have been taken as a site for what may be called the personal estate. This ground, however, is beautifully located by Nature, being upon the shore of Lake Oconomowoc where the elevation is enough to produce a very artistic effect. No attempt has been made to embellish any other part of the tract and the efforts of the landscape gardener have been largely confined to this portion. A system of broad driveways has been completed connecting the various buildings with the main highway, also pathways extending to the lake front, through the woodland and to attractive vistas. As the grounds of the main residence are partly surrounded by water, one of the most ornamental features is a very handsome bridge also of concrete connecting what might be called the main land with the private grounds.

In building the various groups, the plan followed was very interesting. As already stated the sand and gravel were all excavated on the estate, about 10,000 barrels of cement being required for the composition. The number of men required ranged from 100 to 300, all of whom were housed and fed on the grounds, yet the total expense for food and other supplies in a single year was little over \$10,000.

Considering the number and extent of the buildings, the economy of constructing and completing them is indeed remarkable, for the total investment has not exceeded \$300,000, the home of the owner costing ready for furniture less than \$50,000.

The Pabst estate is situated in what is called the Wisconsin lake region and is about thirty miles west of Milwaukee. It is connected with the city by an electric railway, while one of the principal steam systems is within three miles of it.



THE BRIDGE

# Aubusson Tapestries

BY GEORGE LELAND HUNTER

## PART I.

A FINE set of Aubusson tapestries to cover five pieces of furniture—sofa, two arm chairs, two side chairs—weighs ten pounds, measures nine square yards, and is worth from \$1,000 to \$5,000. That is to say, if you bought it by weight, you would pay from \$100 to \$500 a pound; if you bought it by area, you would pay from \$110 to \$560 a square yard.

To an Aubusson set worth \$1,400 correspond a Belleville set at \$950 and a Nimes set at \$700.

Tapestries like these, antique as well as modern, come frequently to the auction room. All are usually grouped under the name Aubusson, together with the cheap machine imitations. The cheap ones are apt to sell for too much; the fine ones for too little. To enable the amateur to tell the real from the imitation and to know when a bargain is before him is the object of this article.

The finest furniture coverings in the world are woven in the little town of Aubusson, in France, 207 miles by rail south of Paris. Tradition says that the industry was established there in the year of our Lord 732 by stragglers from the Saracen army, which Charles Martel, grandfather of Charlemagne,

defeated near Tours, thus saving Europe to Christianity. And it is certain that as late as 1585, the weavers were called *tappiciers sarrazinois* (Saracen makers of tapestry), which was the term used also in Flanders and Picardy to designate workers on the low-warp loom.

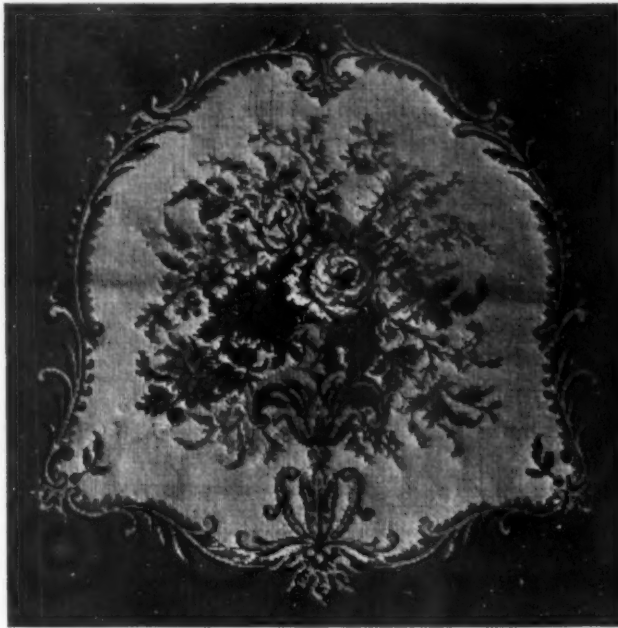
That Aubusson, with its neighbor Felletin, was ever distinguished as *originator* of large picture wall-tapestries, like those made at Arras and Paris and Brussels, in the fourteenth, fifteenth and sixteenth centuries, is improbable. The attempt of M. Cyprien Pérathon, the historian of Aubusson, to attribute to the looms of his native place the famous Lady with the Unicorn series at the Cluny, does more credit to his local patriotism than to his scholarship. Although mural picture tapestries have been woven at Aubusson for centuries, and although reproductions of the finest products of seventeenth and eighteenth century looms are woven there to-day, the fame of Aubusson depends principally on the seats and backs and rugs (the rugs in the same weave but heavier) to which it has given its name—*aubusson* being a general term for hand-woven tapestry furniture-coverings and flat rugs in the French



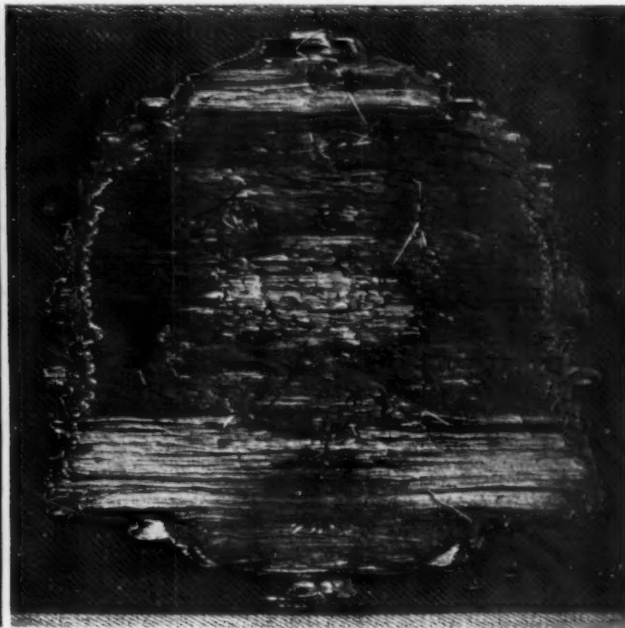
1a, an Aubusson chair back; 1b, reverse of 1a. Notice that the pattern is reversed, and that the loose threads make various angles with the warp. In *brochés* like Belleville and Nimes tapestries, the floats are all parallel with the weft, i. e., perpendicular to the warp



## Aubusson Tapestries



2A, A BELLEVILLE CHAIR SEAT



2B, REVERSE OF BELLEVILLE CHAIR SEAT

styles, wherever made—just as gobelin is a general term for large picture tapestries, having supplanted the earlier arras, and savonnerie is a general term for hand-knotted pile rugs in the French styles.

That the high-warp loom employed at the Gobelins and at Merton in England was ever used at Aubusson is improbable. It is for low-warp work that Aubusson is famous.

But this does not mean that Aubusson tapestries are on that account less valuable or perfect. Between the finished product of the low-warp and the high-warp there is not the slightest difference, and the most experienced connoisseur cannot tell them apart. In one respect the high-warp is more convenient for the weaver. At any stage of the process he can see from either front or back a large part of his completed work, and thus compose color effects freely on a large scale. That is why in the Golden Age of tapestry weaving the high-warp was preferred for the more important *tapisseries à personnages* (tapestries into which human figures were introduced). But for verdure tapestries and furniture coverings, the low-warp has always been faster and more accurate. And since the eighteenth century improvements of Vaucanson and Neilson, and other nineteenth century improvements, its superiority is even more marked.

Illustration No. 1a shows an Aubusson back in the style of Louis XVI. The ribs that are a distinguishing feature of most varieties of tapestry, are seen to run vertically with the subject of the miniature picture. In wall tapestries the ribs are horizontal, almost without exception. In furniture tapestries the ribs are either vertical or horizontal as is most convenient for the weaver. The coverings with vertical ribs are more durable.

The warp of the tapestry before us is of wool; the

weft is of silk and wool, silk being used for the lighter colors. Personally I prefer the tapestry coverings of the Renaissance period, which were made principally of wool; for wool seems to be the material that best adapts itself to the technique of tapestry weaving. But the coverings most popular to-day are those in the styles of the eighteenth century—Louis XV. and Louis XVI.—the light colors of which can be secured only in silk. Consequently silk is the chief constituent of Aubusson seats and backs.

Illustration No. 1b shows the reverse of No. 1a. Notice that the pattern is reversed in direction—runs from right to left instead of from left to right, as in the face—and that the loose threads make all sorts of angles with the warp. In *brochés*, such as Belleville and Nîmes tapestries, the floats on the back are all parallel with the weft—that is to say perpendicular to the warp.

If you want to be quite sure quickly whether a covering is real Aubusson, look at the back. It will be covered with loose threads—*not parallel*—that mark the transition of bobbin or flûte from section to section of the same color. If the loose threads are shaved off, the back will be exactly like the face, except that the pattern is reversed in direction.

Here we have a distinguishing feature of all real tapestries—the face and the back are alike, every grain of color on the face being matched by a similar grain of color on the back exactly opposite. Most tapestries are woven from the back, and all tapestries are woven in plain weave—that is to say, with complete alternation of warp and weft threads—and the weft is not thrown all the way across the loom, but only as far as the particular section or spot of color is wide—sometimes no more than two warps. Of course the more complicated the design, the smaller

will be the blocks of color, the oftener the weaver will have to change bobbins, and the more loops of loose thread will there be.

Illustration No. 2a shows a Belleville chair seat, made partly by hand and partly by machine. Illustration No. 2b shows the reverse of No. 2a. The broché threads that float loose on the back—being tied down in tapestry point on the face, where they form the pattern, as seen in No. 2a—are extra wefts put in by hand.

Illustration No. 3a shows a Nîmes chair back that is made entirely by machine, but that is by no means to be despised, or to be regarded as merely an imitation.

It has a technique and quality of its own, and an individual beauty. Illustration No. 3b shows the reverse of No. 3a. As the reader will discover on comparing illustrations Nos. 1b, 2b, 3b, it is easy by the backs for even a novice to tell a Belleville from a Nîmes tapestry, and both from an Aubusson.

A fundamental distinction between them and an Aubusson is that they are of uneven thickness, while the Aubusson is of the same thickness in every part. In the former the figures are produced by extra weft threads superposed upon the ground—put in by hand in the Belleville type, by the jacquard attachment in the Nîmes type. In Aubusson and all real tapestries the ground stops where the figures begin. In real tapestries, too, open slits are usually left between colors that meet parallel with the warp. The presence

of these slits is easy to detect, even after they have been sewed up, which is usual.

The surface of the real Aubussons is fascinating, especially of those that have been woven with woolen warp stretched not too tight. The ribbed surface curls and twists just enough to give wonderful variety of light and shade and texture, and to set this apart from all the other arts.

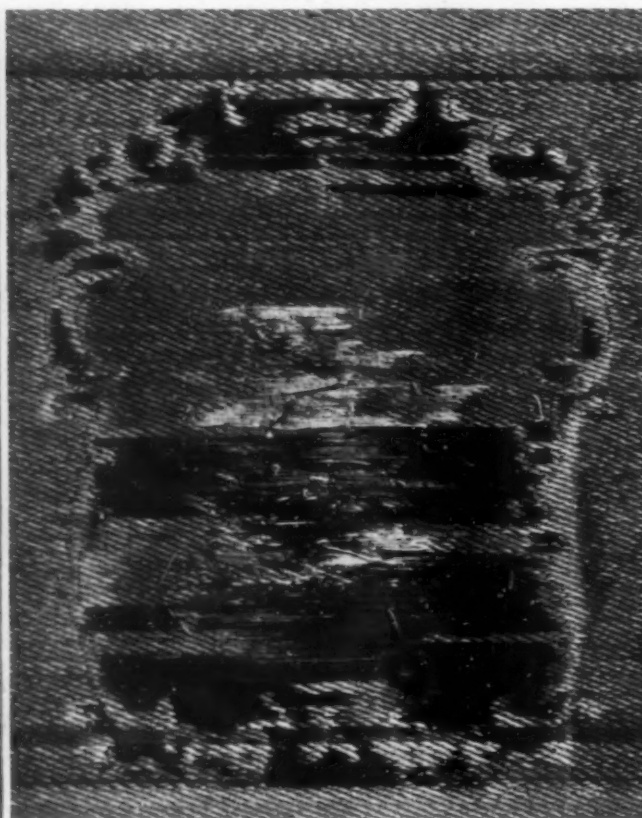
Of the Belleville and Nîmes tapestries the surface is more regular. Some of the Nîmes tapestries have the ground in silk of satin weave, but the more interesting ones have the ground in wool.

Whether we accept the story of the Saracen foundation of the industry at Aubusson, or not, it is certain that tapestry weaving there and at Felletin, seven miles distant, is of great antiquity. Possibly it dates back to the time when the Roman Empire still ruled the civilized world—possibly still farther back, to the period before Cæsar conquered the country, as told in his famous Commentaries so diligently studied and so little understood by schoolboys. At any rate, the people of the country, the Lemovices and the Arverni, fought under Vercingetorix, whose defeat ended the independence of Gaul. And in 1664, the tapestry merchants and weavers of Aubusson in a report to the king on the condition of the manufacture, declared that it had been "established from time immemorial, no person knowing the institution of it."

*(To be continued in December issue.)*



3A, A NÎMES CHAIR BACK, FLORAL DESIGN



3B, REVERSE OF NÎMES CHAIR BACK



Illustrations from the Chrysanthemum Exhibit of 1907, made by the United States Department of Agriculture at the Greenhouses of the Department at Washington, D. C.



1. Seedling of 1907 named "Edith Root," by Secretary Wilson; large lavender pink. 2. Mme. Cecil André; bronze.  
3. Magnificent; crimson with golden reverse. 4. British Empire; large yellow bronze. 5. Norman Davis; large bronze red



View of chrysanthemum house at Department of Agriculture showing Ongawa, Chrys Montigny, British Empire, Mme. Armand Detroyot, Mrs. A. Bott, A. T. Stevens, with a large plant of Miss Clay Frick, the sides having all the new varieties of pompon.



SHOWING SECTION OF HOUSE WITH ALL THE LATEST SINGLE VARIETIES





SHOWING SINGLE AND POMPON VARIETIES MIXED



POMPONS AND ANEMONE POMPONS, THE LATTER ARE AT THE LEFT



Fig. 1. Byzantine Border of Vine and Leaves Composed of Relief Tiles in Silhouette Set in Dark Cement.  
Colors: Brown, Reddish Buff and Green

## Economical Ways of Using Cement with Decorative Effect

By E. A. TREGO

PROBABLY few people have a clear conception of the tremendous growth of the Portland cement industry in the United States during the past decade. This is due to the utility and economy of cement as a structural material when used in the form of concrete. In 1890 America produced less than one million barrels of Portland cement. In 1907 nearly fifty million barrels were produced. A few years ago any one of the recent great engineering enterprises of New York City, the subways for example, would have consumed the entire annual supply. Last year the output would have supplied a half barrel to every inhabitant of the United States with enough left to build a four foot concrete pavement around the earth.

It is in the form of concrete that cement has entered into practically every type of construction from pavements to gigantic bridges, dams and other conspicuous engineering triumphs. It is now used in every city, town and hamlet and thousands of barrels are consumed annually in farming communities. Without the use of concrete many important engineering achievements, especially in the domain of hydraulic engineering, would have been impossible.

Concrete, as commonly made, is a plastic mass composed of Portland cement, sand and stone, or Portland cement and gravel. A standard mix is one part cement, three parts sand and five parts crushed stone. The sand, according to standard specifications, should be clean and sharp and the stone may run from a quarter-inch to half-inch in size or even larger. The mass should be thoroughly wet to make a dense concrete and it should be well tamped or puddled when placed in the moulds or forms. A well-made column of reinforced concrete

ten feet high and two feet square would support many tons.

One barrel of cement mixed with sand and stone in the proportions given will make about twenty-three cubic feet of concrete. To make a "wet" or dense concrete the cement and sand are first thoroughly mixed in a dry state. Water is then added until the mass is of the consistency of thick cream. The stone is then wet and the whole mass thoroughly mixed. Thus each grain of sand becomes coated with cement and the stone in turn becomes thoroughly coated with the mortar composed of the cement and sand. Such a mixture when thoroughly worked and tamped makes a dense concrete.

In this country and abroad concrete is rapidly supplanting stone and terra-cotta in a field hitherto occupied exclusively by these materials. We refer to structural work of both ornamental and useful character, designed for lawns and gardens. This is chiefly due to the great economy of concrete. Stone and marble are, to a majority of people, prohibitive in cost when worked out by hand. Terra-cotta designs may be easily and cheaply duplicated as to the raw clay, but there follows the expensive process of burning in kilns. As opposed to this, concrete may be cast in moulds time and again at trifling expense. It possesses all the virtues of its competitors, when in good hands, is far more durable and, as stated, vastly more economical. Hence, the wide demand for it in the form of garden furniture, fountains, arbors and pergolas.

But notwithstanding its popularity in this field, the development of the industry has, in some instances, been attended with most deplorable results, when judged from the artistic standpoint. It would be



## Economical Ways of Using Cement with Decorative Effect

difficult to find more pathetic examples of bad taste than are shown in some instances. On the other hand, manufacturers and artists of good taste are doing beautiful work. Those engaged in the industry may be divided into three classes.

First: The artist whose work bears the impress of individuality and hand labor, both in the production of original designs or reproductions made from plaster moulds taken from the stone and marble masterpieces of the old world.

Second: There is what might be termed the "commercial" plant, which does business on a large scale. In these establishments really competent artists are employed, but as the business depends upon large sales it is essential to produce many



Fig. 2. Column of Byzantine pattern in original unplastered concrete, supporting heavy ceilings. Capital ornamented with colored tiles, glazed and unglazed, flat and in relief. Colors: yellow, green, blue, gray, red, white and buff



Fig. 3. Concrete column in original rough state, decorated with a capital set in the concrete consisting of flat tiles, glazed and unglazed. Colors: green, red, brown, yellow, blue and buff. The lower band of tiles has been inserted in a groove chiseled in the finished column

duplicates. This results in the same monotony of design found in terra-cotta and ornamental metal work. Where special designs are made the prices are very high.

Third: There is the man who has mastered the mechanical principles involved in cement work, but whose taste is execrable.

When one of moderate means seeks to procure concrete garden ornaments he finds that the artist must charge well for his wares owing to the time and labor spent upon it and that the expenses of conducting a large commercial plant also increase cost. He does not want the wares of the third party.

Therefore, it is the purpose of this article to suggest ways and means of procuring a few simple and inexpensive structural forms in concrete, which may

be made on the premises, and with pleasing results. Given freedom of line as an expression of its plastic nature, concrete will be beautiful in itself. Monotony may be relieved by encrusting the surface with tiles or mosaics. A very small percentage of its surface may be treated with excellent results where tiles or mosaics are used, or it may be entirely covered with them if expense is not a matter of moment. Concrete does not, however, lend itself to hard and precise lines or smooth and even surfaces, a virtue which makes for economy.

If it be accepted that good taste and economy forbid profusion in the decoration of a lawn or garden, in the way of either ornamental or structural forms, it might be expedient to adopt one good thing, for example, an arbor. This need not be a series of perfectly true columns adorned with decorated capitals, surmounted by machine-planed timbers. The cover page of this magazine suggests something entirely different. The simple column shown at the left margin of the picture is such as may be found in Mediterranean countries. It represents a direct and economical method of utilizing concrete. The rounded top affords no opportunity for water to collect and freeze, and the beams may be hand hewn timbers or small trees whose lines will correspond to the free lines of the column. The concrete is left just as it appears when the forms are removed. There has been no "slicking-up" with trowel and plaster and the work is done for all time—if well done in the first place. A tile might be inserted here and there at the cost of a few cents, but decoration of that character is not at all essential. The beams could also be cast in concrete, reinforced with iron, making an indestructible arbor which would last practically forever and without repairs. If the aggregates used, sand and stone, are warm and pleasing

in color, and the surface of the column be rubbed and washed until the coarser material is exposed, an agreeable tone and texture will result. As is frequently done in European countries, a column might be washed with a delicate pink tone which will mellow with time and weather. Concrete paints or washes are now made in such durable form that a chisel will scarcely remove them.

Concerning the column shown on the cover page, it is in such simple and substantial designs that artists have found paintable subjects, and were it not a common trait to be more impressed with the cost of things than their intrinsic merit, we would find work of this character supplanting many of the expensive and ornate designs found upon many estates. As to the column illustrated, it is the purpose to suggest a general method of treating concrete rather than to emphasize the merit of a particular design. That is to say, if it should prove to be inconvenient to construct a column with a beam encased in the manner shown, the top of the column could be left flat and surmounted with a simple cap. The cap could be made by casting the concrete in a hole in the ground, dug to the required size and shape, thus obviating the necessity for wooden moulds or forms. The important matter is to achieve economy by avoiding the precision of lines found in machine-made products requiring expensive moulds. In advocating this type of construction, however, there is no intention to decry more elaborate and ornamental work merely because it is of that character. It is frankly conceded that where the latter possesses real merit such as the charm always imparted by the labor of the artist's mind and hand, we have something more valuable than the rather rude work previously described. But, as stated, work of that character is costly, and we are striving to suggest a substitute which

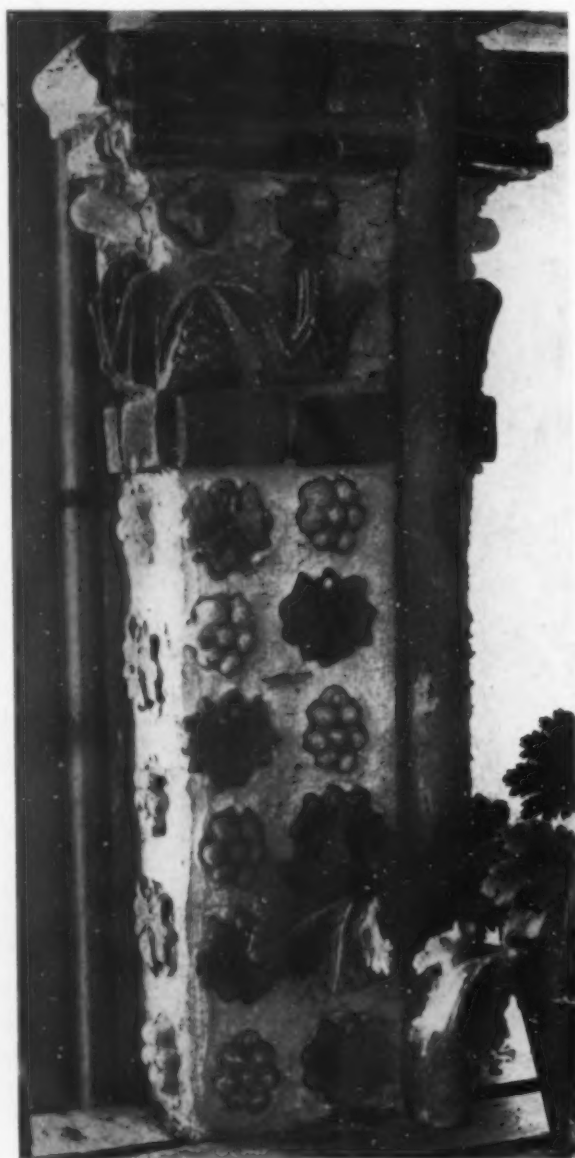


Fig. 4. Detail for a conservatory. Filaster decorated with relief tiles in silhouette, pushed into wet concrete, thus avoiding necessity of pointing. Capital adapted from lotus design recently excavated at Tel el Amarna, Egypt. Blue grapes and green leaves with other decorations in brown, buff and red, glazed and unglazed



## Economical Ways of Using Cement with Decorative Effect

shall conform to all the requirements of good taste, but at minimum cost. While designs should be simple and picturesque, the builder should be careful to avoid forcing things in that direction by having lines out of plumb and coarse surfaces exaggerated to the last degree. Built up in an honest, straightforward way, to answer an honest purpose, and with durability, economy and utility in mind, a row of

would result in a picturesque pergola. Expensive form work of matched lumber is not necessary where the designer considers the utility of a thing instead of seeking the ornate. These simple forms also permit the use of rustic timbers in arbor construction.

Referring again to the cover page, we find the artist has drawn not only a simple column but several things quite as easy to construct. Plain concrete steps lead into the garden. In the foreground is a perfectly simple concrete fountain. The gravel walks, which might also be of concrete, are bounded by low concrete walls, and under the shade of a tree is a plain concrete bench. None of these is elaborate or complicated in detail. The objects are very few, yet the garden appears to be well furnished.

As seclusion is one of the delights of a garden, attention is called to a modern method of constructing a concrete fence. It requires years to cultivate a high hedge. A board fence will soon decay and if very high is quite expensive. Walls of brick and stone involve high price labor. Concrete is an economical and ready substitute for all of these. The fence



Fig. 5. A border consisting of relief tiles in silhouette banded with flat rectangular tiles, the whole representing a grape vine with fruit and leaves in three repeating units of pattern. Tiles are set in light cement plaster. The cement background is freely used as part of the design. The central tiles are pushed into the wet concrete. Colors: red, green, blue, black, gray and buff

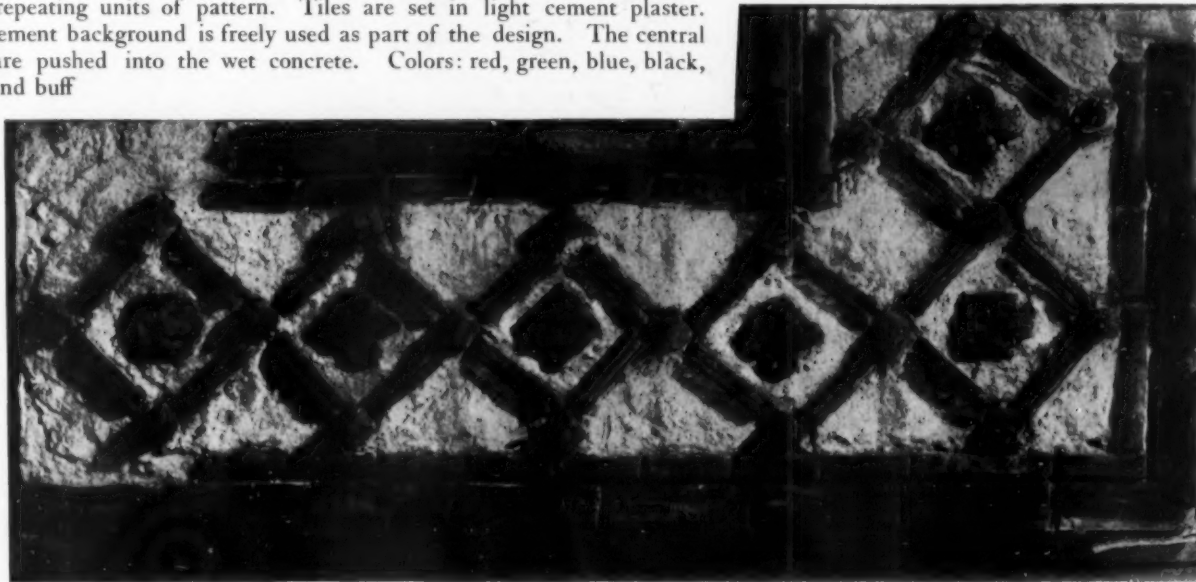


Fig. 6. Detail of Gothic border made in relief tiles in silhouette set in uncolored cement plaster. Colors: green, black, brown, gray, red and buff. These tiles pushed into the wet plaster do not require pointing

these columns would be decidedly picturesque and useful.

The subject of columns has been discussed at length because the structural principles involved may be made the key-note of all concrete work of this simple, inexpensive yet pleasing character. The ingenious man will apply the same rules to the construction of a garden wall, bench or fountain. Plain concrete walls, surmounted by smaller columns,

shown in Figures 7 and 9 consists of iron posts set in concrete footings, with expanded metal attached to posts and bars, and the whole plastered with concrete. The result is a satisfactory and durable fence which will require neither paint nor repairs. It should be stated that in all construction of this character, the cost of labor is an important item. For example, a concrete wall four feet high and eight inches thick, could be constructed under

ordinary conditions for about one dollar and sixty-five cents per running foot. This estimate includes price of materials, forms and labor. If the builder were competent to supervise the work and employed cheap lumber for forms and ordinary labor, he might reduce these figures materially. The fence or wall shown in Figure 8 is a more costly and substantial affair.

Reference has been made to the decoration of concrete surfaces with tiles and mosaics. The latter should conform to the character of the concrete and may, as stated, be but a small part of the whole structure, a mere sprinkling of color, so to speak. The trued-up, machine pressed tiles, common in hotels and other public buildings, do not harmonize with concrete. There is required something bearing the impress of hand treatment, thus giving emphasis to its plastic qualities. The accompanying illustrations of tiles show the great possibilities of this form of decoration. The concrete forms the background for the tiles, which



Fig. 7. Making a cement fence with expanded metal. The latter is plastered with cement mortar, making a cheap but desirable fence



Fig. 8. Another style of concrete fence or wall with tile coping

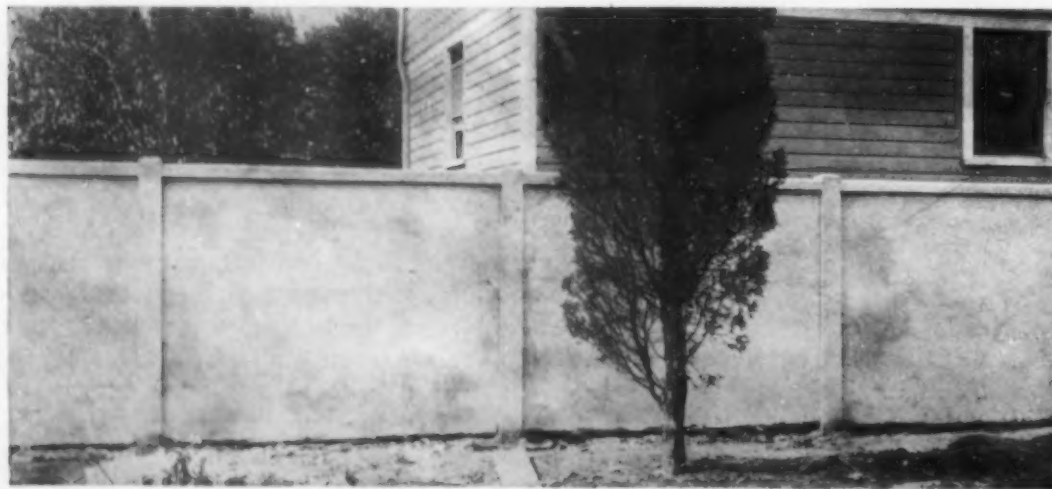


Fig. 9. Expanded metal and concrete fence as it appears when finished

may be glazed or unglazed, flat or in high relief. It is a matter of regret that the rich colors of the tiles cannot be reproduced. The designs in high relief are peculiarly suited for concrete as they conform to its uneven surface. In many of the illustrations shown the tiles were merely pushed into the wet mass of concrete or plaster, thus doing away with the necessity of pointing. They look well whether used in profusion or merely to introduce spots of color here and there. In other words, the design may be governed by the amount one can afford to spend for tiles. A bench or column can be made to cost anywhere from two dollars to one hundred dollars, so far as encrustation with tiles or mosaics is concerned.

Referring again to the necessity of having decorations of this character conform to the surface of the concrete, attention is directed to

(Continued on page 11, Advertising Section.)





## Winter Trees—A Plea

BY HELEN CHURCHILL CANDEE

THOSE who have dreamed under Italian skies, long for Italian trees at home. Can we not have them? Say if you like that I know nothing whatever of tree-growing. Who does, forsooth, except a few specialists, and these holding mightily to tradition? The child cries for what he wants and it is his nurse's business to see that he gets it, or else endure with dignity the childish flings and arrows. It is for the man who gardens to tell us that we shall have our desire for Italian trees. Palms and ilexes in Maine, no; but perhaps cypress and stone pine say, in Lakewood, New Jersey, or Richmond, or any place less bitter than New England in winter.

If you think it is not worth while, Mr. Arboriculture, if you stand on the fact that we have trees to make Italy weep with envy in our maples, umbrageous and brilliant, in our elms, which God! sure made in a spirit of grandeur and grace; if you think it not worth while to grow Italy's trees for us, then nothing will help you but to meander from Naples up to Rome, wriggling back and forth from town to town on the way to Florence, striking the sea at Viareggio and caroming off to Ravenna's pineta on the other side, and finally reaching the rise of mountains north of Lombardy's plain where nestle the lakes with their much sung villas. Then when the trees you have thus seen possess your soul, as they surely will, you will say, "They *shall* grow on our soil!"

\* If your journeying is in winter, the determination is but the stronger, for the trees that hold the heart in that land of delight are those which change not with the seasons.

Leader of them all is the cypress, the tree that

marches from end to end of Italy, that trails over steep hills like soldiers in single file, that stands amicably in straggling groups as though for familiar conversation, that forms an eager circle around a mirroring pool, or that stands a lonely guardian at a gate of entry. It is man's ministrant and cares alike for the quick and for the dead. It nestles a garden seat, where beauty listens to tales of earnest deception; or tenderly benign, makes less lonely the sacred graves of poets fallen by the way.

The cypress tree is almost human in its conduct, and so worthy of human love. This love it gains at the first introduction, down in Naples where the ships land the modern of the New World and bring him to happy confusion, drenching him with wave after wave of varied sensation. He comes up gasping after seeing the miseries of poverty-ridden life in the dark cracks between masonry that serve as streets in town and city, and there stands the cypress pointing to God in heaven. He comes up gasping too, after the first waves of antiquity greet him—there stands the cypress firm and comfortable, a companion whose mood can be counted on. And when he first is dashed by the spray of that great wave which will drench his entire life—the Renaissance—it is the strong, calm cypress that holds him steady—it lived then, in that dazzling period for those brilliant men; it lives now, for the modern.

To know the cypress it must be lived with—another human attribute. It is not to be made an acquaintance by a glance as you pass along the road. It is no peasant, but a very aristocrat, with all prejudices toward dignity and reserve, and reveals moods only to tried friends. By discreetly regarding my cypress

## House and Garden



THE POOL AT VILLA FALCONIERI

neighbors from the windows of my villa on the slope toward Fiesole, I learned how deeply sentiment possessed their hearts. In the morning they bristle with work-a-day alertness, and clear vision, simple as the air about them, sharp cut in outline, of practical address. The sun lowers, slips down behind far ragged mountains of Carrara—the cypress caught his passionate gaze, and while through the valley of Arno the river grows dark, the cypress glows red with remembrance of that last meaning look.

And when her color fades you never know, for it is already grown too dark to see, but this is plain, she has gained new grandeur, new importance. She lifts her slender height against the huddling foliage of paler trees, gathers close her sumptuous velvet gown, shows her marvelous symmetry against the paling horizon where one bright star crowns her—and stands in revery, queen of the passionate Italian night.

The cypress avenue at Tivoli's Villa d'Este—its beauty is so voluptuous that almost you resent its power, crying, "It is too much—I swoon!" And besides, in that spot is

the tourist—a quality only pardonable in yourself.

But some cool humid day of quiet February, Frascati gives with lavish love the secrets of her garden's beauty, and the cypresses of the Falconieri embrace the soul of man, leaving enduring imprint. Up the long hill—but not for the hill-top view—through the big gate, through a smaller one, up a sloping bit of wood, a few quick strides to the left along a tiny path—and then—the assemblage of all that the soul of man needs to cast it into despair or lift it to high heaven, or lap it in sweet human joy.

There is an open-air chamber, a long square, floored with fresh fragrant turf, the four walls, columns of living green rising until the tinted sky rests on the firmness of their pointed tops, strong-limbed young caryatids holding the heavenly roof. In the center a pool mirroring all. As if the infinite silence of peace might be misread into the silence of despair, the fountain throws music and motion through the enchanted spot by one jocund spray.

Human feelings are deeper and older than human



PINES IN THE PUBLIC PARK AT ROME

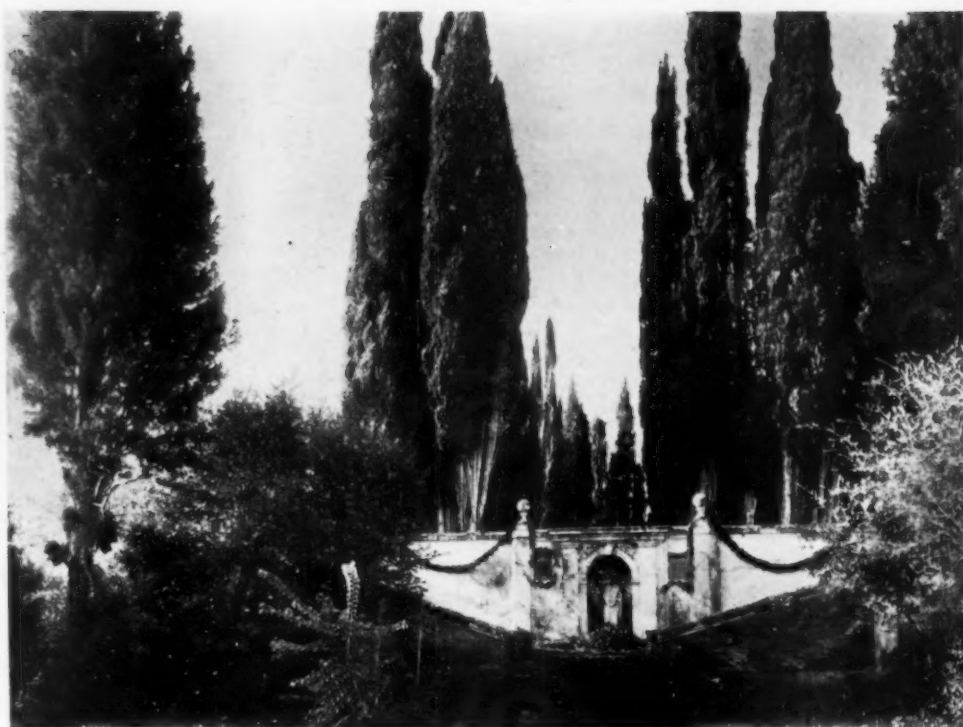


## Winter Trees—A Plea

speech, this cypress chamber of colors and shades banishes all words and its tenants only feel. Yet it was into this sacred enclosure that a tourist burst discontent, whining, "But after all that long climb I don't see the dome of St. Peter's!"

One more word on the cypress; it is not only tree, it is architecture, and counts as such on the landscape. You get used to this in Italy, and feel the spell of the fairy-land where even lemons are not dry-groceries in boxes and dozens, but are offered you with their pale gold gleaming on fresh stem and foliage. The cypress counts as columns, as walls, as gate posts—whatever the architect wills, and even dares reflect the sun like stone-work at eventide

when shadows are long and lights are red. Next closest to the heart is the umbrella or stone pine, another wonder which make landscapes as unreal as walking in old pictures. Until seen in the flesh (they have hearts, and hearts are flesh!) they have seemed the dizzy imagining of an artist, like a purple cow or other vision of the painter. But here



AROUND THE LAKE AT VILLA FALCONIERI

they are in Italy, real trees, every-day practical trees, giving their lower limbs for man's fuel and spreading their tops for the protection of his skin and the joy of his eye. Poet's trees they are too—trees to wander under, to dream under—like those which crown Naples in the wondrous grove of Villa Floridiana, like those filling the expanse of Villa Borghese, Rome's pleasure park.

Lofty, impressive, inspiring—almost aloof, impersonal they seem—yet they are the poet's inspiration. Hard by Ravenna's sad decay, stretches seaward the pine forest where Dante paced in the bitterness of his exile from scenes he loved, and under the trees' strong influence wrote his enduring thoughts. That pine forest stands now as then, and through it flits the strong and bitter spirit of the Poet.

Another came long after, Byron, and for two years trod this same forest—but the two cannot be spoken of together. It takes Nature's patience and long-sight to harbor such dissimilarities in one setting.

Shelley's pine forest was the other side, way over toward Livorno, and got

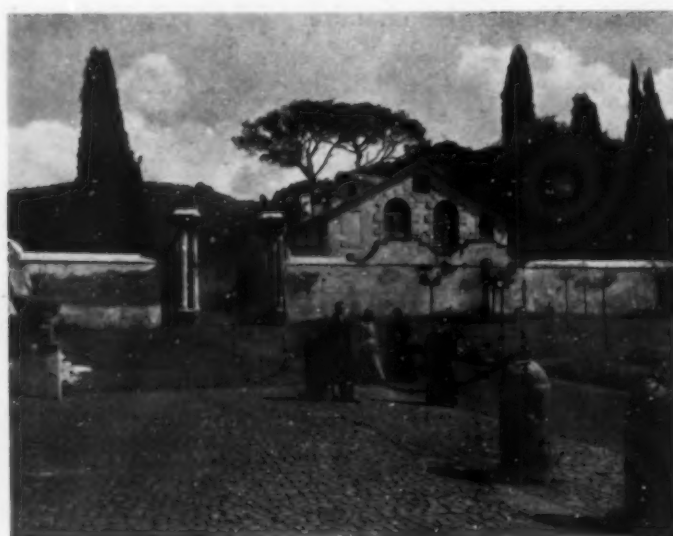


LIVE-OAKS IN THE PUBLIC PARK AT ROME

## House and Garden



VILLA ALBANI, ROME



ENTRANCE AT FRASCATI

tangled in his books, for here he lived and wrote his last heart-throbs.

In single spies the pines are adorable green powder-puffs, feathery pompons, ornamental fluffs to be sprinkled through the landscape and to give a shiver of pleasure to the ecstatic worshiper. Thus we see them at Villa Albani and in a thousand other seductive places. Down in the south flourishes the wondrous *quercia*, the live-oak, the ilex, which beguiles the winter landscape into summer, for who can walk the long alleys of the Villa Borghese or the Pincio on a sunny winter morning without living in his heart a summer day? Demurely trimmed they stand decently before the Villa Medici to guard the view of Rome, and behind the villa of the picture gallery they screen and soften the old marbles around the green.

And the palm in the south—also in the north, for the palm is able to stand a bitter wind with icicles in it, and the cold that comes in from the sea up Genoa way, on the Riviera Levante. It only asks that its roots be not held fast in solidly frozen ground. In fact it is a bluffer, claiming to be a tender languisher of the tropics, but if you brush away its affectations,

capable of Spartan courage—and by this is its charm made infinite.

Now what is the summing up of all this pother about Italian winter trees? A prayer to the arboriculturist to give to those of us who love to stay in our own country, a chance to enjoy these same beauties here, and that without a weary journey to California's reliable climate, or to Florida's winter

respite from her enemy the sun. The reproduced Italian garden is with us. It is the latest note in our landscape gardening, and we have adopted it with avidity. The formal garden alone is not enough; it must be Italian. And this, with delightful inappropriateness is true, whether the rich man's home be on the sandy reaches of New Jersey or on the stern and rock-bound coast of Maine.

But it is not enough that a man shall erect a few yards of concrete pergola, plot out spotty flower beds, and sprinkle among all these the product of the stone-cutter's atelier. Something yet is strangely wanting. It is the trees. To those who have read and dreamed, lived and loved, in the true Italian garden, the modern affair without the proper trees in or near it, is but a weakling stabbing at deep sentiment.



GATEWAY AT FRASCATI





Silver sugar bowl and cream pitcher, Mrs. D. P. Page, Newburyport, Mass.

Rosette teapot with mushroom-shaped finial

Pitcher and plain-creamer, 1805, Mrs. D. P. Page, Newburyport, Mass.

## The Seductions of Old Silver

By MARY H. NORTHEND

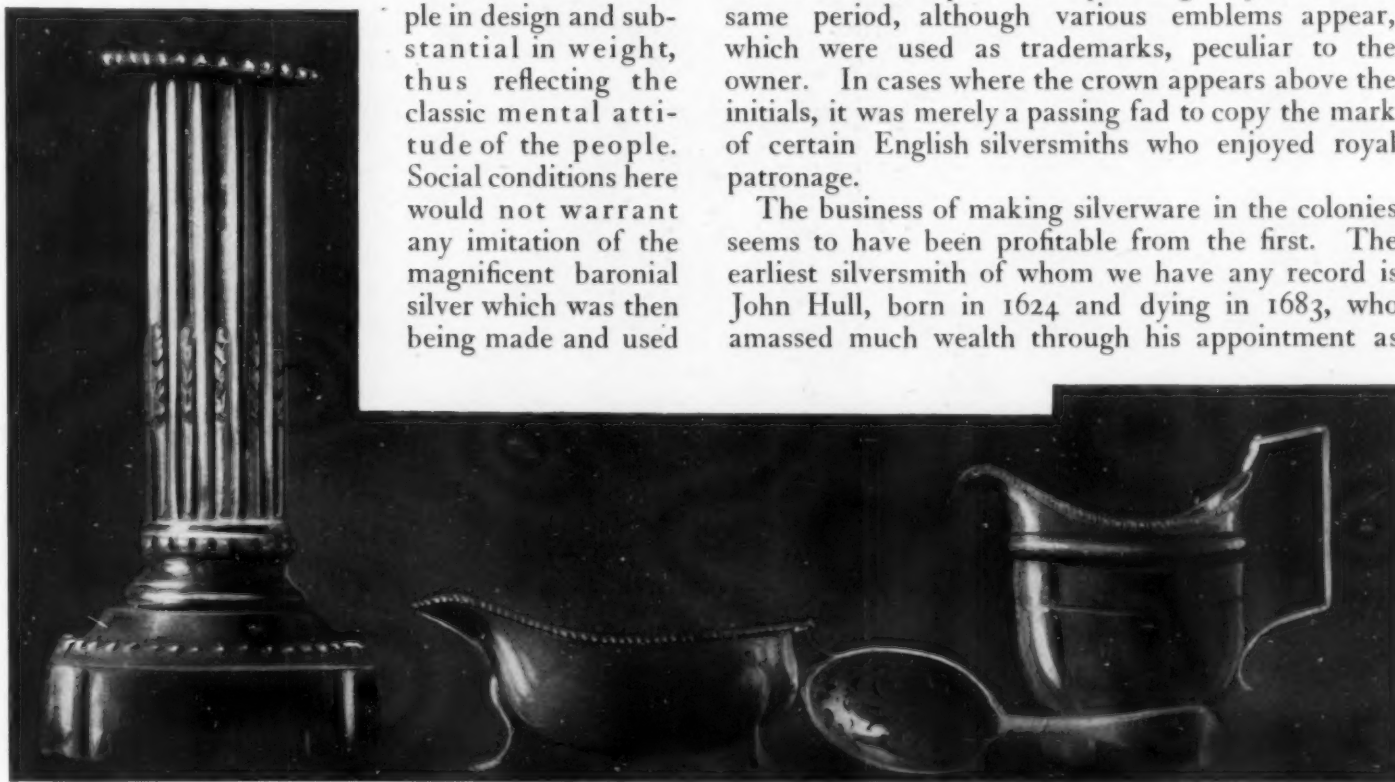
**T**HERE is a widespread and growing interest in all old silver, especially in such pieces as can be traced back to Colonial origin. Salem, whose commercial prosperity was well established by the middle of the seventeenth century, has some wonderfully good pieces of Colonial silver, many of which are family heirlooms.

The early American silverware, like our early furniture and architecture, is thoroughly characteristic of the tastes and mode of life peculiar to that period in America. It is simple in design and substantial in weight, thus reflecting the classic mental attitude of the people. Social conditions here would not warrant any imitation of the magnificent baronial silver which was then being made and used

in England. Many of the pieces in these collections come to us hallowed by a hundred associations and by traditions recalling the lives of our forefathers in all their manifold phases. The sight of the silver communion service recalls the early history of our New England churches, it reminds us of the devotion of the people to the institutions about which revolved both the social life and the political.

Only the identity of the maker is revealed by the hall-mark on American silver. There is no trace of the date letter, so prevalent upon English pieces of the same period, although various emblems appear, which were used as trademarks, peculiar to the owner. In cases where the crown appears above the initials, it was merely a passing fad to copy the mark of certain English silversmiths who enjoyed royal patronage.

The business of making silverware in the colonies seems to have been profitable from the first. The earliest silversmith of whom we have any record is John Hull, born in 1624 and dying in 1683, who amassed much wealth through his appointment as



Silver candlestick, Mrs. W. D. Northend, Salem, Mass.

Caddy spoon and two styles of creamer, all of the eighteenth century



Silver tankard, Mrs. William West, Salem, Mass.

Tankards, pre-Revolutionary time, from a Salem collection

Tankard, Mrs. D. P. Page, Newburyport, Mass.

mint-master for Massachusetts in the old days of the Pine Tree Shillings. His name, together with that of his daughter Betsey, has been immortalized by Hawthorne.

That Captain Hull did not have a monopoly of his trade is proved by the fact that a beaker, which was presented to the Dorchester church in 1672, was made by one David Jesse. Also, a certain Jeremiah Dummer, brother of Governor William Dummer, was apprenticed to John Hull, to learn the silversmith's trade, in 1659, and has sent out much work stamped with his own name. He also taught his trade to his brother-in-law, John Cony, who engraved the plates for the first paper money that was ever made in America.

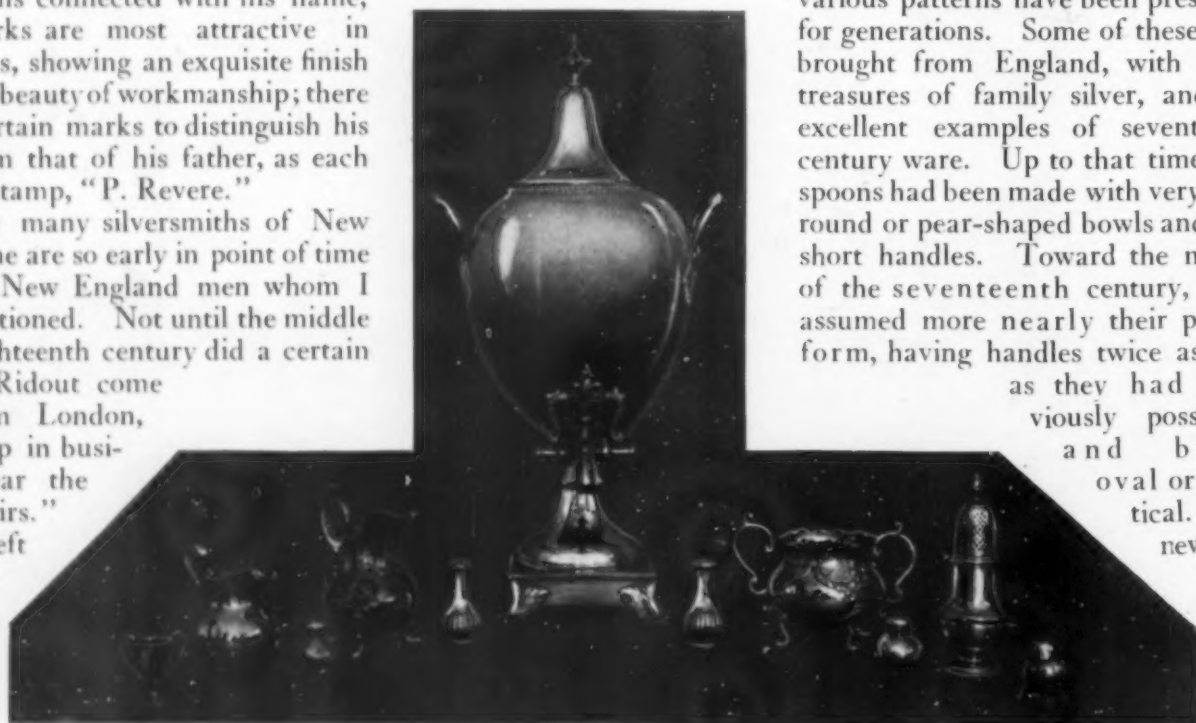
Most famous of all New England silversmiths, was Paul Revere. Besides the historic associations connected with his name, these works are most attractive in themselves, showing an exquisite finish and great beauty of workmanship; there are no certain marks to distinguish his work from that of his father, as each used the stamp, "P. Revere."

Of the many silversmiths of New York, none are so early in point of time as these New England men whom I have mentioned. Not until the middle of the eighteenth century did a certain George Ridout come over from London, and set up in business "near the Ferry stairs." He has left us beau-

tiful candlesticks, marked with his name, and by these is he remembered. At about the same time Richard Van Dyck, tracing his lineage to the Knickerbockers, made very handsome flat-chased bowls, and Myer Myers, seemingly of similar origin, set his stamp upon finely proportioned pint cans, having an ear-shaped handle and a pine-cone finial.

At a later date, shortly subsequent to the Revolution, a silversmith named Tragees made beautiful sugar bowls with urn-shaped finials; and Cary Dunn, who held a position in the Custom House, designed exquisitely engraved teapots, having the cover surmounted by a pineapple as the emblem of hospitality. These early makers stamped their names plainly upon their work, so that the task of approximating their age is thus rendered easy.

In most families silver spoons of various patterns have been preserved for generations. Some of these were brought from England, with other treasures of family silver, and are excellent examples of seventeenth century ware. Up to that time, teaspoons had been made with very deep round or pear-shaped bowls and very short handles. Toward the middle of the seventeenth century, they assumed more nearly their present form, having handles twice as long as they had previously possessed, and bowls oval or elliptical. The new style



Silver owned by Mrs. H. P. Benson, Salem, Mass.



## The Seductions of Old Silver

was sometimes dubbed the "rat-tail spoon," in derisive comment upon its long and slender handle. It will be seen from the picture that many of our earliest teaspoons were no larger than the present after-dinner coffee spoons.

It is probable that no other type of spoon possesses the interest, not to say the money value, of the old Apostle spoons, which came into fashion in the sixteenth century. At that time it was an English custom for the sponsors to present these spoons, as baptismal gifts, to the children for whom they made themselves responsible. A wealthy godparent would give a complete set of thirteen, but a poor man generally contented himself with giving simply the one spoon which bore the figure of the child's patron saint.

The complete set consisted of the "Master" spoon and twelve others. The "Master" spoon has upon the handle a figure of Christ, holding in one hand the sphere and cross, while the other hand is extended in blessing. A nimbus surrounds the head, in all these spoons. Each apostle is distinguished by some emblem. Saint Paul has a sword, Saint Thomas a spear, and Saint Andrew a cross. Saint Matthias carries an axe or halberd, Saint Jude a club, Saint Bartholomew a butcher's knife, and Saint Philip a long staff with a cross in the T. Saint Peter appears with a key, Saint James the Greater with a pilgrim's staff, Saint James the Less with a fuller's hat, and Saint Matthew with a wallet. Saint John has one hand raised in blessing, while the other holds the cup of sorrow.

Whole sets of these spoons are very rare. In fact, there are said to be but two whole sets in existence, with another set of eleven. One of these sets sold in 1903 for \$24,500, while another set of less ancient date brought \$5,300.



Tankard and spoon, owned by Mrs. F. Pousland, Salem, Mass.



Sugar bowl and sugar tongs, Mrs. D. P. Page, Newburyport, Mass.



Cruet stand, early part of the nineteenth century, private Salem collection

A single Apostle spoon, bearing upon its handle a figure of Saint Nicholas, and upon its stem the inscription, "Saint Nicholas, pray for us," sold in London for \$3,450, a few years ago. This is said to be the highest known price ever paid for one single spoon.

The oldest hall-marked Apostle spoon is dated 1493, while the most modern of which we have any record bears the date of 1665. It is probable that the custom of giving these baptismal presents began to go out of fashion at that period.

Other spoons of great interest, although not so old as the earliest Apostle spoons, are the curious little "caddy-spoons," which came into vogue with the first popularity of tea-drinking more than two centuries ago. The tea was at first kept in canisters, whose lids served as a measure. Then came into use the quaint and dainty tea-caddy, with its two-lidded and metal-lined end compartments, and a central cavity to be used as a sugar bowl. A favorite and poetic custom of the old sea-captains, upon visiting China, was to have their ships painted upon china caddies by Chinese artists, as gifts for wives or sweethearts at home.

Now since the sugar bowl was a part of the tea-caddy, the use of the caddy-spoon or scoop became immediately popular. All of these spoons have very short stems and handles, with bowls of fanciful design, perforated, or shell-shaped, or fluted. A few were made like miniature scoops, with handles of ebony; while others were perfect imitations of leaves, the leaf stem curling around into a ring, to make the handle.

In this country, caddy-spoons came into use after the

Revolution. Until very recently, they have been neglected by collectors, and were to be bought at a low figure; but all that is changed, and the price is from fifteen dollars upward in most cases, besides which, the purchaser must take his chances as to the genuine worth of his bargain, as many imitations are being put upon the market. It is no proof of genuine worth that the spoon may be bought in an antique shop on a quiet street of some sleepy old seaport town. This is just the spot likely to be chosen for perpetrating a fraud. The most common counterfeit is made by joining a perfectly new bowl to the handle of a genuine Georgian teaspoon that bears an irreproachable hall-mark. The unusual length of handle betrays the cheat, which can be further proved by the presence of a flattened spot, similar to a thumb print, where the bowl joins the handle.

Still another fraudulent specimen has a false hall-mark. These counterfeits were probably made outside of this country, perhaps not even in England. The hall-mark is the stamp of a head that bears no particular resemblance to George III., for whom it is possibly intended; a lion that may, perhaps, be near enough in design to pass for the royal British brute; and signs and letters, half-effaced, which in conjunction with the king's head and the lion, make up an imitation of the Birmingham hall-mark. Of course it would not deceive, for an instant, the experienced buyer, in a good clear light; but the shops are often darkened to a kind of twilight, and the inexperienced amateur detects nothing wrong about the spoon, which is usually made after some uncommon and attractive style.

As this fraud is of recent date, no examination would be necessary for spoons known to have been in a certain family for some years. These spoons were made of Wedgwood ware, china, glass, agate, or tortoise-shell, as well as of silver. There are beautiful silver ones in the shape of a hand or of a flower. In two cases, I have seen the spoon made to match the caddy. One of these sets was of decorated china, and the other of tortoise-shell set in silver.

Another spoon, which passed out of date with the caddy ladle, was the so-called caudle spoon. It might be well to explain to the present generation that caudle was a preparation of wine, eggs, and spices, which was commonly fed to invalids, in the latter part of the eighteenth century. The caudle spoon,

perforated or entire, but with a longer handle and smaller bowl than the caddy spoon, was employed to stir the mixture. It is now obsolete, as is the snuff spoon, another relic of the whimsical customs of yore. There was a season when it was stylish to carry a snuff-box, and to take a pinch one's self, now and then, or to offer it to a friend. The snuff spoon was used to avoid dipping the fingers into the powder, which would of course soil and stain both finger-nails and cuticle.

As the caddy was the companion piece of the caddy spoon, so the caudle bowl is associated with the caudle spoon. The Salem specimen stands six inches high, and has a capacity of three pints. It has two handles, and is embellished by a broad gadroon chasing at the base, and by fluted gadroon chasing about the body. The caudle cup, shown with it, is severely plain, but has a good outline.

Tankards, both with and without covers, were in common use, toward the close of the seventeenth century. In size, they varied from a capacity of one quart to that of three. They were often fitted with a whistle, by the blowing of which the butler's attention could be



Silver belonging to Dr. Hardy Phippen, Salem, Mass.

called to the fact that the tankard needed filling. From this custom, arose the old saying, "Let him whistle for it." The singular expression, "A plate of ale" comes from the fact that in old inventories, tankards are listed as "ale plates."

The largest Salem specimen has a capacity of one quart only, and is beautifully chased in a rose-and-pineapple design, around the body and upon the cover. This chasing is much worn, not only by the passage of time, but also by the pitiless polishing of the methodical New England housekeeper. This is a straight-sided tankard, with a well-curved top, which necessitates a long and tapering thumb-piece. The handle is large and well tapered, extending well above the rim. All these specimens belong to the Revolutionary epoch.

The style of silver made and used in this country during the first half of the nineteenth century is well typified by the sugar, creamer, and teapot shown in this article, and recognizable by the pineapple finial upon the teapot and sugar bowl. This style was originated by Cary Dunn of New York at the close of the Revolution, and won immense popularity. The pineapple which is its most notable decoration has



## The Seductions of Old Silver

always been accepted as the emblem of hospitality; while the primrose pattern about base and body is neat and tasteful. The lines in these designs are less severely simple than in some, but are excellent, nevertheless.

Another favorite style of this same period is shown in the graceful little pitcher whose sole ornament is the rosette where the handle joins the body. Rosettes were high in favor in the early part of the nineteenth century, and were shown in the furniture of that day as well as in the silverware.

The charming little pitcher which stands upon three legs is a veritable prize, literally as well as figuratively. During the war of 1812, our Salem privateers seized many a valuable cargo. Among the confiscated treasures was this dainty little silver pitcher, handsomely engraved, and bearing the coat-of-arms of a prominent English family. In the division of the confiscated goods, this article fell to an ancestor of Mrs. W. D. Northend, of Salem, who has received it by inheritance.

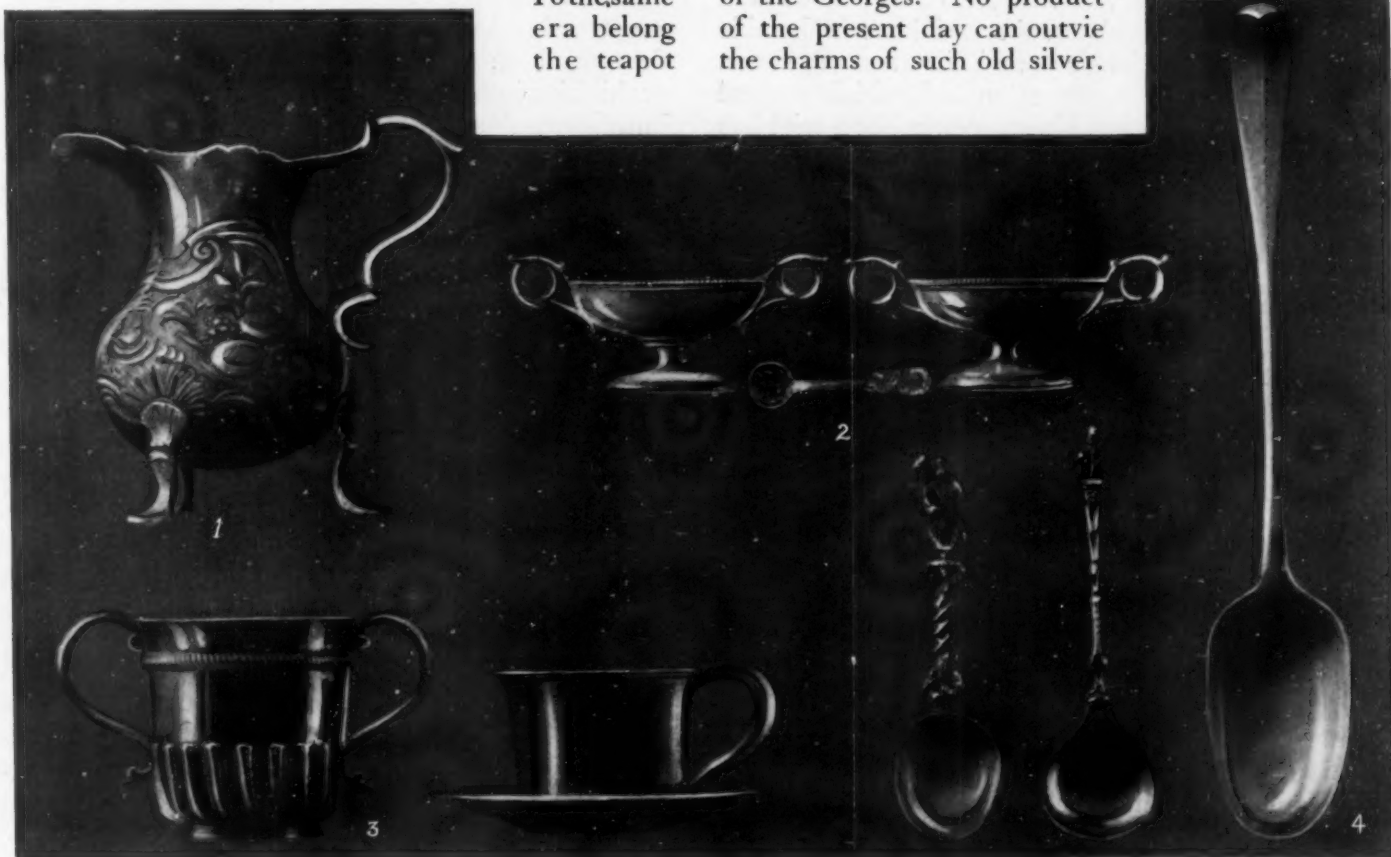
The cruet stand belongs to the same period. Fifty years ago, these were in common use upon the tables of our ancestors. Fashion has relegated them to the sideboard or to the top shelf, where the old-fashioned high silver cake-basket keeps them company in exile.

To the same era belong the teapot

with its rosette bowl and mushroom-shaped finial, which was among the bride's presents at a wedding in 1804. The sugar and creamer, which are shown, belong to a later date, as they were bridal presents received in 1867. The beauty of the lines in these two specimens falls far short of the standard set by American manufacturers of Colonial times.

The tall sugar bowl, mounted upon a standard, is more than one hundred years old, as are the tongs beside it, with their delicate acorn-cup pattern. In the larger piece, the rings which form the handles pass through the mouth of a dog's head, upon each side. The feet which support the standard suggest the work done in the furniture of that day by Chipendale, Sheraton, and their followers. To the latter days of the eighteenth century belong an endless yet interesting variety of patterns of pouringers, salvers, sugar bowls, perforated baskets for loaf sugar, tea and coffee pots and innumerable table utensils.

Another article which is now found but rarely is the nutmeg-holder or spice-box. The interior of the lid was roughed for use as a grater, and few were the "night-caps" but had a final touch added through its use. While the usefulness of the spice-box and the snuff-box has long since passed away, yet they are treasured because of the pictures they bring to the mind's eye of the old days of the Georges. No product of the present day can outvie the charms of such old silver.



1. Silver cream pitcher owned by Mrs. W. D. Northend, Salem, Mass. 2. Bowls for loaf sugar, and a caudle spoon, belonging to the Revolutionary period. 3. Caudle bowl and caudle cup of the same period, and in private collection. 4. Two Apostle spoons, and a rat-tail spoon, all dating back to the eighteenth century, from a private collection

# Building Indestructible Homes in Four Days

BY LAWRENCE LARUE

HAD some of our mechanical geniuses been contemporaries of Romulus, the old adage, "Rome was not built in a day," would probably have had but small excuse for ever existing. It would have been a close call at least, for had the old Romans possessed our modern method of building a substantial, permanent dwelling in four days with the employment of but a comparatively small number of men, it is difficult to surmise just what they would have been able to accomplish with their multitude of slaves and their prowess, push, and pluck which enabled them to perform so many seemingly impossible tasks. Under those conditions, Rome would probably have sprung up as quickly as some of the "mushroom" cities of our own Western frontier during a "boom," and its seven hills would have been covered with palaces, residences, and villas in almost as many days.

One would not ordinarily suppose that a house sprung up in a night, as it were, or in four days at the most, could furnish as substantial or comfortable living accommodations as one built of wood, stone, or brick in the construction of which several months must needs have been spent; but a trial has proved that such is the case, and concrete, both in the brick and "monolith" form, has stepped to the front as a building material which, in point of the ease and despatch with which it may be used, bids fair to rival the mud and clay of the Southern Indians; as a material which combines the strength of iron and steel with the enduring qualities of granite; is a substance as fireproof as asbestos, as impervious to water or dampness as stone; and as easily obtained as the cement, water, and sand of which it is composed. In consequence, all buildings constructed of reinforced concrete are fireproof, clean, cool in summer, warm in winter, as easily erected as an adobe or log cabin, and as strong and substantial as any refuge which our primitive forefathers ever hewed out of the solid rock in the cliff.

Let it by no means be supposed that concrete is new as a building material for it was used by the Romans several years before the days of Julius Cæsar.

It is evident then, that the progress has been made, not so much in the manufacture of the concrete, as in the methods of applying it in suitable shapes for forming the desired buildings, and it is in this that the two methods of "monolith" concrete construction now before the public differ. Thomas A. Edison's device, or idea rather, consists in constructing the

shell or mould of the entire house from steel or other suitable material and then filling this with the concrete. After this has dried sufficiently, the shell or mold may be removed and a building of solid concrete remains which will become harder and more substantial as time progresses. Houses built by this method are known as the "monolith" type as opposed to the pressed block style which, as the name implies, uses pressed blocks of concrete laid one above another as a mason would lay brick or stone. Construction of the latter type naturally necessitates a plant for the mixing of the cement, sand, and other ingredients, and machinery for forming the pressed blocks. Even then, when these have been transported to the building site, the work has progressed no farther than would be the case were the structure to be built of stone, and as a consequence, concrete as a building material has proved to be more expensive, even, than stone.

The monolith, or one-piece, method of concrete construction has been in use for years, but it too, demanded an initial outlay of capital that proved prohibitive in most cases, and in consequence, private buildings of solid concrete are exceedingly rare. Mr. Edison pointed out that the excessive cost of this construction lay in the fact that the molds, used for forming the frame or shell of the building and into which the concrete was poured, were of wood and consequently could be used but once, and that the erection of these same molds formed a large part of the initial outlay required. "If," argued he, "I could make some steel molds which could easily be erected and which could be used over and over again in the construction of successive buildings, I would be able to cut the cost of construction in half and build a completed house in a few days." Briefly stated, the outcome of Mr. Edison's reasoning resulted in the design of a complete hollow steel structure having the shape of the house to be built and which is to be completely filled from the top with the concrete mass. This concrete can be poured in twelve hours, and after the mass has dried sufficiently, the frame may be removed, and—behold, the finished house. If the concrete, as it is poured, be reinforced with steel rods, so much the better, as these serve to give extra strength and to prevent the walls from cracking.

It is evident that the chief objection to this method of construction will be found in the time and labor required to supply and erect the mammoth steel molds, and that many days might be wasted in the



## Building Indestructible Homes in Four Days

transportation and assembling of these. It is in the construction of these molds that the new method differs from the Edison system, and although in both cases the result is a concrete monolith, the similarity ends there. The new system uses a series of interchangeable molds in separate pieces, and by means of various combinations of these, different designs, shapes, and sizes of houses may be obtained. The progress of the work under this method would be somewhat as follows:—The molds and reinforcing rods are assembled and set up on the desired site the first day and the concrete for the first floor is then poured; on the second day the molds are changed and the concrete for the second story is poured, and so the work progresses, a completed story a day. For the average size of dwelling, the whole house could be constructed in four days.

It is not to be supposed that this will include the plumbing, electric light wiring, or paper hanging, but it does provide for floors, partitions, ceilings, staircases, porches, outside steps, fireplaces, mantles, and in fact, everything which could be considered a part and parcel of the house proper. Should any ornamental design be desired, either inside or out, patterns may be introduced in the proper molds.

The system of molds is not the only invention which contributes to the rapid completion of a monolith house, as is evidenced by the various devices in use in this connection. One of the most interesting of these adjuncts is the mixing machine which, when fed with the proper proportion of cement, sand, water, and crushed stone, will deliver a steady stream of concrete of the right consistency at the rate of sixty cubic yards every ten hours. With several of these machines operated by a small force of men, a sufficient quantity of well-mixed concrete can be supplied to fill the molds in the required time. Operated in conjunction with the mixers is the conveyor, of a special type which transports the concrete in a steady and uninterrupted stream to the molds; and by the use of these two labor-saving devices, a maximum amount of work can be accomplished with minimum attendant labor and consequent expense.

A study of the cost at which an ordinary eight-room dwelling can be erected by this method is interesting and instructive as showing the possibilities for relief which will soon be offered the dwellers of the tenement districts of the large cities. The original cost of the molds will be in the neighborhood of \$10,000, but as these can be used in the construction of thousands of separate houses and will probably be operated by contractors, the cost will be seen to be small when distributed among the individual buildings. The labor and material necessary for the construction of the house and the removal of the molds will probably aggregate in the neighborhood of \$1200, and if to this be added another thousand to cover the cost of interior decorating, plumbing, wiring, doors,

windows, and the like, we have a comfortable, substantial, sanitary dwelling erected at a total expenditure of a little over half of what any other form of construction would cost.

The fields which this cheap method of house building open up are practically unlimited, but undoubtedly medium-sized dwellings will probably offer the largest for the use of this method of concrete construction.

There is one thing a man should remember when giving his order for a reinforced concrete house: "As a man builds his house, so shall he occupy it," there can be no tearing down of this wing and adding of that, no cutting of a doorway through here or removal of a partition there, for alterations cannot be made after concrete has once "set." Dynamite is about the only agent suitable for such a task as demolishing, and the final cost of this process would probably be several times that of the erection of an entirely new building. Reinforced concrete structures are even earthquake-proof; it was a noticeable fact that the majority of the buildings which survived the recent San Francisco disaster were the monoliths of this type of construction—pretty good evidence that it would require more than the ordinary methods to tear down one of these "four-day mushrooms," and that they are built to *last*.

When one considers the number of concrete buildings in process of construction and already erected, and remembers the difficulties, excessive cost and disadvantages under which they were built, he realizes the field open to this interchangeable mold system which reduces the time, labor, and expense by half.

A striking example of the widespread use of concrete construction can be found in the newly completed shops of the New York Central system at Indianapolis. Here the large repair shops, store-rooms, supply houses, and even the workmen's dwellings are all built of concrete, and there is scarcely a stick of wood in the whole plant. Concrete makes the best foundations for stationary engines and heavy machinery such as derricks, cranes, steam hammers and the like, but this is probably the first instance in which this material has been used exclusively in the construction of the entire plant.

If this railroad, which like all other successful corporations is looking for the best results with the least attendant expenditure of money, has decided that concrete is the best building material for its purposes, its almost universal use when the interchangeable steel mold system is thoroughly installed may well be imagined. Then, it is to be hoped, there will be more of these "model towns" built with the workmen's homes erected near the factories, and with clean, well-lighted buildings replacing the dim, dirty, and ramshackle shops of many of our largest and most important industries.



## Making Repairs Underneath the Car in a Private Garage

By HAROLD WHITING SLAUSON

FOR years the comic papers and humorous periodicals have been devoting space to illustrations depicting mishaps to automobiles on country roads; and invariably the luckless owner or driver was shown sprawled on his back in a mud-puddle under the car trying to find the trouble. It makes no difference if the story which this picture was supposed to illustrate had plainly stated that the trouble lay in the radiator,—the repairs had to be made from a reclining position under the car. In fact this seems to the mind of the imaginative cartoonist to be the only possible way by which repairs may be made in the country. These pictures may have been more or less true to life several years ago when all motor cars had the engine and transmission in some nearly inaccessible place under the seat, but modern design with the power plant located under a removable front hood and the transmission system and clutch within convenient reach under the floor-boards, has done much to lessen the troubles of an ordinary breakdown, and temporary repairs can generally be made now from a much more dignified position than our artist friends would have us believe. Nevertheless it is oftentimes absolutely necessary when

in the garage for the chauffeur, or the owner if he does his own repairing, to replace some broken part or to make some final adjustment which can be performed only by obtaining a "worm's-eye view" of the car.

If the man who must work under the car is lucky enough to be in a garage where a pit is provided in the floor for such purposes, his troubles are fewer than those of his less fortunate brother who must squeeze his ten or twelve inches of chest between the floor and bottom of a car having from eight to fourteen inches of clearance. In a position such as this every muscle becomes cramped, the radius of action is limited, and a formerly good temper may be temporarily ruined.

At first sight it appears strange that so many of the new and so-called "up-to-date" garages have no provisions in the nature of pits to facilitate working under the car, but when it is remembered that many of these repair shops have cement floors and are located above the ground floor of the building, it will be seen that there are many obstacles in the way of properly fitting up a public motor car repair shop.

The owner of a small private garage does not have these troubles to



THE REPAIR PIT; TIGHTENING THE FRONT SPRING CLIP



## Making Repairs Underneath the Car in a Private Garage

contend with, particularly if his building is of frame construction with a plank floor and no cellar. In this case the floor may be cut away leaving an opening about three feet wide and from six to twelve feet long, depending on the size of the car. Into this opening can be fitted a well-made box which may rest on the ground below and which should be fastened to the opening above. It may be necessary to make a small excavation in the ground to accommodate the box at the proper depth, and should this be in a locality where there is any danger of surface water accumulating, the outside of the box should be lined with zinc and soldered where the boards come in contact with the ground. This will keep the bottom and sides of the pit dry at all times, and will add to the durability of the box by preventing it from rotting. The depth of this pit should be about three feet and a half for a person of ordinary height, provided a seat is placed in the box. A convenient seat may be made by fastening a wooden cleat along the entire length of each side of the pit about eighteen inches from the bottom, and using these as supports for the ends of a plank of a length equal to the width of the inside of the pit.

This forms a removable seat and shelf for tools which may be placed in any part of the pit by merely sliding the board along the cleats. In case some work on the car requires a higher seat an additional row of cleats may be placed along the sides higher than the first ones described, and the board or plank used in the same way. A break should be made in this upper row of cleats to admit of the board being placed on the lower set when necessary.

It is of course advisable to have a strong cover made to fit over the top of the box flush with the floor of the garage, as it is probable that the pit will be used so seldom that it will be a decided advantage to be able to move the car to all parts of the floor with no danger of running it into an unprotected opening. This can be made in two sections with a couple of handles sunk in the upper surface of each part to allow of easy removal. The pit should be made as large as practicable so that, no matter what part of the underside of the car is being repaired, the opening will extend two or three feet beyond one axle of the automobile, thus making it easy to enter and leave the pit.

Electric light is the only form of artificial illumination which should ever be used in the vicinity of a

motor car or gasoline tank, and as nearly all large and small towns are now equipped with plants supplying even the farm houses in the environs with electric power, the installation of this, the only safe light for a garage, should be an easy matter. In addition to the minimum danger from fire which the use of electric light entails, it has the advantage of being portable, and by means of a long flexible cable a single incandescent lamp can supply light for the whole garage and car. It is convenient to have a socket or receptacle hanging down to within a few feet of the hood of the car, as adjustments to carburettor, spark plugs, magneto, oiler, coils, and in fact nearly all parts of the motor, may be made without moving the light. For the illumination of the underside of the car and other inaccessible places, special lamps are provided. These are attached to one end of a long flexible wire, the other extremity of which may be screwed into the socket in place of the ordinary



CAR STANDING OVER PIT

globe. The special globe is screwed into a wooden or hard rubber handle through which the wire passes, and is surrounded by a cage of heavy wire which permits of handling the lamp rather carelessly with small danger of breakage. This combination of handle, cage, and lamp is exceedingly useful as a "trouble hunter," and as the cage terminates in a hook, the light may be hung on any part of the car or

mechanism which gives the best illumination for the work necessary, and there is small excuse for the repair ever being made in shadow, as would be the case were a stationary light used.

Where the floor of the garage is constructed of wood it is of the utmost importance to see that the boards are kept absolutely free from gasoline and grease, as when they are once soaked with these substances the danger from fire is greatly increased. Every garage should be provided with a flat zinc pan to be placed under each car to catch the drops of oil or gasoline which are almost sure to accumulate under an automobile when standing still. These pans should be washed off frequently, and in this manner the floor under the car may be kept comparatively free from grease and dirt. If such precautions of cleanliness apply to the garage floor, they are doubly necessary for the floor of the pit, and it is of the greatest importance to immediately remove any oil, grease, or gasoline which may have been spilled there. Oily waste should never be left in the pit, and it is this tendency of the pit to collect all kinds of dirt

## House and Garden

and refuse from the building that forms the chief objection to the use of one in a small garage. When a man does his own repairing, however, it is probable that he will be impressed with the necessity of these precautions, and realizing the danger from spontaneous combustion in the confined space of the pit, will make sure that no oily or greasy rags are allowed to remain there after the cover is replaced. Spontaneous combustion has been the cause of many "mysterious" fires which could easily have been prevented had due precaution been taken. Cases have been known where a piece of oily waste left in the bottom of an open motor boat was the cause of a fire which destroyed the whole craft, and if spontaneous combustion can take place so readily in an uncovered space, how much more is it liable to occur in the enclosed pit where the air may remain unchanged for several days at a time!

It should be remembered that the method of fighting a fire which occurs in a pan or tank of gasoline is entirely different from the ordinary practice where great quantities of water are used. In fact, if a fire should break out in an open pan or pail of gasoline, no water whatever should be employed as it does not serve to quench the fire in the least and is liable in addition to scatter the burning liquid to all parts of the floor.

A case of this kind occurred a few months ago in one of the large garages in New York City. A "helper" was cleaning an engine with a brush and gasoline. A pan was placed under the engine to catch the drippings, and in some unaccountable manner the gasoline on the motor caught fire and this was communicated to the contents of the pan.

A pail of water was thrown on the burning liquid, but this only served to scatter the fire in every direction and had no effect whatever in putting it out. It was only after the application of chemicals and sand

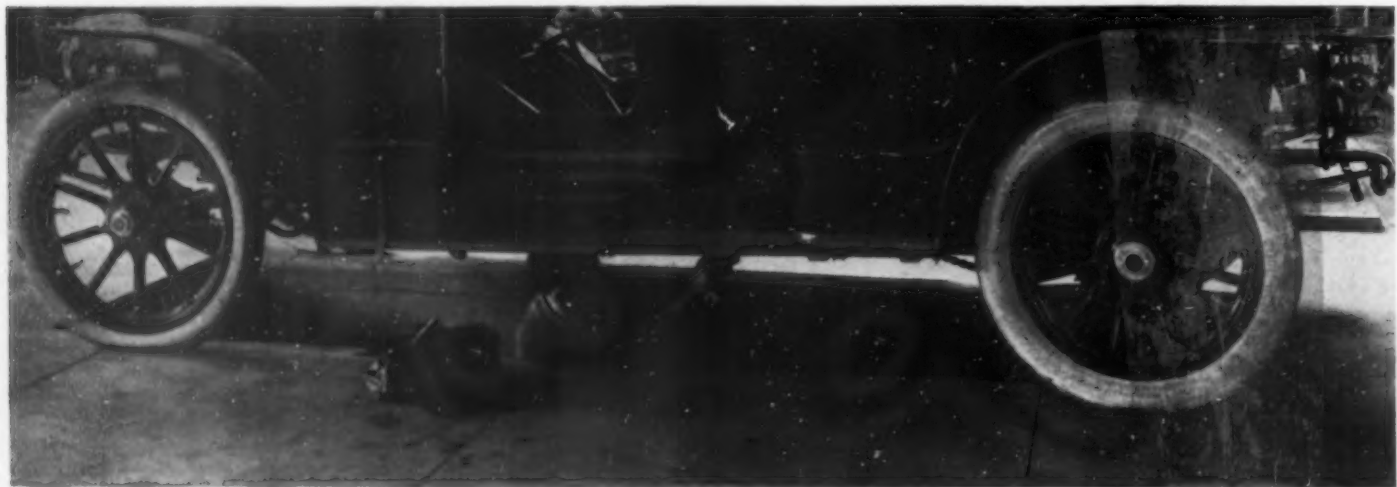
that the fire was got under control, and had the building not been absolutely fireproof it is certain that great damage would have been done. This well illustrates the advisability of having some kind of chemical fire extinguisher near at hand in the garage.

The most efficient of these chemicals come in the form of a powder put up in a long tube. In case of fire, the top of the tube is pulled off and the contents thrown at the base of the burning material, and the powder, at the instant of coming in contact with the intense heat, forms fumes which cut off the supply of oxygen and literally "starve" the fire. A pail of sand is also useful for smothering flames upon which water will have no effect. It is always well to carry one of these tubes of chemicals in some accessible place on the car, and by so doing many a disastrous fire in an automobile may be avoided.

For garages in which pits cannot be provided, special frames are made upon which the car may be run.

These frames are two or three feet high and as they are provided with casters, they may be moved to any part of the garage. The disadvantage of this method of getting at the underside of the car, however, lies in the fact that it will be rather difficult to move a heavy automobile up the inclined plane leading to the frame without the aid of its own power, and as this is often impossible owing to the nature of the breakdown which it is necessary to repair, it will be seen that this device is hardly suited for use in a small private garage.

The average man who does his own repairing will not only find that he can cut down the expenses of maintaining a car, but that he will also take a renewed interest in motoring due to the increased knowledge of the details of the mechanism and construction of his automobile with which such work must imbue him.



THE PIT SHOULD BE AS LONG AS THE CAR AND ABOUT CHEST DEEP. IT SHOULD ALSO BE PROVIDED WITH REMOVABLE COVERS



## THE EDITOR'S TALKS AND CORRESPONDENCE



The Editor, Margaret Greenleaf, wishes to extend a personal invitation to all readers of *House and Garden* to send to the Correspondence Department, inquiries on any matter pertaining to house finishing and furnishing. Careful consideration is given each inquiry, the letter and answer being published in due time as matters of interest to other readers. Where an early reply is desired if a stamp and self-addressed envelope are enclosed, the answer will be sent. No charge whatever is made for any advice.

A NUMBER of the letters which have reached us recently voice a difficulty which is evidently not unusual with the woman who is fitting up her rooms. In response to these letters, our talk this month will deal with the selection and disposal of the small decorative things of the home. We offer some excerpts from two of these letters which will serve to explain themselves.

"What are the little touches," one correspondent asks, "which give charm and individuality to a room? It is so difficult for the inexperienced one to decide what is needed."

To quote from another letter at greater length: "My house is finished and while everyone says it is good, as there are no jarring colors and no incongruous pieces of furniture (thanks to *HOUSE AND GARDEN*), we none of us feel that it is home. In some strange way it lacks expression. In our living-room we have the usual amount of chairs, small tables, curtains, rugs, bookcases and books, statuettes and vases on the mantel and a rubber plant on a stand in the window. This describes in a way the effect of all of the rooms. They look ready to be lived in but that is all. Perhaps this is vague but I am hoping you can see our trouble and help us."

William Morris's creed, "To have nothing in the house which you do not know to be useful and believe to be beautiful," is an excellent guide for those who can follow it understandingly, but there are others to whom the question of deciding upon what really *is* beautiful, is difficult.

The character of the room, the uses for which it has been designed as well as its architectural detail, go far toward determining the small things that should be used in its decoration. It is much better to err on the side of too little in the way of decorative small things than to have one piece too much.

The Japanese idea of a single rare vase holding a few perfect blossoms is becoming recognized as good decoration. We have not, however, reached the point of emulating this in its entirety, but we are

growing more fastidious in our selection of vases and other ornaments as well as in the arrangement of these. A single choice piece should be featured in a way that will give it its full value.

To generalize: candelabra, candlesticks, quaint boxes, or a collection of small ivory carvings, good pieces of bronze, bits of old brocade utilized as table covers, light screens and book covers, any and all are attractive and decorative features of a room and where the proper form and color is selected for these, they supply the "little touches" which render it livable and inviting. Lamp shades are important factors in such decoration. They are quite as effective and beautiful if of home manufacture, but they must be suited to the room in which they are used. Large wire frames may be purchased for thirty cents and covered with liberty silk or any thin silk of coloring appropriate to the room. This must be put on laid in close folds and finished with a double one inch frill at the top and bottom or a narrow gold galloon may be substituted. The folds must be drawn tautly over the frame. These shades could be used on lamps in rooms of more or less formal character where door hangings are of velvet or silk and the upholstery of brocade or similar fabric. In other words, such shades would not be suitable in rooms where mission furniture is used and the rough arras cloth and the stenciled linen draperies prevail. Thin Dresden silk, showing tiny bunches of delicately colored flowers on a white ground, also makes effective shades in rooms where the French idea is prominent in the decoration, or the shades made from deep ivory vellum which show dainty Empire and Colonial designs worked out in water-colors, are charming and may be introduced safely in rooms simple in decoration or where the period idea is carried out in rich furnishings.

In selecting the lamp and lamp shade for a living-room or library where the decorating and furnishing shows simple color combinations and plain lines, a lamp of dull old brass or bronze or unglazed pottery (of soft blue, green or rich yellow brown color) is a good

choice. The shape should be low and heavy, the shade spreading. Whether of pierced brass or of very open wicker, the lining should be of thin silk. Shades made of the same metal as the lamp, framing softly colored frosted glass, are suitable also for rooms of this kind.

The screen is a useful and beautiful feature in the fitting of a room. A wide range of choice in these is possible. If the frame is of wood, of two or more leaves, this should be the same as is used for the standing woodwork or furniture of the room.

Palms and ferns set in wicker covered pottery, brass or bronze jardinières, are highly decorative. While there is wide personal choice in the selection of house plants, we feel that the one least conducive to beauty is the rubber plant. Low stands or tabourets matching the furniture used in the room should hold the plants unless one is fortunate enough to be enabled to give up a sunny window to their accommodation. This latter disposition of them is particularly attractive in a dining-room.

Well chosen and properly placed desk fittings are also decorative features and not to be overlooked. These may be of the simplest description or of silver, brass or bronze and do equally effective work in beautifying the library or living-room in which they may be used.

The real point to be borne in mind in adding these "finishing touches" to the room is to select suitable and harmonious articles and colors. As will be seen, most of the features recommended are those which are decorative and useful and one finds after all the rule of the artist is not a difficult one to live up to.

### CORRESPONDENCE

#### FINISHING AN ATTRACTIVE HOME

**W**E are finishing a house, the plans of which I enclose. It is set on a hundred foot lot in a town of five thousand, on the northwest corner of a block.

The woodwork downstairs is pine finished with weathered oak, upstairs, except bath-room finished in a gray green satin. The floors are oak downstairs and pine upstairs. All woodwork and floors have a waxed finish. We have some Oriental rugs, the largest four by ten feet. Small Scotch rugs upstairs. The furniture throughout is mission oak in Craftsman style, downstairs. Mahogany in the front room, bird's-eye maple in the guests' room.

We would like suggestions for the exterior color of the house. It is frame. The color for walls and ceiling in the halls and in the different rooms, also window hangings. We would like a flat oil paint on the walls which are now gray plaster having a smooth finish.

There is a chair rail in the dining-room, hall and

bath-room. Would like the name of the firms having flat paint for walls, also a hard white finish for the bath-room walls. The woodwork is white enamel. Full suggestions for electric light fixtures for each room with the name of firms carrying these. I enclose a stamped envelope for reply as we desire the work done at once.

**Answer:** Allow us to thank you for the clear and concise way you put the requirements for your house before us. We are pleased to send you the following advice. Names of materials advised and the addresses of the firms manufacturing them have gone forward to you by post in accordance with your request.

For the exterior treatment of your house as shown in the little drawing on your letter, we would suggest a shingle stain in a shade of moss green for the roof. The body of the house brown, trim ivory white, porch floor gray. You have failed to mention whether the gables are shingles or siding. If shingles, use a darker brown shade than the body of the house shows. If the gables are of siding, they should be treated with the paint advised for the body of the house.

To obtain the best flat finish in oil for your walls we heartily advise the material of which we send you the name. This comes in a number of beautiful soft colors. Also there is a finish made by the same firm suitable for bath-room walls which is sanitary and washable.

For the rooms on the first floor with the exception of one, we suggest tints for the entire wall. For the dining-room we advise a paper to be used above the chair rail. This will add much to the decorative effect of the room taking away the monotony of the plain wall. The wall below the chair rail to be tinted green with the flat oil paint. The paper advised while inexpensive, is particularly decorative in effect as the green foliage of the trees against the tan background has the effect of a wash water-color. This will harmonize well with the weathered oak woodwork.

The tint advised for the adjoining living-room is a slight variation of the tan shade shown in the background of this paper. The brown velvet recommended for door curtains and the printed tapestry in shades of tan, green and mahogany brown, suggested for over draperies and sofa pillows, will be found to harmonize well with the wall tint and make an agreeable setting for the mission furniture in this room. A more yellow shade of tan is recommended for the tint in the hall.

For the bedroom walls of your den on the second floor, where the gray green stain has been used for the woodwork, we recommend a dull sage green tint for the wall. We send you a sample of cretonne in



## The Editor's Talks and Correspondence

harmonious colors and suitable design to use with this. Ecru draperies should be used next the glass.

For the guest-room a delicate tint is suggested for the walls with white muslin curtains embroidered in pink at the windows with over draperies of a French fabric showing garlands of roses, and blue ribbon in the design, against a cream ground. For the owner's room an upper third treatment of the wall with wall-paper is suggested. The paper selected is a particularly dainty one showing spring flowers in delicate tones of dull pinks and soft yellows. Overdraperies of yellow linen with embroidered muslin curtains next the glass should be used in this room. The wall to be tinted a faint tone.

The selection of electric lights for the various rooms of your house should be made with care. Designs of simple lines should be chosen. The October number of *HOUSE AND GARDEN*, contained an article which will probably be of service to you as this offers a number of illustrations of lighting fixtures suitable for such rooms as you describe. For your dining-room the hanging shade for straight electric would be a good choice. The finish for the fixtures throughout the first floor should be the same. Old smoked brass or wrought iron effect would either of them be suitable.

### TO REMOVE DAMPNESS FROM THE CELLAR

We have had much difficulty with dampness and odor of mould in the cellar of a house which we built less than a year ago. Having found that *HOUSE AND GARDEN* is willing to help its subscribers in all directions, we come to you with the request that you will advise us practically what to do in this emergency, as we do not feel that we can go to the expense at present of digging to get to the outside of the cellar wall which doubtless would be the correct way to handle this. We enclose a self-addressed and stamped envelope asking the favor of a prompt reply.

Answer: We are glad to be able to send you the name of a material which will probably meet your needs. This is a material which may be applied like paint to your cellar walls and is impervious to dampness.

### EXTERIOR COLOR FOR SHINGLED AND CLAPBOARDED HOUSE

We are just beginning to build a small house which will be our permanent home. So many of the houses in the small town in which we live show unpleasant color combinations that we have determined to be very careful in making our choice of stain for the new house. No paint will be used except for the trim and porch pillars. The drawing we send you will show you that these are not heavy.

Kindly recommend a suitable stain for the shingled upper story and the clapboard walls of the body of the house, also the stain for roof and the color for exterior trim. The house sets close to the street and has a brick red painted frame house as its nearest neighbor.

Answer: Select a good moss green shingle stain for the roof of your house. For the shingles of the body of your house, a dark brown stain is recommended, lower clapboarding to be treated with a lighter brown stain. Ivory white paint is advised for the trim. This will give you a harmonious scheme and one which will look well in any surroundings. We are sending you by post the addresses of firms from whom you can obtain samples of shingle stain and paint that you may select exactly the right shade.

### SELECTING THE MANTELS FOR THE HOUSE

I have been greatly interested in what *HOUSE AND GARDEN* has had to say recently in regard to mantels and chimney-pieces. As I have a house now in course of construction, the first floor of which opens up well, I am desirous of having some personal advice as a guide to me in selecting the mantels for hall, dining-room, library and reception-room. Kindly advise me of the best choice to make.

Answer: We regret that you failed to send your address, as before giving you any advice, it is quite necessary that you furnish us with further information. A rough draft of your floor plan showing the relative positions of rooms and the position of fireplace in each room, would be of great assistance in giving you practical aid. Also it is essential that we have some idea of the general architectural design of the house; the character of the woodwork, and the detail of same should be described. With this information in hand we can be of service to you.

## Timely House Suggestions

LEILA MECHLIN

**O**CTOBER is chiefly given to matters of furnishing but November recalls attention to the house itself. Cold weather is at hand and preparations must be made to withstand the winter storms. Have the storm doors and windows put up without delay, fasten up the cracks, see that the weather strips are in condition, but don't forget that no matter how low the mercury in the thermometer drops, fresh air and ventilation are essential to health. Provide for warmth, guard against drafts, but don't make it impossible to give every room in the house a good daily airing. Where hot air is used for heating,

a bowl of water placed near the register will prevent extreme dryness of the atmosphere which sometimes in severe weather becomes oppressive.

Have the guard rail put on the front steps now before the sleet and ice come, and see not only that the balconies where the snow may lodge are covered but that there is no danger of avalanches descending upon the unsuspecting pedestrian from the roof. And, by-the-way, when the ice and snow do come and the steps and sidewalk are dangerously slippery try sawdust instead of ashes for the purpose of security. The latter is bound to soil the clothing and track up the floors.

Now is the time to remedy leaking faucets and thus avoid frozen drains. New washers are frequently all that are needed and these can readily be put on by the man-of-the-house if he is not entirely devoid of mechanical skill. The cold storage room may also well be arranged now and put to actual service. Have the window barred and screened, the door tightly fitted and secured, the shelves sand-papered and adjusted to suit the need. It will prove a great convenience.

See also that the vacuum cleaning system, if one is installed, is in good working order; now that the rugs and carpets are down and the fires lighted it will be in constant use, and to be effective must be perfectly adjusted. The electric light wires also should be gone over so that if the insulation is worn at any point it can be renewed.

This is the month of short days and long evenings so it is especially desirable to give thought to the artificial lighting of the house—not only to the fixtures but the quality of the illumination. The comfort of the family greatly depends upon this. Have all lights agreeably screened, as glare is always painful, and have enough to more than make the "darkness visible." Some beautiful effects are now gotten by concealed lights, and if a new house is being finished bear this in mind, but even with the old-fashioned fixtures excellent results can be obtained. Lamps with simple shades are always attractive and should be so placed as to be really accessible and useful. For receptions or other occasions where there is stately formality, a flood of light from above is good, but for libraries, sitting-rooms and the like, used informally, less light lower down is desirable. One must use his or her own judgment and taste, but no amount of thought expended upon this subject will be found to be wasted.

In November, the dining-room may well come in for special consideration. This from the esthetic standpoint alone should be one of the pleasantest rooms in the house and yet it is often one of the dreariest. It should neither be over-furnished, nor bare, but simple and hospitable. Elaborate draperies are here out of place, though the windows should by all means be suitably curtained. The dining-table,

chairs, buffet and serving-table, should be the only furniture, excepting, of course, the china and crystal closets if they are not built in. The floor should be polished and covered with a rug—the walls painted or papered and not decorated with plates. It should neither be a sitting-room nor show place. Exceedingly pleasing results can be got with simple materials. Two of the most attractive dining-rooms that the writer has seen were in summer cottages and represented in their furnishings an amazingly small outlay of money. Even if the dining-room is in the basement there is no need to despair—almost any room can be made attractive if it is tastefully furnished and appropriately lighted.

This is a good time also to make resolutions in regard to the bric-a-brac—to start an active reform, eliminating much which is superfluous and yet has gradually been given place. Try the Japanese method; pack away some of the things and enjoy your possessions a few at a time. Unless a piece of bric-a-brac is worthy of this distinction it is of no worth at all. Do not clutter the mantels, the book-cases and the tables with articles of no art merit—have a few things that are really a delight.

And now one may well be reminded of the desirability of using, winter as well as summer, flowers for decorations; or if not flowers some living green. A pine branch or a bunch of other evergreen will be a real joy when the snow is on the ground, and will give an air of livableness to the room in which it is placed. Not placed behind a picture, or fastened on the wall, but in a vase on a table where it will really signify.

## Timely Garden Suggestions

JOHN W. HALL

THE thought of finality in any form is not inviting; if in connection with the garden it would seriously detract from the pleasures incident thereto. It is, therefore, fortunate, that some actual work is necessary to be done each month. Now the lawn must go into winter quarters; rose plants and shrubs of all kinds require attention; weeds and trash should be removed from among fruit trees so as to leave no hiding place for insect pests; there should be a general cleaning-up all along the line.

It is especially important to now give attention to the rose plants. Some prefer to leave the bushes to freeze back, but unquestionably where protected by straw being tied about them they do better and produce more perfect flowers. Not only the roses but shrubs of all kinds should be liberally mulched. An application of pulverized sheep manure about the base of the plants, covered by a mulch of leaves which ordinarily can be raked up about the garden this time



## Timely Garden Suggestions

of the year, will effect an early and vigorous spring growth. The mulching of rose and other plants, the roots of which are near the surface, prevents alternate freezing and thawing. Therefore in latitudes where the roots are liable to freeze, or freezing thaw out during the winter, heavy mulching should be done.

Chrysanthemum exhibitions are features this month. It will be well for the gardener to attend one or more of these shows. In all probability there will be seen a variety of the flower the acquisition of which for next season will be very desirable. Some of these exhibitions are remarkable for the variety and fine quality of the blooms shown.

The Crimson Rambler and all other roses in pots should be kept rather dry, with full exposure to the sun, that the wood may become thoroughly ripened to better withstand winter freezes.

Tree planting is now in order. Planting now means the gain of a season with many trees, and it can be done vastly more satisfactory than in spring.

Plants which are desired to bloom by Christmas should show buds by the 10th or 15th of this month. For forcing give the plants the best possible sunny location indoors where a minimum temperature of not less than sixty-two degrees is maintained; give liquid food at least twice a week. For succession of blooms, advance the plants to the light in the house.

Hybrid perpetual roses, pots or boxes, do best when left out until rather severe weather sets in. It is a mistake to drench rose plants after they are housed: they only require sufficient water to keep them from shriveling.

When the annuals have been exhausted; when but few perennials are seen, the Japanese anemones come in their loveliness and beauty. There is nothing more charming than the "wind flower." A sheltered position, yet with plenty of sun and protection in the event of early frost before bloom is necessary.

Lily-of-the-valley and spiræa are now coming to hand. After unpacking soak the clumps and pips for a few hours and keep either in the open ground or a cold frame where they will freeze. The roots must be frozen before forcing is begun.

Lily-of-the-valley is clamorous for a brisk, moist heat of from seventy-five to eighty degrees, while the bottom heat may be raised to ninety degrees. The pips may be placed in sand, loam or moss, and kept close and dark until grown about three inches. Then admit light to allow development of foliage; the flowers are not half so beautiful without foliage.

If the spiræa is not to be used until Easter let it remain dormant for some time yet. The best varieties to grow are *S. compacta grandiflora*, *S. astilboides floribunda*, Gladstone, and Washington. The two latter are comparatively new varieties.

How often does the house plant need to be watered ?

Just as often as it needs it is the only logical answer. Nor is this any arbitrary answer. The weather, atmosphere and temperature of a room may vary so much that no rule as to watering at regular intervals would apply.

A good test is to strike the pot sharply with a hard implement, and if the sound is sharp and clear the plant needs water; if the sound is dull, water is not needed. When water is needed give a good watering.

Set pots in saucers or plates. Cleanliness, drainage and air passage are then provided and all roots get the necessary supply of oxygen to induce growth.

Mignonette calls for cool weather. The plants should be supported before they become too large. Disbud to secure stout stalks. Night temperature of forty or forty-five degrees is sufficient. Keep the benches moist and apply liquid manure in periods of ten days.

Tuberose, gloxinias, ackinenes and begonias are to be put away. Do not place them too near hot water or steam pipes. Do not let the pots become sodden from drippings from the benches.

Have a supply of turf cut and stacked. If fern fibre of sphagnum moss is needed now is the time to provide for all requirements.

Some of the bulb dealers are offering this year choice collections of hardy bulbs for outdoor culture. There are but very few sections of the country but where hardy bulbs can yet be planted in the open—in beds and in the lawn. The very finest outdoor displays of the early spring months are obtained from bulbs planted about this time. What is more charming than a bed of hyacinths and tulips following close upon the disappearance of the winter snows? Brilliant effects can be had by massing different colors in hyacinths, having regard for those that grow about the same height and bloom at the same time.

Tulips are unequalled for brilliancy of coloring and beauty of form. There is nothing more popular for bedding of all the hardy bulbous plants. In selections, as with the hyacinth, have regard for color and average height to get the best effect. The best plan is to allow a reliable nurseryman to make the selection.

The Bermuda Easter lily is easily grown and can be forced into flower in a very short time. It is well adapted to garden culture, but in latitude north of Washington should have good cover of ashes or litter to protect during the winter months.

Iris (fleur-de-lis) can now be had. The Spanish iris (*Iris Hispanica*) is grown largely by florists. Protect lightly during the winter months and about April cover the beds with glass; the flowers will be ready for cutting in May.

Crocus, narcissus, and anemones do better planted now in beds. They require only little protection and give good results in early spring.

## Garden Correspondence

W. C. EGAN

## PLANTING WILD FLOWERS

OUR country house is on a place of eighty acres in Cooperstown, New York, with frontage on the lake. There is a beautiful brook and I should like some suggestions as to planting wild flowers along its course which is shaded by fine trees. Can daffodils be sown or planted along the lake margin with chances of success, if left to themselves I mean? Please give me the address of reliable gardening firms for flowers and vegetables.

W. E. G.

You are fortunate in having a place that evidently must have many possibilities for charming effects. Being large in area, and having the unusual advantage of water effects of two distinct characters, with all their changeable and varied forms, it is best that you employ some reliable landscape engineer to visit it and suggest the planting. Light and shade, elevations, surroundings, and so many things, enter into the proper conception of what should be done, that to do it right, one should be on the spot to study its characteristics. If you employ any one, be sure he is one who understands his business. Get a landscape engineer of reputation. A carpenter may be a good carpenter, but you would not trust him to design your house; so, too, a gardener may be a good gardener but fail when he comes to landscape work. If you want to have the fun of laying out the place yourself, and stamping it with your own individuality, you will find a world of pleasure in it. Alfred Austin says, in "The Garden That I Love," "The moment I enter a garden I know at once whether it is the owner's garden or the gardener's garden. Nearly all large and costly gardens are gardener's gardens and for my part I would not take them as a gift."

Note what wild flowers are there and the positions they occupy. Save seed from them and raise young plants, or obtain the same plants elsewhere, and plant with those in place, endeavoring to plant in masses or colonies. Then obtain from some reliable nurseryman any of the following hardy perennials which should do fairly well in the situation you describe: Globe flowers—(*Trollius*), hemerocallis, several varieties; tall garden phlox, iris, especially the German and Siberian varieties; asters, loose-strife (*Lysimachia clethroides* and *L. punctata*), golden rods, Galega, in variety; everlasting pea, yarrow, ferns—especially the ostrich fern, *Monarda didyma*; heleniums, lobelias, hibiscus (crimson eye), and others the nurseryman may suggest.

You can grow the narcissuses on the bank where the

moisture will not injure them in the winter. *Narcissus Barrii conspicus* is one of the most robust and lasting.

## TREATMENT FOR A CITY BACK YARD

I am about to move into a city house on a fifteen foot lot, the house facing south and would like to find out through your correspondence department the proper treatment for the back yard. It is in New York. It is surrounded by a high wooden fence and measures fifteen feet by twenty-five feet. There is a grass plot in the center and at the east and west sides are strips of earth with half dead grass one and one-half feet wide and at the north end is a strip about six feet by fifteen feet, also grass. The earth is poor and stony.

What can I do to raise grass in the center plot? It does not get very much sun as you see. I wish to have flowers or shrubs at the sides and back that will bloom before July 1st and after September 1st. Can you advise me what to plant and how to prepare the earth and when to plant?

Mrs. K. W.

The situation is certainly one surrounded by difficulties. If the grass in the center plot looks fairly well I would wait until spring and then give it a good dusting of pulverized sheep manure. Before doing so rake the surface most thoroughly with a sharp iron-toothed rake in order to get out all moss, creeping and other weeds. Obtain from a seedsman a grass seed for shady places, sow it over the raked plot, and roll it well before putting on the manure.

The narrow sides are too shady for almost any grass. Spade them up deeply and add plenty of well-decomposed stable manure and let the surface remain rough all winter to obtain the benefit of the action of the frost. Treat the six foot strip the same way. You want plants that bloom before July 1st and that will stand some shade. Try the columbines.

The most reliable are *Aquilegia Canadensis*, *A. chrysantha*, and its hybrids and the common European *A. vulgaris*, but it is better to renew them about every second or third year. For fall blooming plant the improved Black-eyed Susan, *Rudbeckia triloba*. This is a biennial that self sows freely. *Vincæ minor*, the myrtle, will grow there and make a good carpet and in the way of shrubs, the wild roses *Rosa lucida* and *R. blanda*, should do fairly well and bloom before July.

In the six foot strip try *Lonicera fragrantissima*, deutzias, the Missouri currant, *Rubus odorata*, and perhaps the *Clematis paniculata* against the fence if it will obtain any sun a few hours a day. I would pave or cement the space between the grass plot and the house, as it evidently gets no sunshine. If you should grow the columbines, I would smooth the surface of the beds and after staking out where the columbines are to be placed in the spring, plant this



fall, spring flowering bulbs in between. Start your stakes for the back row of columbines six inches in from the fence and fifteen inches apart in the line. Then place stakes within three inches of the front border and fifteen inches apart in the line, starting the first stake at one end so that it comes in between two back stakes. Then plant your bulbs in between and up to within three inches of each stake. This allows a space of six inches diameter open for the columbines. The stakes may be removed after the bulbs are planted as the open spaces will be evident in the spring. Mulch the bulbs with straw for winter protection and let them remain in the ground all summer.

**ECONOMICAL WAYS OF USING CEMENT WITH DECORATIVE EFFECT**

(Continued from page 160.)

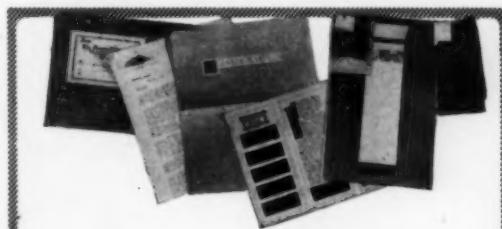
Figure 4 as a striking example of this, the projecting ornaments in the capital and the strongly modeled tiles representing fruit and leaves being in perfect harmony with the roughly treated background. Figure 5 is another example of the good effects to be obtained in this way. The columns illustrated in Figures 2 and 3 show a very frank treatment of concrete. In the originals the capitals glow with rich color, while the moulded mass of concrete suggests extreme strength and durability.

Figure 6 is an excellent example of the use of concrete as a background for ornamental work of this character. The concrete is quite rough and uneven. Any trowelling or slicking-up would detract from its charm.

The work shown is quite elaborate and therefore expensive, but decoration equally effective could be obtained by using comparatively few tiles.

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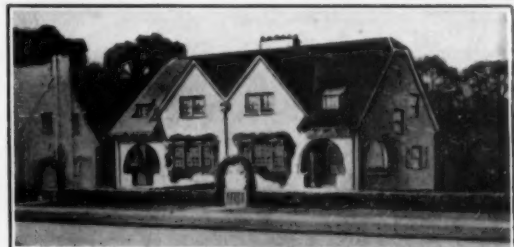


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possibilities, Mr. Edison's reputation as a wizard of invention has silenced condemnation, all feeling that in his hands all things are possible. Mr. Edison's proposition is that he will build a finished house, ready for use and occupancy in forty-eight hours of work, the same to cost no more than \$1,200, including plumbing, heating and lighting fixtures. The building arranged for two families. The building to be two stories high and in appearance similar to the design prepared by him, which represents a two-story building with a very broken outline and covered with a Mansard roof. It is far from being an economic form, and the same accommodation could be obtained at much less cost by a more economic outline and the use of a flat roof. Some critics consider the design as attractive. On the contrary, it may be said that it is a pretentious, overambitious building, not in keeping with its purpose. Mr. Edison's project is to build the house of concrete, and by pouring it into iron molds of the forms desired. The moulds to be made of cast iron sheets, put together and connected with iron rods in pipe sleeves. The inner faces of the mold plates to be nickel plated, and where intricate details are needed brass will be used.

All pipes for gas, water and all plumbing, and also ducts for electrical wiring, to be in place before concrete is poured; although these things may be put in after the walls are up; at least, steam and water pipes may. Chimney flues to be made of thin sheet metal and allowed to remain. The concrete where needed will be reinforced by strips or rods of steel, which will be in place before the concrete is poured.

Very elaborate preparations will be made to erect and take down the metal forms, which it is estimated will weigh 280,000 pounds. Mechanical mixers for the preparation of the concrete and the pouring of the same will be provided, and so arranged as to discharge the concrete into a storage hopper; also, a device will be used to maintain a uniform consistency in the concrete, which will be poured from the top of the house. Plungers, power-driven, will be used to keep the same agitated, to prevent a separation of the materials composing the concrete and also to drive out the confined air and to force the concrete into remote places and horizontal spaces. This will prove the most difficult problem



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of the project. The concrete will be one part Portland cement, three parts of fine sand and five parts of broken stone and gravel that will pass through a one-half-inch mesh. To prevent the separation of the different parts of the concrete and to add to its uniform flow it is proposed to add to the mixture colloids of electrolytes in small quantity. Color may be added to the concrete, but the cost of this was not estimated in the original cost of the structure; but either that or the application of color on the exterior would be demanded. It is plain that to overcome the law of gravity in the settlement of the heavier particles of the concrete is an important matter. Perhaps the use of compressed air, which is used to the amount of 100 pounds per square inch, and which is used in the application of cement grouting in repairing dilapidated masonry and in filling the cracks of walls in England, might be successful.

The concrete is carried to the top of the building by means of a bucket elevator. It will require the discharge of eighteen buckets of a capacity of one-half cubic foot each to carry up 200 cubic yards per ten hours. The public await more information on this matter before deciding as to the merits of Mr. Edison's project.—*The Western Architect and Builder.*

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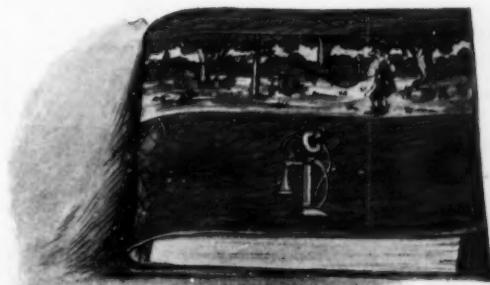
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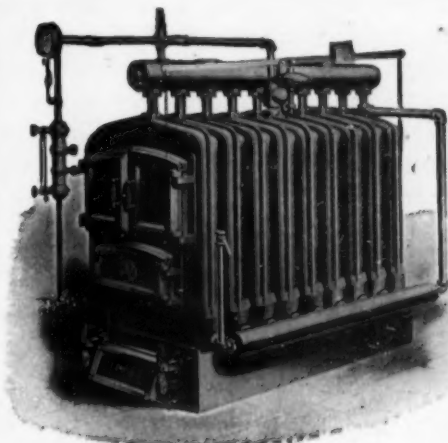
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### INSECTS IN PENNSYLVANIA

THE farmers of Pennsylvania are having unusual difficulties this year with insect pests of all kinds. Many varieties which ordinarily occur in such small numbers that they do not do any appreciable harm are very much in evidence this season, with the result that Dr. H. A. Surface, the state economic zoologist, finds his mail filled with specimens of all sorts of strange creeping and crawling things which farmers have discovered and cannot identify.

The potato beetle has again appeared in hordes this summer and is doing much damage. It is a strange fact that in this connection, an unusually large acreage of potatoes has been planted in Pennsylvania this year. Nature seems to have her own ways of preventing over-production. “The abundance of the potato beetle this year,” says Dr. Surface, “is a good example of the way insects come and go, appearing at unexpected times after it was thought they had dropped out of existence. The reason lies in the common but important law that



parasites which prey on insect pests increase or decrease in proportion to the number of their enemies. There is a parasite which keeps the potato beetle in check in the long run. This parasite lays its eggs in the larvæ. Conditions especially favorable to the multiplication of the potato beetle have existed this season, so that they have increased with great rapidity. In another year or so, the parasites will have caught up with them and the scourge will be over for the time being."

Orchard pests are also very numerous this summer, and in some instances orchards have been seriously defoliated. Peaches are being badly affected by insects and by disease, so that the crop will be smaller than was anticipated. Much damage from the San José scale is also reported. This scale is so small that comparatively few internal parasites come to maturity in their small bodies, the result being that they are not kept in check as readily and as automatically as many other common pests.

The pine-tree blight, which has been doing considerable damage in New England, has apparently made its appearance in one or two places, and some reports of chestnut blight are heard. A great deal of damage has been done to forest trees this season by the measuring worm, which ordinarily is not a serious pest. One man in Monroe County says that he has sustained a loss of \$16,000.

The reason for the sudden outbreak of insect pests is supposed to be found in the exceedingly warm weather and the heavy rains. The latter have brought about what has been in effect a second spring. The result has been a stimulation of crops and verdure and ideal conditions for the multiplication of insect life. As a consequence, many varieties which in ordinary years are seen only occasionally have appeared in such great numbers that they have attracted attention, and the farmers have been led to believe that new sorts had been discovered.

Were it not for the cutting off of the forests, the drainage of the swamps, and the indiscriminate slaughter of birds and snakes throughout the state the loss from this great influx of pests would be smaller. Nearly all the common birds devour wonderfully large numbers of these insects every day during the summer, and when the pests leave the trees and go to the ground, the snakes prey

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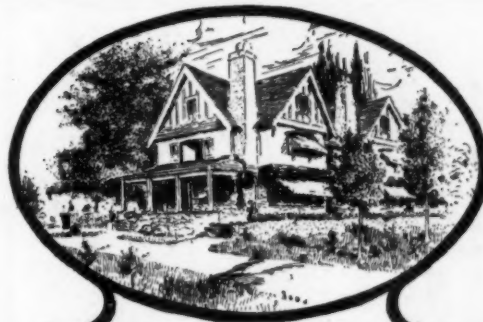
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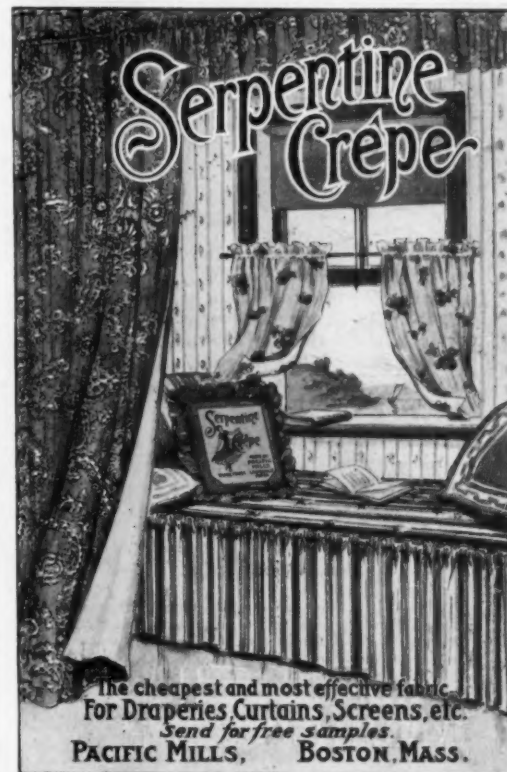
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on them. Even the copperhead is of no little benefit in this respect, making way with a great quantity of this kind of food. There is no excuse for the slaughter of black snakes and other inoffensive reptiles, which are of much benefit to the agriculturist, but which every one seems determined to put an end to on sight.—*The Country Gentleman.*

### TRACING ORIGIN OF RARE TEXTILES

**D**R. WILLIAM VALENTINER'S article on textiles in the Metropolitan Museum of Art was in large part given in a recent issue of the Herald's art section. The Curator of Decorative Arts points out further that among the ornamental stuffs of Sassanidian origin there is the round medallion with the palmetto tree in two sizes, the shoulder piece, the red stuff with the yellow rhombic pattern, two strips with alternating star and circle pattern and some smaller fragments. Six pieces on which the story of the birth of Christ is told more nearly approach the Coptic stuffs.

They differ from these in their better drawing and a technique related to the silks, so that they were probably introduced toward the end of the activity of the Copts, at the time when the silk industry was already known (sixth and seventh centuries). The motives are Byzantine, but both Egypt and Byzantium may be considered in their execution.

Several centuries are passed over in the next extremely effective piece, well known in literature, which has reversed eagles and gazelles.

The stuff appears in somewhat varied form in the Errara collection in Brussels, South Kensington Museum, Lyons and Venice, and has been judged most diversely. It is called Persian by Cole, Syrian by Migeon, Italian by Mme. Errara, and the date varies from the eleventh to the fourteenth century. The Oriental origin of the twelfth or thirteenth century seems to Dr. Valentiner to be beyond doubt and Migeon's opinion in regard to the locality the most probable.

The same difficulty in determining the origin is found also in the newly acquired stuff with reversed griffins and lions which is executed with very clever and graceful drawing on the finest material. Remnants of the same kind are

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owned by the Berlin and Vienna museums, and Dreger has authenticated it also in the background of a Tyrolean painting of the year 1385. According to this, it must have originated about the fourteenth century, although by some critics it is placed as early as the tenth century, inasmuch as it is found in Egyptian tombs. It seems very improbable that it is Italian, as is sometimes assumed. On the contrary, it may have originated in Syria, since some faience fragments found in Fostat near Cairo show related designs.

The pleasing flow of lines in this stuff has become more stiff in a piece with flying eagle in the form of the Spanish tiles, which originated about the same time (fourteenth century) in Spain. Like a later Spanish piece, with trees and arabesque (first half of fifteenth century), it differs essentially in its harsh choice of colors from the Italian stuffs of the same period, which are delicate and bright in coloring as they are graceful in design.

Of these Italian-Arabian stuffs of the fourteenth century two small pieces give a poor idea, especially as they have almost lost their color charm. At the same time one must admire the playful grace with which the conventional form of the animals is carried out; the stag resting in the meadow in one, the chained dog and fluttering eagle in the other; and also the skill with which the symbolic meaning clothes itself in a charming artistic form representing the soul now in the form of a stag languishing for the sunbeams of divine favor, again in that of a dog bound to the earth and threatened by danger in the form of the flying eagle.—*New York Herald.*

#### ROOT PRUNING TREES

**R**OOT pruning trees a year or two in advance of transplanting them has been often advocated, yet the recommendation will bear repetition, for it is too good a practice to let go by without having as many persons as possible understand it. If those who have not seen the results of root pruning could but witness the grand root system such trees have after a year or two have elapsed since the pruning, they would have all trees treated in that way they proposed to transplant in a year or two. It requires two seasons' fresh growth after the pruning to have such trees in the best condition for removal. Trees not



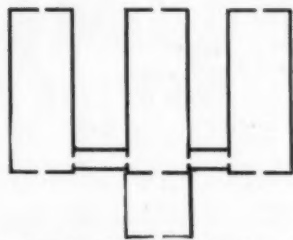
*From the work room side it is specially attractive*

## THE GREENHOUSE PRACTICAL

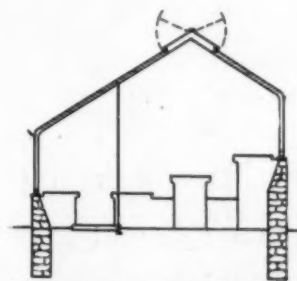
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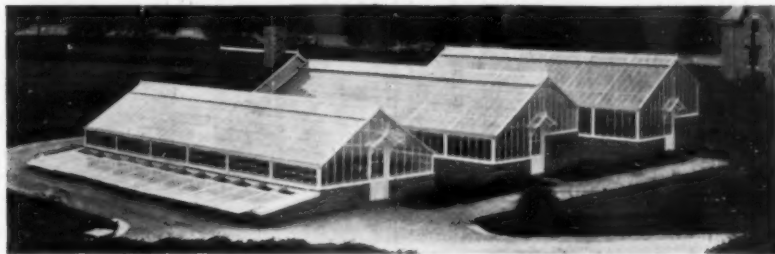
Send for our illustrated collection of houses which explains more fully about these particular houses, and gives numerous other examples, from a simple, two compartment house up to extensive ranges. Conservatories are also included.



*Plan showing central location of work room and passages connecting the houses.*



*Section of the rear house showing its high sides and arrangement of benches.*



*This view was taken from the roof of a nearby building*

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pruned now would require to rest undisturbed until the Autumn of 1910, unless they were of small size, when one year's growth of small roots would suffice.

In nursery rows oaks, hickories and similar trees making but few lateral roots naturally, are made as safe to transplant as kinds easily moved when root pruning is practiced. A furrow may be opened along the row, then with a spade the soil excavated until the roots are met with. The greater number of these roots are to be severed, all the large ones anyway, the holes refilled and then the branches shortened in one-half. The very hardest trees to remove, and trees in woods never transplanted, can be safely found room for on lawns, for there need be no fear of losing them.

Autumn is a good time to root prune. There is more leisure than in spring, and if the work is done early new roots are formed before the ground freezes up.—*Florists' Exchange.*

### PRESERVATION OF PILING AGAINST MARINE BORERS

THE length of service of piles in wharves and other marine structures is greatly shortened by the attack of marine borers, or shipworms. A method of protection, both efficient and cheap, is much needed, the more so because the timbers best suited for piling are becoming very scarce and are increasing rapidly in price.

Marine borers are found as far north as Maine and Alaska, though they are more numerous and destructive in the warmer waters farther south. Since they require only a small exposed surface in order to gain entrance and completely destroy a pile, any effective means of preservation must protect the wood from high-water mark to a point in the mud below which the borers do not go.

A number of excellent methods have been devised for protecting piling by external coatings or sheathings, any of which, properly applied, will increase the life of the pile. Three factors which decrease their efficiency are the corroding action of salt water, the wash of the waves which injures and often breaks the casing, and the dangers from floating timbers and debris. Thick iron cases resist damage from these sources for a long period, but they are very expensive.

The injection of preservatives through



holes bored in the top of the pile, or near the mud line, has failed to secure a distribution sufficient to adequately protect the outer layers of wood. All soluble salts have also shown a tendency to leach out when exposed to salt water. Impregnation with creosote, a coal-tar product, has usually proved highly efficient with suitable kinds of timber properly prepared, when a sufficient quantity of good creosote is used.

The principal timbers used for piling are longleaf, shortleaf, and loblolly pine, and white and red oak on the Atlantic coast and Gulf of Mexico, and Douglas fir on the Pacific coast. Spruce, redwood, cedar, cypress, eucalyptus, and palmetto are used locally.

All of these woods with the exception of palmetto are subject to damage by borers. Hardness is not a complete barrier to their attack, although boring is probably slow in dense woods. Southern pine and oak can be impregnated with creosote, and this promises to be one of the most efficient means of resisting the borers. It is probable that some of these timbers can be successfully treated by the open-tank process. However, if a very heavy absorption is desired, a treatment under pressure may be the more efficient.

Circular 128, issued by the Forest Service, gives a detailed description of the most important marine borers and their habits, together with a discussion of the different forms of mechanical devices in use for the protection of piling and of protection by chemical preservatives. This publication will be sent free upon application to the Forester, Department of Agriculture, Washington, D. C.

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THE new patented breakfast foods and cereals are taking the place of the old-fashioned oatmeal, buckwheat and mush. In 1866 when the first authentic buckwheat returns appeared the country devoted 1,045,000 acres to the crop and raised 22,791,000 bushels of pancake material, with a farm value of \$15,413,000. Now the country has but about 750,000 acres and raises 14,500,000 bushels worth \$8,000,000. In former days Pennsylvania was the banner state, with nearly 500,000 acres devoted to buckwheat, and New York came second with 250,000 acres. Now

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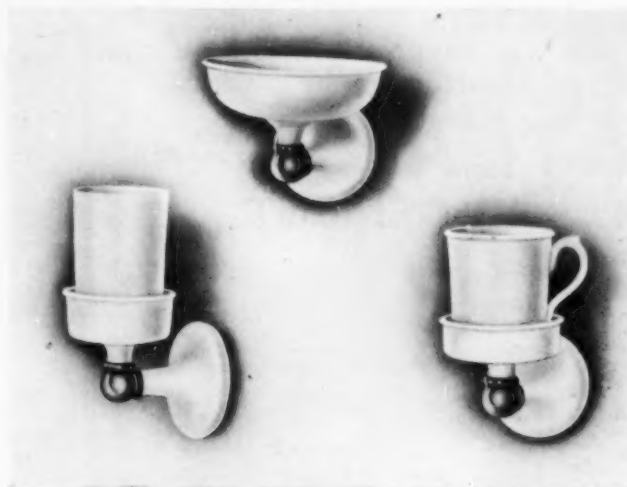


Plate 1610-K

Plate 1620-K

Plate 1615-K

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Pennsylvania has only 250,000 acres, while New York holds the banner with an area of 325,000 acres. During this period the average yield per acre for the country has decreased from twenty-two bushels to about eighteen bushels. Forty years ago Maine grew an average of thirty-one bushels. To-day Iowa averages twelve or thirteen bushels. The average price on the farm has fallen about ten cents a bushel.—*Journal of Agriculture*.

### ITEMS FROM AUTOMOBILE TOPICS

A story comes from across the water to the effect that the mayor of a Spanish town resigned his office because some of the townspeople threw stones at automobilists. Hereabouts municipal officials do not, as a rule, take motorphobic attacks so much to heart.

The attorney-general of Ohio has handed down an opinion that is remarkable and, if sustained, may lead to a number of complications. He holds that none of the members or officers of a corporation which owns an automobile has a right under the law to operate the machine without first taking out a chauffeur's license, and if he does so he is liable to arrest and punishment. He says that because one happens to own stock in a corporation he is in no sense an owner or part owner of an automobile that the corporation owns. The state laws permit the owner of an automobile and members of his family to operate it without the chauffeur's license.

The hideous depths of iniquity to which the average New York bicycle cop, whose special duty it is to apprehend alleged speed violators, has sunk, may be imagined when it is said that they do not even extend courtesies to members of their profession. This hard heartedness came to light through the arrest the other day of the Chief of Police and Chief of the Fire Department of a Connecticut town just over the New York border. These officials crossed into New York in the automobile of a mutual friend, and they were bowling along Pelham Parkway, in the Bronx, at what would be considered in Connecticut as a "reasonable and proper speed," having a clear road and their machine under perfect control. It was then that the fly cop butted into the game and told them they were under arrest. After expressing surprise at the



strictness of the New York cops, the Connecticut official explained who he was and exhibited his badge, thinking, of course, that nothing more would be necessary to secure his release. It didn't go with the cop, however, and that obdurate man haled his prisoners to the nearest police station, and there they were required to put up \$100 bail before being permitted to continue their journey. The next time these chiefs come to New York it will be in a trolley car or behind a high stepper—for no one ever thinks of getting after them for violating the speed laws.

One result of the very decided increase in the amount of good roads work being done all over the country is the scarcity of contractors. Here is an opportunity for men in this line to get steady work on a paying basis. The work of building improved roads is only in its infancy and each mile that is constructed makes it certain that many more miles will be built. The two important requisites in a contractor are knowledge and facilities. With these he can get all the work he wants.

Swampscott, a resort just outside of Boston, which is a much more attractive place than its name would indicate, has a sensible chief of police. He has arrived at the conclusion that automobile traps are antiquated and practically useless. He will now try circulars. When an automobile is seen going at a speed that is thought to be greater than the law allows, its number will be taken. The automobile register will be consulted, and the next day the owner will receive a notice. Thus speaks the man who wants to have fewer violations of the law, not to encourage them and get his rake-off of graft.

Dr. Heaton, the Missouri motorist who is touring through Europe with the determination of keeping his expenses under \$3 per day, has broken all previous records. He has got his expenditures down to \$2.59 per day, thus proving that he really is from Missouri. This low water mark was reached in Switzerland, in a district that is considered one of the most expensive in that country. In spite of this and the heavy mountain climbing, the expenses for two persons for the week ending June 13 were: Hotels, \$22.10; gasoline, \$8.90

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one motor, operating both the washer and wringer, does every whit of the work.

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Servants happy; laundry bills saved; clothes lasting twice as long. For the "1900" does washing better than any other method known.

Now electricity makes the washer go. Doesn't that sound like a new era for women?

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You don't invest a penny—don't commit yourself at all. Do four washings with it. Try it on dainty things, heavy things, everything. Then, if you think that you can get along without it, we will take it back.

Your 30 days' use will be free. You have no obligation whatever. Treat us just like a dealer who shows you a washer. If you don't want it when the month is up, simply say so.



But don't go on washing in the old way without knowing what this method means to you. Women have no right to do such hard work when electricity can do it for them. Send first for our Washer Book, to know all about it. Then, if you'll try it, just tell us to send it on.

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cleaning, garage, laundry and sundry expenses, \$5.30. Total for two persons, \$36.30. This amounts to \$18.15 a week, or \$2.59 a day, for one person. Which is going some.

It is refreshing to read the charge of an English judge in the case for damages brought before him. A chauffeur borrowed his employer's car to give some friends a ride. He collided with a watering cart and was killed. His wife brought suit, claiming that her husband was testing the car for the owner. Judge Woodfall, in dismissing the action, with costs, said: "A greater abuse of this benevolent act I have never experienced. The man took his friends out for his and their pleasure, and yet it has been gravely argued that it was a test of the car in his master's interest. It almost excites one's indignation." His Honor added that he wished he had power to make the person responsible for bringing the action pay the costs out of his own pocket.

#### THE WAR ON PERNICIOUS INSECTS

THE apparent rapid spread or development of destructive insect pests on our trees and shrubs, while alarming, is not necessarily beyond the expectation of successful combat. In the past comparatively little attention was given to this question, while to-day it is accorded a leading place in horticulture, and constant warfare is being made to minimize the damage done and to destroy the cause. Whether drastic laws are necessary to compel every individual to take care of the trees and shrubs under his control is a mooted question, but in the proposed agricultural instruction destined to become a part of our common school education, destructive insects, and the agencies to destroy them, should be made an important feature. Our young people, with such instruction to guide them, might become a very effective insect police, materially aiding in the general warfare upon such pests.—*Landscape Gardening.*

Yellow locust timber is among the most durable known, a fact which has caused its extensive planting in many states. In some parts of the country the locust borer, *Cyllene pictus*, has been so destructive that it has caused a suspension of the planting of the tree.