House & Garden

CONDÉ NAST, *Publisher*
RICHARDSON WRIGHT, *Editor*

HOUSE PLANNING NUMBER

WHOEVER called November "bleak" was without a copy of HOUSE & GARDEN. If the home can be made attractive enough, what matter the elements outside? This is just what the November House Planning Number does. If your home is lovely already, it will suggest a touch to make it more so. But if you are planning a home as well as a house, and there is a vast difference, you will find suggestions contained in articles and illustrations that will make you forever glad you decided to consult HOUSE & GARDEN in the beginning.

One of the great industries seriously affected by the war was the industry of building. People were forced to go without homes, and architecture and decoration for a time were at a standstill. All that is changed now, and the article on Post Bellum architecture will be as interesting to the layman as it will be of value to the prospective builder. In connection with this there are articles on Electrical Equipment Before Building, Making Kitchens Sanitary and a page of California Bungalows. These are becoming as popular in the east as they are in the west, so if you are contemplating a new home, there is a vast amount of material in this number for you to choose from.

But it is the inside of the house that is made so alluring in this unusual number. The bachelor who has always considered himself a little neglected, has an article all of his own, and after reading the Bachelor's Room, no longer will his surroundings be a matter of indifference or chaotic disorder.

One of the interiors shown in the November Number

In present day interior decoration we owe much to the art of Japan, and its magic is nowhere better shown than in the exquisite prints of her vari-colored birds. Gardner Teall sends an article on Japanese Bird Pictures that shows this art in all its lovely simplicity. There is also information on patios, Venetian blinds, an interesting story of South Jersey Glass and a page of unusual articles in the shops. Surely a number to be reckoned with.

Nor is the garden forgotten. There is a page on the vegetable garden, and the second of the series of Rockwell Monographs. This time it is on the Cotoneaster, a shrub that is little known but so unusual and decorative that we are glad of this opportunity of giving more information about it.

We believe that a dog is an integral part of a house and a garden and are continuing the series of dog articles. This month it is the wire and smooth coated Fox Terriers. Altogether a remarkable number when you consider the amount of information contained and its nearly two hundred illustrations. Such is the November HOUSE & GARDEN. Don't forget it!

Contents for October, 1919. Volume XXXVI, No. Four

PUBLISHED MONTHLY BY CONDÉ NAST & CO., INC., 19 WEST FORTY-FOURTH STREET, NEW YORK. CONDÉ NAST, PRESIDENT; W. E. BECKERLE, TREASURER. EUROPEAN OFFICES: ROLLS HOUSE, BREAMS BLDG., LONDON, E. C.; PHILIPPE ORTIZ, 2 RUE EDWARD VII, PARIS. SUBSCRIPTION: $3.00 A YEAR IN THE UNITED STATES, COLONIES AND MEXICO; $3.50 IN CANADA; $4.00 IN FOREIGN COUNTRIES. SINGLE COPIES, 35 CENTS. ENTERED AS SECOND CLASS MATTER AT THE POST OFFICE AT NEW YORK CITY

THE GARDEN FAÇADE

When possible, the house should turn its back to the road. This arrangement affords a convenient location for the service quarters in close proximity to the tradesmen's wagons and gives the owner the privacy of a garden in the rear. It also gives a garden façade in which the real loveliness of the house can be shown. This was the successful arrangement used in the residence of Joseph E. Brush, Esq., at Fieldston, N. Y. You are looking at the garden view, along the line of the entrance and the two projecting wings of the house. Dwight James Baum was the architect

THE GARDEN *of* WINTER EFFECTS

There Is No Need for Us to Crawl Into Our Garden Shells and Hibernate as Soon as Snow Flies—
Let Us Give Heed to the Sturdy Garden that Is Planned for Cold Weather

ROBERT STELL

SHOULD you ask any prominent landscape architect what phase of outdoor planting is most in need of development here in America, the chances are rather more than even that he will say, "Planting for winter effect." And if, then, you turn the matter over in your mind and consider how few of the private grounds you know in the northern states are really attractive from November to March, the probabilities again are that you will agree with him.

Most of us are apt to take it for granted that the only gardening thoughts to think in winter are either prospective or in retrospect, unless, indeed, they have to do with indoor plants which are quite independent of weather conditions. Bleakness and forbidding chill we take to be necessary evils which our grounds must endure until the spring sun brings them again to leaf and blossom. We accept winter much as we accept an appointment at the dentist's, as a thing inevitable and in no wise to be mitigated.

Evergreens and Snow

I wish that all who hold such views could go on a sunny day in January to a certain southward-looking slope above the valley of the Wissahickon, near Philadelphia. From the rambling field-stone house which crowns the hill the land drops away toward the stream in a dipping sweep of lawn which in summer shows velvet green but now is white and flawless with fresh snow. Bounding the open on the east are elms and maples etched along the sky, and to the west is what appears at first glance to be a mere windbreak of densely planted arborvitae.

Drawn by that curious attraction which evergreens exercise never more strongly than when the ground is white, you turn toward them and discover that they are a living wall enclosing a narrow, terraced garden which steps away down the hill in the cosiest seclusion imaginable. The simple square or oblong pools on the different levels are hidden by the snow, the bulb borders which in spring are gay with blossoms lie unsuspected now. But there is nothing bleak or repelling in the outlook, for this is as truly a garden as ever in midsummer—a garden of innumerable greens and sturdy cheer, defying the roughest winds and gathering to itself an unsuspected warmth of sunshine. It is a winter garden in the truest sense, and if you are unmoved to brush the snow from one of the stone benches and sit down to revel in the faint aroma from the evergreens and boxwood you are no real lover of gardening.

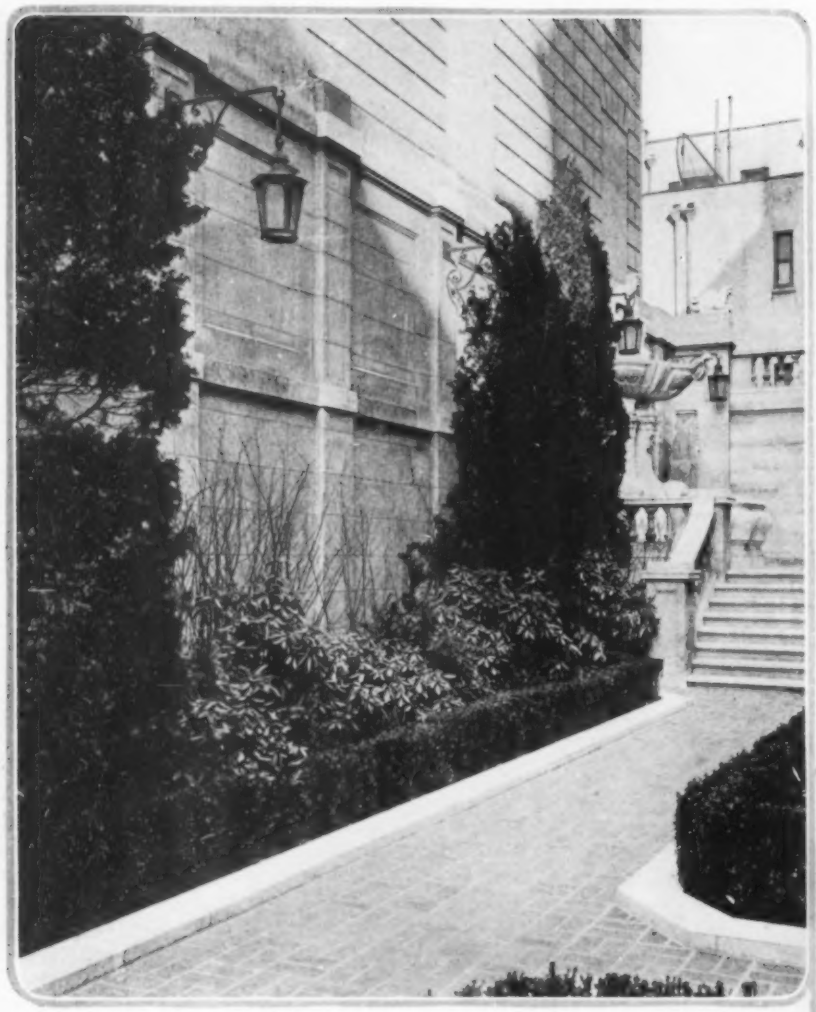
Tebbs

An interesting evergreen garden has been developed on the property of A. G. Paine, Jr., Esq., New York City. The roof of the garage has been utilized for tubbed trees which, with the pergola, give a pleasant outlook from the second floor of the house. C. P. H. Gilbert, architect

Three Attributes

The charm which marks this spot among the Wissahickon hills is the same which should characterize every garden planned for winter effects. It arises from three attributes: an evidence of wholesome life when all else outdoors seems dead, a strong massed contrast of color with the surroundings, and a wealth of delicate detail.

There need be no lack of subtlety in the winter garden, although it must of necessity be somewhat less ethereal than where a summer setting is at hand. Nor is monotony of coloring unavoidable; there are innumerable shades of green as well as wide variety of line and mass effect among the conifers and broad-leaved evergreens, and the needed touch of brilliancy may be



Harting

The winter gardening possibilities of this city yard have been recognized. Cedars and rhododendrons are effectively used behind neat borders of clipped privet

supplied by the red fruits of barberry, the orange of bittersweet, and the scarlet haws of certain roses. Think, too, of the wonderful delicacy of gray beech twigs against an azure sky, and of the silvery plumes of pampas grass feathered with hoar-frost. A weather-bleached, drooping grass blade, pivoting in the wind on its parent stem, traces lines on the new snow whose appeal to the fancy no rose or summer lily can surpass.

Other Forms of Winter Gardens

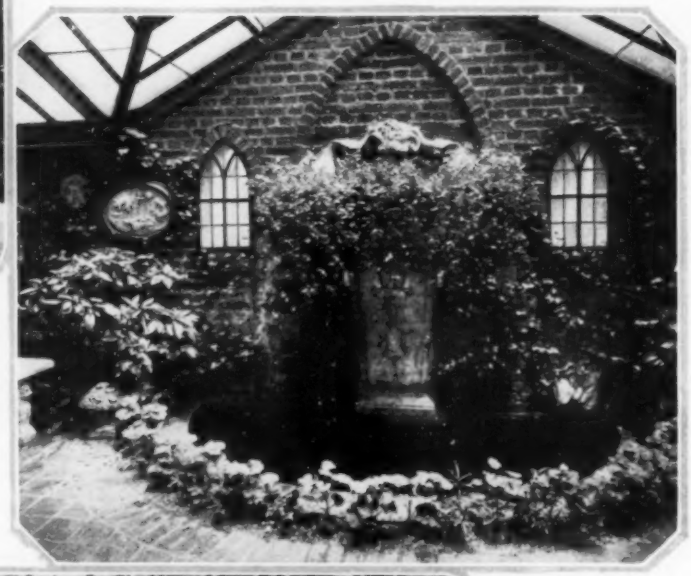
Of such is the really outdoor garden of winter effects, but there are other types of planting for cold weather pleasure which should not be overlooked. Often conditions are such as to put quite out of the question features such as I have suggested.

Consider the city back-yard, for example. Here we have all the adverse conditions of bitter weather without the inspiration of surroundings which winter in the country provides. Whatever beauty there is to be we must create out of our own vision and resourcefulness.

Granted the desire to relieve that restricted area in the rear of a city house of its barren unattractiveness, the solution lies largely in the use of tubbed evergreens, with perhaps one of the more hardy varieties of English ivy trained up a brick dividing wall. Almost all of the smaller specimens of hardy evergreens are adapted to this sort of planting, so that there is no necessity for unpleasant monotony. Firs, pines, hemlocks and arborvitaes will prove the most generally satisfactory. Properly arranged in ornamental tubs, whose design must of course be in harmony with the surroundings, their varied greens prove far more than worth the trouble of securing them. Though as far as trouble is concerned, several of the big nurseries have recognized the demand for such small trees and are supplying them through the regular trade channels.

Window Ledge Plantings

Less pretentious than these back-yard plantings, but possessing great possibilities nevertheless, is the city house window ledge. Here, in boxes of concrete or artificial stone made to match the materials of the house wall and har-



Johnson

A glassed in garden of unusual success. Vines are used for their contrast with the rough pointed brick and potted geraniums lend color to the foreground

The garden for winter effect can be readily converted into an equally pleasing summer one by the addition of ferns, spirea and other tender potted plants

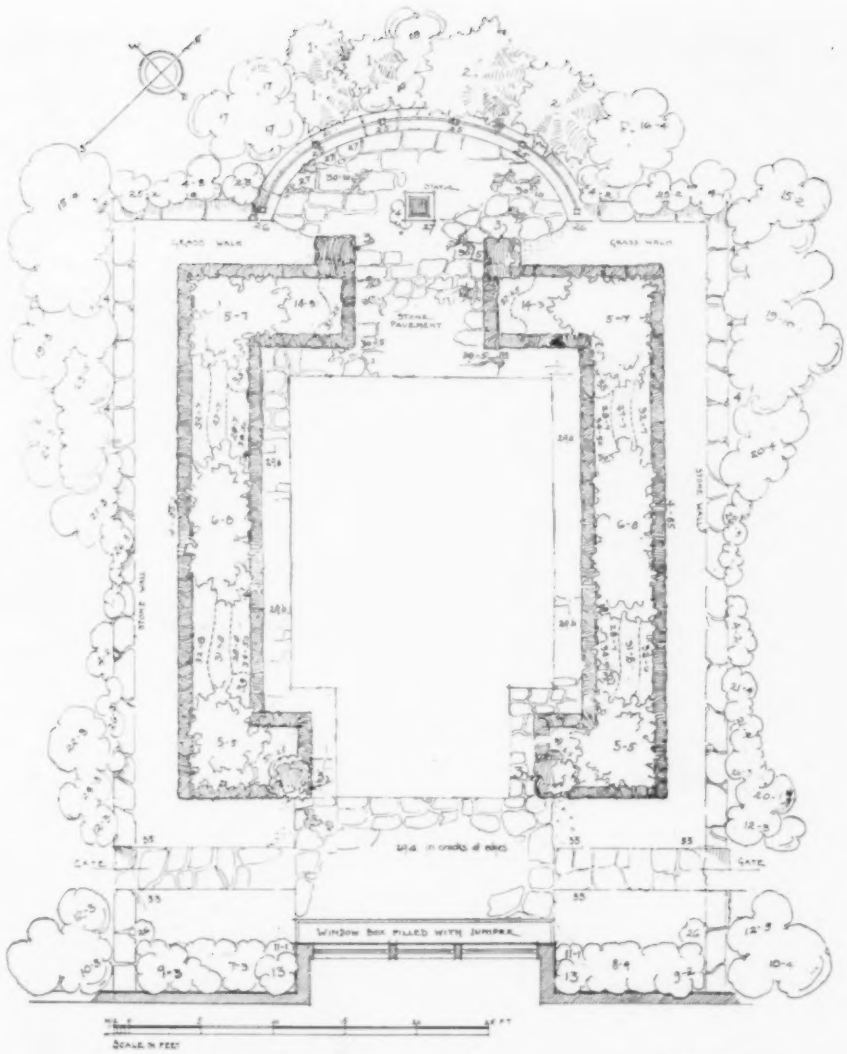
monize with its architecture, a planting of dwarf evergreens, Japanese barberry and evonymus (to mention a few of the most successful plants) will add a touch of color and life.

As a matter of fact, the winter window ledge idea is fully as applicable to the country house as to the city. In this case, too, it may be given an added charm—that of attracting certain of our desirable winter birds that stay with us through the cold weather. If bits of suet, peanuts and pieces of bone are tied to the dwarf evergreens here and there they will furnish many a meal to the chickadees, nuthatches and perhaps a woodpecker or jay. Besides these foods, bread crumbs or bird seed scattered in the box should draw the juncos and the tree sparrows. Indeed, any real evergreen winter garden will prove a refuge for the birds.

Glassed in Gardens

All these, of course, are entirely outdoor arrangements, requiring no artificial heat or protcction of any sort. There remain to be considered briefly some of the forms of glassed-in gardens which are apart from the out-and-out greenhouse.

It often happens that an areaway, jog or angle in the wall, small walled yard or other architectural oddity can be glassed in to form what is in effect a miniature conservatory. If this is so located that it can be partially heated through some connection with the house itself, such as a door or window, so much the better; or perhaps the rays of the sun will serve as a more or less adequate heating system. In the latter case it will be necessary to move some of the more tender plants indoors at night, when the temperature of the outside glassed area will naturally fall to the freezing point or below. Two of the photographs on page 20 suggest some of the possibilities which winter enclosures of this sort offer.



Winter effects are especially planned for here, but the charm of the garden is strong in summer as well. A vine covered trellis surmounts the low fieldstone wall at the opposite end from the house. The planting key is below. Elizabeth Leonard Strang, landscape architect

A New Field

In the final analysis, the development of the winter garden idea is rather in its infancy in this country. What we need to do is recognize the possibilities of our individual places, to give a little more rein to our imaginations. There is no call for us to draw into our garden shells and hibernate as soon as snow flies and our summer plantings become things of the past. There is a wholesome strength in the garden planned for winter effects which is good for the soul.

PLANTING LIST *for* A GARDEN *of* WINTER EFFECTS

EVERGREEN TREES

1. *Juniperus virginiana* (red cedar): 3 plants 4′ apart, 4′-5′ high. Chosen for pointed picturesque effect, and blue berries relished by birds.
2. *Picea orientalis* (oriental spruce): 2 plants 6′ apart, 3′-4′ high. Dense, dark green.
3. *Chamaecyparis pisifera plumosa* (retinospora): 4 specimens, 2½′-4′ high. Not suitable for extremely cold climate, in which case use clipped hemlocks.

EVERGREEN SHRUBS AND VINES

4. *Evonymus radicans var. vegetus* (broad-leaved evonymus): 190 plants 12″ apart, 10″-12″ high. Clipped to form hedge like box.
5. *Juniperus chinensis Pfitzeriana* (upright Chinese juniper): 24 plants 2′ apart, 2′-2½′ high. Very hardy, silvery green, light and feathery to show above snow.
6. *Taxus baccata repandens* (prostrate yew): 16 plants 2′ apart, 1½′-2′ spread. Hardy, dark green, branches curving upward.
7. *Mahonia aquifolium* (Oregon grape): 3 plants 2′ apart, 1½′-2′ high. Yellow flowers, dark blue fruit, glossy evergreen foliage.
8. *Pieris floribunda* (lily-of-the-valley shrub): 4 plants 2′ apart, 15″-18″ high. Broad leaved evergreen, compact bushy shape, does not burn.
9. Rhododendron hybrid Boule de Neige (dwarf white rhododendron): 5 plants 2′ apart, 18″-24″ high.
10. Rhododendron hybrid *roseum elegans*: 7 plants 3′ apart, 24″-30″ high. Pink.
11. *Azalea amoena* var. *Hinodegiri:* 2 plants 9″-12″ high. Low, small flowers of pure brilliant red.
12. *Kalmia latifolia* (mountain laurel): 12 plants 2′ apart, 1′-1½′ high.
13. *Ilex crenata* (Japanese holly): 2 plants, specimens, 2′-2½′ high. Dark green, small leaves resembling box but hardier.
14. *Cotoneaster Franchetii* (cotoneaster): 6 plants 2′ apart, 1′-1½′ high. Slender arching branches, erect growth, persistent leaves, red berries.

DECIDUOUS TREES AND SHRUBS

15. *Salix vitellina* var. *britzensia* (salmon barked willow): 6 plants 4′ apart, 8′-10′ high. Twigs vivid orange in winter.
16. *Betula papyracea* (canoe birch): 4 plants, close together, 8′-10′ high. Gleaming white bark, larger than the common gray birch.
17. *Crataegus cordata* (native thorn): 3 plants 6′ apart, 5′-6′ high. Scarlet fruit persists until spring.
18. *Cornus mascula* (cornelian cherry): 2 plants 5′ apart, 2½′-3′ high. Small yellow flowers in early spring, red fruits attractive to birds.
19. *Cornus alba* var. *Sibirica* (Siberian dogwood): 13 plants 3′ apart, 2½′-3½′ high. Vivid red twigs conspicuous in winter.
20. *Lonicera fragrantissima* (fragrant bush honeysuckle): 5 plants 3′-4′ high. Small fragrant flowers appearing before the leaves, which are dark, glossy and almost evergreen.
21. *Kerria japonica* (globe flower): 7 plants 3′ apart, 1½′-2′ high. Fine twigs of bright green.
22. *Symphoricarpos racemosus* (snowberry): 6 plants, 2′ apart, 2½′-3½′ high. Large white fruits in early winter.
23. *Hamamelis japonica* (Japanese witch-hazel): 6 plants 3′ apart, 2½′-3½′ high. Small yellow flower in January or February.
24. *Rosa rugosa* var. *alba* (white Japanese rose): 3 plants 2′ apart, 2′-3′ high. Conspicuous red haws in winter.

VINES

25. *Celastrus orbiculatus* (Japanese bittersweet): 8 plants 3′-4′ apart, 4 years old. More shrubby than native sort; fruit in smaller clusters and more scattered.
26. *Rosa multiflora* (trailing rose): 16 plants 3′ apart, 2 years old. Covered in winter with small red haws.

HERBACEOUS PLANTS

27. *Polystichum acrostichoides* (Christmas fern): 20 plants, 12″ apart. Evergreen all winter.
28. *Galax aphylla* (wand plant): 30 plants 12″ apart. Round, shining, evergreen leaves.
29. *Thymus* (thyme): here and there in cracks of stone walks.
    (a). *T. serpyllum lanuginosus*, gray leaved thyme, 10 plants.
    (b). *T. serpyllum citriodorus*, lemon-scented thyme, 10 plants.
    (c). *T. vulgaris*, English thyme, 10 plants.
30. *Mentha requieni* (mint): low, moss-like fragrant when bruised, in cracks between stones.
31. *Helleborus niger* (Christmas rose): clumps, 16 plants 12″ apart. White flowers in winter or very early spring, frequently blooming under the snow.
32. *Daphne cneorum* (garland flower): 28 plants 12″ apart, 6″-8″ high. Evergreen plant or shrub, with very fragrant pink flowers.

BULBS

33. *Eranthis hyemalis* (winter aconite): 250 bulbs. Small yellow flowers, very early, in cracks between stones.
34. *Galanthus nivalis* (snowdrops): 250 bulbs.
35. Crocus, mammoth golden yellow, 100 bulbs.
36. *Crocus chrysanthus:* a very early variety, 50 bulbs.
37. *Muscari botryoides* (grape hyacinths): 100 bulbs. For spring bloom; blue flowers in May. Very permanent, do not run out like tulips, but increase in size and numbers.

It's hard to improve on Colonial architecture and an excellent example is here shown in this house of brick veneer with limestone trimmings. It relies for decoration on the classic simplicity and beauty of the recessed doors and windows

In these days when one is planning a home, quite as much thought is given to the designing of the garage as the house if one wants an harmonious and beautiful ensemble. This garage is in admirable accord with the architecture of the house

What we owe to classic architecture is nowhere better illustrated than in the beautiful proportion of this Colonial doorway. The only ornamentation is the fan-like pediment over the door

The HOUSE *of* E. J. McCORMACK Esq.

BROOKLYN, N. Y.

SLEE & BRYSON, *Architects*

Tebbs

The inside of Mr. McCormack's house is quite as effective in its simplicity as the outside. In this sun room the floor is red quarry tile and the walls cream stucco

A charming place to breakfast in is this sun-swept porch with its latticed walls and hangings of gay cretonne. The coloring is mostly gold—to catch the sunlight, perhaps

This attractive corner is part of the billiard room in the cellar. The walls are sand finished and the fireplace is of tapestry brick

TRIBUTES TO ROOSEVELT

THEODORE ROOSEVELT once wrote "The life of the State rests and must ever rest upon the life of the family and the neighborhood." It is fitting, then, that a magazine such as HOUSE & GARDEN, devoted to the betterment of the surroundings of the family, should print these two announcements. The first explains the work of the Roosevelt Memorial Association; the second, the plans of the Woman's Roosevelt Memorial Association.

IMMEDIATELY after the death of Theodore Roosevelt, there sprang up all over the country a demand for a memorial to this ardent patriot and great man. It seemed to be the opinion of people of every class and interest that while his place in history was assured, and his place in the hearts of his countrymen could never be lost, there should be erected, without loss of time, a memorial to express the affection in which he was held and to perpetuate for the benefit of future generations the ideas and ideals for which he stood.

The result of this demand was the formation of the Roosevelt Memorial Association, with headquarters at No. 1 Madison Avenue, New York City, a non-partisan organization in the creation of which personal friends of the late ex-President took the lead. This Association met in March and decided by formal vote to conduct a campaign to raise $10,000,000 by popular subscription, to erect in Washington, seat of the Government and scene of Colonel Roosevelt's most important labor for the public good, a national memorial monument; and to create at Oyster Bay, his home for so many years, a park which may ultimately include his estate of Sagamore Hill, to be preserved like Mount Vernon and the Lincoln home at Springfield.

Out of the thousands of suggestions for fitting memorials that came from Roosevelt's friends and admirers, it seemed that these two forms were most nearly significant of his life and personality. Washington, the capital of the country, where Roosevelt had spent so many of his years in work that left its impress on the history of the nation, could be left out of no plan for a permanent memorial to him. There is the most appropriate setting for a lasting tribute to him as a statesman and leader and servant of his fellow-countrymen.

Equally fitting for a memorial to Roosevelt as a man and as a lover of nature is the scene of his ideally happy home life at Oyster Bay. In his lifetime he loved it all, its woods and fields, the shores of Long Island Sound, the flowers and the birds. He loved the outdoor life and he wanted others to love and share and benefit by it. During his lifetime in fact he endeavored to obtain an outdoor park for his friends and neighbors at Oyster Bay, but did not live to see the accomplishment of his wish. With his passing, a wider significance will be given to this cherished aim of his. The creation of a park will give his fellow-citizens opportunity for rest and recreation and upbuilding of mind and body; the inclusion of his home, with its fields and woodlands, its furnishings, its library and trophies and gifts from all over the world will make it particularly a spot associated with his memory and a Mecca for all Americans.

The officers of the Roosevelt Memorial Association include men and women of national reputation, friends and associates of Roosevelt from all over the country and from all walks of life.

THE association is strictly non-partisan, for its purpose is to honor the memory of Theodore Roosevelt as a great American. So it is the earnest desire and hope of its members to enlist the co-operation of every American in this tribute of appreciation to Roosevelt as a man, a citizen and a patriot.

The campaign for the fund to establish the memorial will be held in every state during the week of October 20-27, and will be directed from the offices of the Association, at 1 Madison Avenue, New York. The dates were selected as having a particular aptness, as the last day of the campaign will fall on Colonel Roosevelt's birthday. Organizations have already been completed in all the states and in the various sub-divisions in which the canvass for subscriptions to the memorial will be made.

Every penny subscribed for the memorial fund will go into the fund, as generous personal friends of Colonel Roosevelt have undertaken to defray all the expenses incidental to the campaign. No effort will be spared to reach every American who would like to be represented, be it by ever so small a contribution in the making of a memorial that will be commensurate with the achievement of Mr. Roosevelt and the widespread esteem and affection in which he was held throughout his country. It is, in fact, the hope of the Association that the number of contributors to the fund will be a gratifying index of the hold he had on the affections of Americans, North and South and East and West.

THE Woman's Roosevelt Memorial Association has acquired Colonel Roosevelt's birthplace at 28 East Twentieth Street, New York City, and the adjoining house at 26 East Twentieth Street.

The two buildings will be connected and together will form Roosevelt House.

His birthplace is to be restored and the interior reproduced with the original furnishings, family portraits and other heirlooms.

It will be a repository of records and other intimate mementoes of this great partiot, in order that it may be visited by all who loved him and by those who would study the influences which shaped his career.

The whole Roosevelt House is to be not merely a museum but a living influence.

There will be a free Circulating Library containing all the writings of Colonel Roosevelt and many other books on travel, nature study, history, and the lives of great men.

Classes will be held for teaching English and the History of the City and of the Nation.

In the Assembly Hall lectures will be given on all these subjects and also on the life of Theodore Roosevelt.

A million dollars is needed.

The women of America purchased and restored Mount Vernon. The women of America helped to preserve the home of Lincoln. The women of America are asked now to restore and perpetuate the birthplace of Theodore Roosevelt.

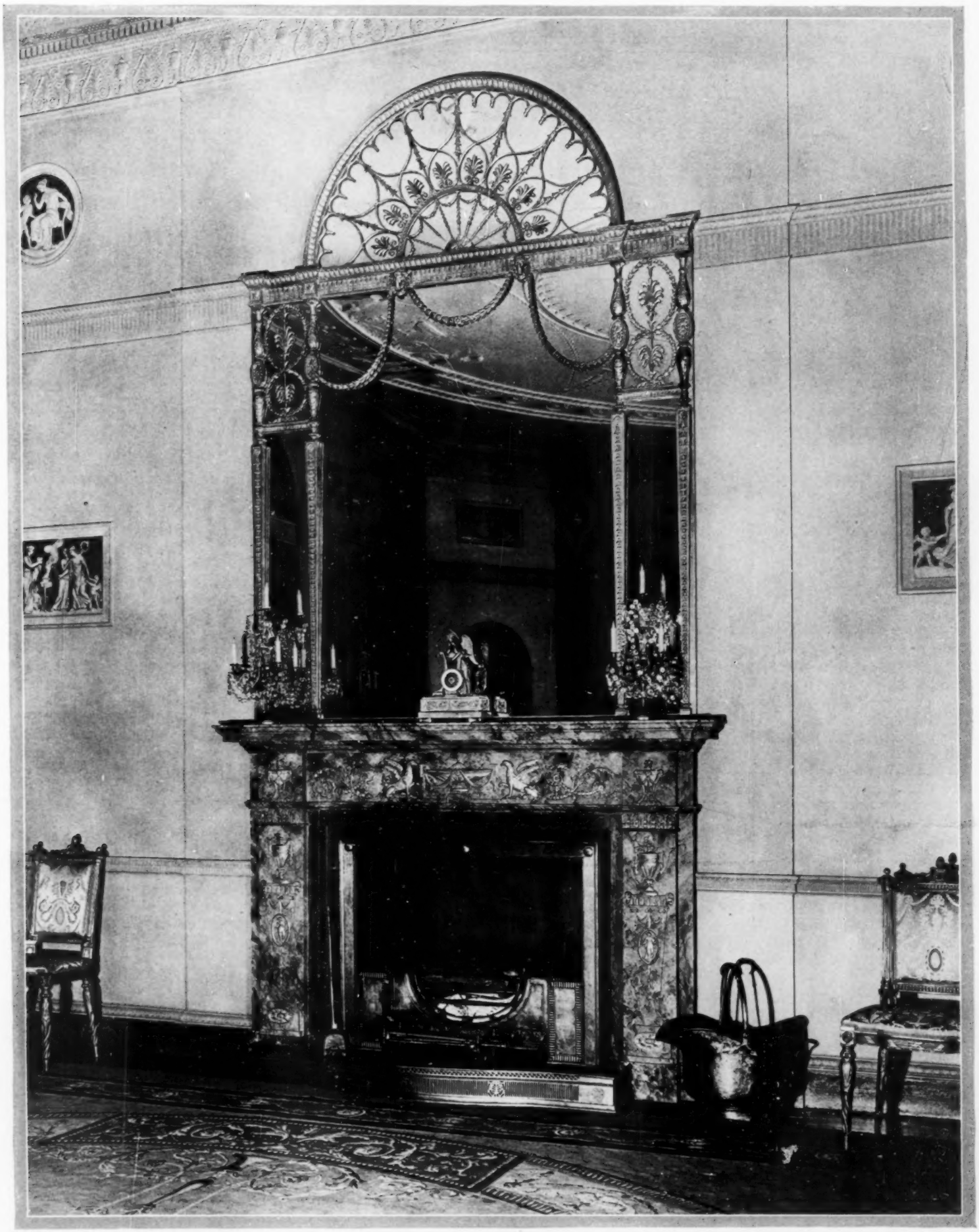
To establish a permanent school of citizenship and to keep this birthplace year after year a center where the boys and girls of America, and the men and women as well, will come together to learn the duties and privileges of citizenship.

WE in America pride ourselves on our recognition of wholesomeness, courage and straight thinking, qualities which Theodore Roosevelt possessed in a superlative degree. The loss which America suffered with his passing we are realizing now, but only the future will bring realization to the full; he was a man who could ill be spared at any time, but especially during the series of national crises through which we have been passing. For each of us to do his or her bit to keep his memory vividly alive is a national as well as a personal privilege.

THE GRACE *of* LITTLE GARDENS

Great gardens have a glory though it does not come my way,
The lure of little gardens is a grace for every day.
In the white radiance of the dawn, the tenderness of dusk,
There's magic in the mignonette, and witchery in musk.
Just underneath my window sill the shy violas grow,
Their wise, wee faces tell me half the things I want to know.
The foxgloves know when fairies pass, an ancient story tells
They hear the Little People ring the Canterbury bells.
Among my roses linger smiles that faded long ago—
A crimson rambler stooped, and bared her heart to tell me so.
While secrets whisper still in tall anemones and phlox,
That stand in stately rows behind my border line of box.
With golden rod and clematis the year is growing old,
A page from Summer's breviary, dim garlanded with gold.
There is a benediction in a little garden's grace,
A chalice filled with wonder at the heart of commonplace.
Where homely colors gleam and glance like stars upon the sod,
The grace of little gardens is the eternal grace of God.

FLORENCE BONE.



Harting

THE MOTIF OF A ROOM

It is often possible for one piece of furniture to establish the atmosphere of an entire room. In this drawing room, which is in the New York residence of Charles Mather MacNeill, Esq., the Adam over-mantel mirror sets the motif for the rest of the decorations—the Adam wall panels, the crystal mantel garniture, the frieze. Frederick Sterner, architect

The Comdack of Stowe missal is bound in wood covered over with brass plates and ornamented with jewels, pearls predominating

COLLECTING THE OUTSIDES OF A BOOK

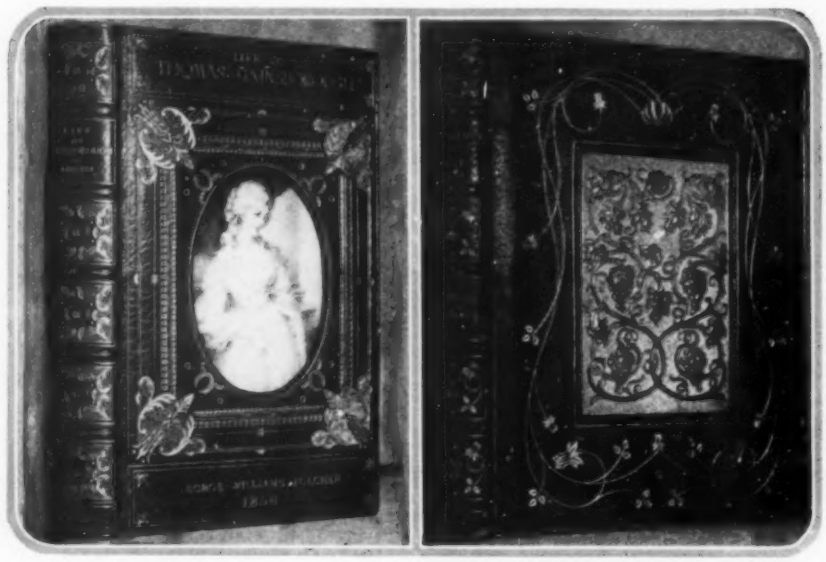
The Story of Beautiful Bindings Is a Fascinating Chapter for Bibliophiles and Connoisseurs

GARDNER TEALL

I KNOW there are those impressive and intolerant persons who hold that a book ceases to be *the* book when once its original binding, whether it be leather, boards, cloth or paper, has been supplanted by another. I will grant you that with many books nothing is more delightful than to come across them just as they outwardly appeared from the publisher's hand. But I also insist that the sentiment of association plays a greater part in such acceptance than does an esthetic perception. Only a vandal, I think, would destroy the original covers of the parts of Pickwick Papers to have new and leather bindings give them their place. But who, with a particle of taste would call the original wrappers beautiful? Only the bibliophile, that lover of books to whom all interesting and some good books are as one's own children, the ugly-featured as beloved as the beautiful.

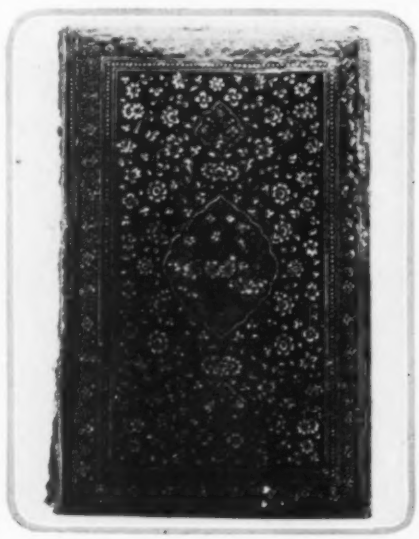
Occasionally I spend an evening with Biblio. We often talk these things over. I think it would be impossible for me to spend an hour in his library if he were not there. That is because with conversation for the raison d'etre we can find much in common, but if I were to turn to his books, it would be hopeless for me to find solace therein, and all because I doubt if there is one of them that has uncut leaves! Do not imagine that Biblio is illiterate, or that he orders from his bookseller by the pound, with no intention of exploring the intellectual realms to which such purchases might admit him. Quite the contrary, he is as well versed as any man I know in belles lettres.

Frankly, it has always been a matter of mystery with me that this is so, because I myself have never seen Biblio with a book that could be read in hand. I suppose he reads at his office in the Bank, or in his comfortable car coming and going. But what he *does* do is to collect the excessively rare first editions of excessively rare books and give them place in a library that they create. All that were well and good were it not that my friend Biblio will not consider



Fulcher's Gainsborough, bound by Riviere & Son in gray and gold with a miniature by C. B. Currie

A copy of the Imitation of Christ bound by Bayntun, of England, in blue crushed levant, brown and gold



A binding in Persian lacquer of 18th Century workmanship. Courtesy of the Metropolitan Museum

Ruskin's Ethics of the Dust, bound by Zaehnsdorf, in brown levant with gilt tooling. Brentano's

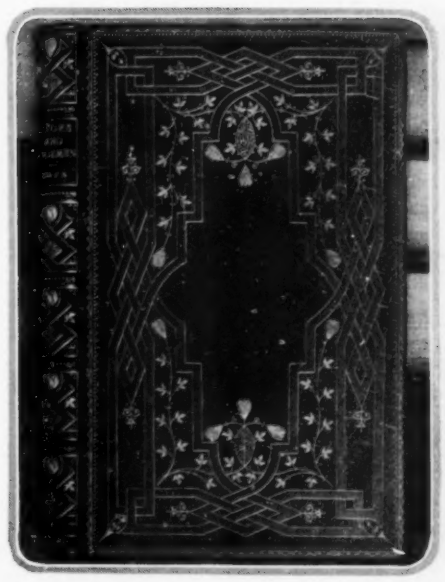
A volume bound in pink crushed levant by Cedric Chivers, of Bath, England. Brentano's

Costello's Rose Garden of Persia bound in green and brown levant. London

Two volumes of a set of Dickens with character bindings. Brentano's

(Below) A volume bound by Henry Blackwell of New York

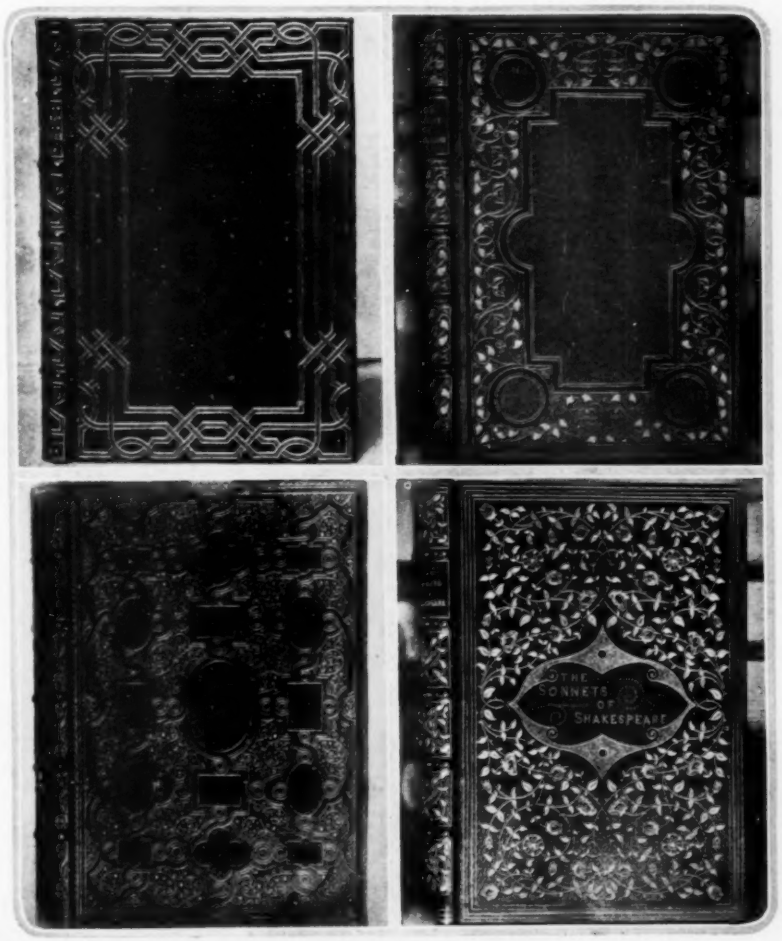
(Below) The Sonnets of Shakespeare bound by Blackwell



Andrew Lang's Books and Bookmen, bound and tooled by Blackwell

anything uncut! With him a book seems to lose interest unless it is as it was the day it came into the hands of someone too tired, too indifferent or too lazy to cut its pages. That a book has survived a reader's natural curiosity sufficiently to descend to him after all these years in the same state seems to give him an unbounded delight. He is known to the book-hawks the world over, and they bless his name, for his purse puts no check to his mania, their consciences none to their desire to supply him with everything he wants.

I once thought to catch him with a question or two over so formidable a thing as a certain first edition of a bygone book of which his collection boasted the only known uncut copy. To do it I had subjected myself to the preparation entailed by the purchase of a late edition, and the subsequent boredom of an hour's skimming of its pages. But Biblio came off with flying honors. He could chat about the volume's contents with a facility



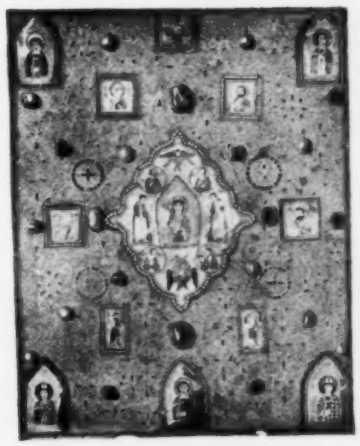
that could only have had its origin in a knowledge of the author's words; and yet, where did he get it? Not from his uncut copy, I am sure, unless, forsooth, he is gifted with second sight! I have often suspected as much, for what happened in the instance to which I have just referred, later appeared to be the case with every other uncut book's mention, when chance led me to refer to this, that or another volume in the category.

However, I think Biblio's knowledge of the insides of books is one not so completely shared by other collectors who also bend in the directions of his particular mania. Were it ctherwise, perhaps there would be no occasion to complain. As it is, I contend that there is a limit to one's veneration for uninteresting or unbeautiful—definitely uninteresting and unbeautiful—books in their original garb, pages uncut.

The covers of printed books were originally—after printed books had begun to become

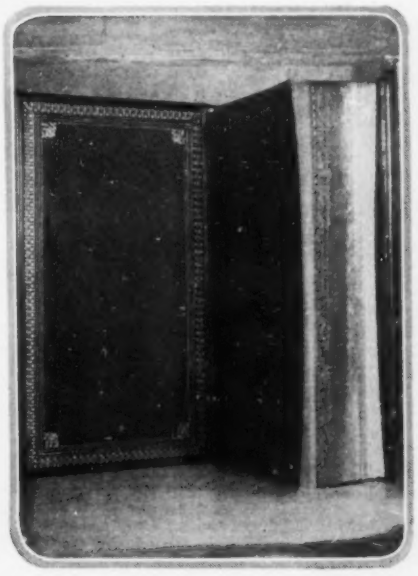
(*Continued on page* 88)

An intricately hand tooled binding by Henry Blackwell



Jeweled cover of a parchment ms. of the Gospels

A book of Shakespeare's Sonnets bound by Henry Blackwell



A richly embossed Persian binding

A Birdsall binding, with inside cover

AN EVENING GARDEN OF FRAGRANCE

Not All of the Charm of a Garden Lies in Its Appeal to the Eye—Here Is One Planned Primarily for the Scent of Its Flowers

ELIZABETH LEONARD STRANG

TWILIGHT may be said to represent the period between light and dark when God, having sat at His potter's wheel since the first flush of dawn, His fingers grown stiff and His brain weary, turned, and with eye benignant, the calm, undoubting eye of the Master Artist, reviewed the work He had that day accomplished. And one likes to think that He sat thus until the moon rose, making the vapors luminous and glorifying the materialization of His the Master Architect's vision of a universe.

To the elderly, the hour is symbolic of all that is sacred, clean and inspirational in life. The years have broadened their outlook. They have become less proud and infinitely more tolerant. For them the outlines of the great picture of life are no longer shrouded.

A Twilight Garden

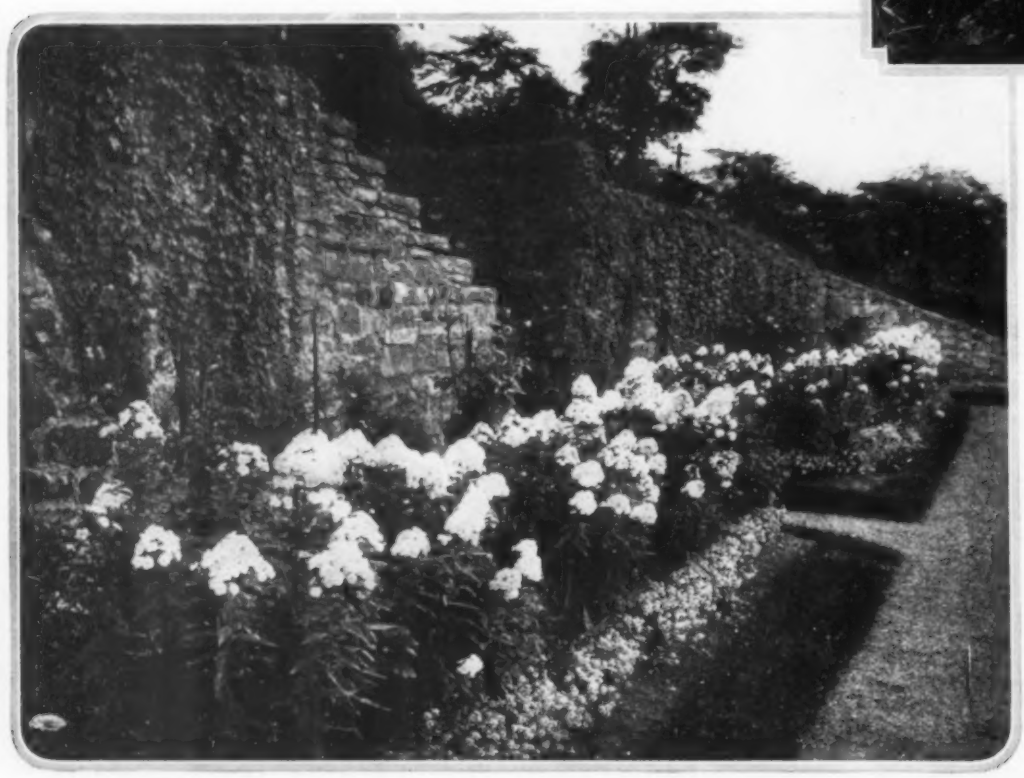
To those still upon the sunny side of the mountain, to whom even the moon is afar off; who are still engaged upon the task of laying the foundation stones of the tower of their ambitions—to those the twilight, shot with moon rays, fragrant with flowers, is the hour royal of the day. So, because it holds every member of the family in thrall of some sort, why not a garden which, by twilight, moonlight or censer-hung lanterns, would give the greatest amount of joy to the family and visitors, and—not the least of its charms—induce the highest order of thought?

Its general design is formal. On one side is a pergola twined about with fragrant roses. Here the young folks can stroll between dances, and reach up and touch the stars. The walks are broad enough to accommodate two or more abreast. A trim border of pungent box edges the beds, so that overhanging plants drenched with starry dew may not injure filmy evening gowns.

The boundary hedge is of hybrid sweet briar clipped to a height of 3'. It blossoms less luxuriantly when thus cut down, but the increased fragrance of the foliage compensates for this.

The white blossoms of Dictamnus alba give off a fine fragrance in late May

Something of the charm of the lilies is reflected in the white iris



Next to the madonna lilies, the phlox present the chief effect of the flower year. Especially in the dusk, their blossoms are enchanting

Outside the Hedge

Without the hedge are flowering shrubs. They are particularly devoted to early spring effects, so designed that there may be more space in the garden proper for the summer flowers, when nights are sultry and most people are out of doors. Near the seat is the early fragrant bush honeysuckle, which is supplemented a little later by the large pink and white cups of *Magnolia Soulangeana,* which has a peculiarly earthy odor.

Grouped near the pergola and the corners of the house are the tall, old-fashioned white lilacs, whose scent is clean, fresh and not too overpowering. Nearby are the equally old-fashioned mock oranges or "syringas," whose blossoms almost cloying in their sweetness, appear two or three weeks later than the lilacs. It is said that rose-bugs forsake the roses if white flowered shrubs are near at hand, so there is a practical as well as an esthetic reason for employing them here. A low shrub inside the garden is the *Viburnum Carlesii,* whose fragrant blooms, flushed a delicate pink, are not unlike a very large arbutus.

At the back of the pergola the actinidia makes a heavy dark green shade for midsummer days. On the sunny side of the garden are climbing roses, the immense single white blossoms of Silver Moon contrasting with the tiny fragrant double white Wichuraiana Triumph. Roses also arch the gate at the garden's end and shower a trellis placed against the house.

Within the Garden

Within the garden four double white flowering peach trees accent the center. Beneath them, and down the entire length of the central walk, are large egg-shaped early tulips of a shimmering white. Blooming simultaneously, here and there in the spaces

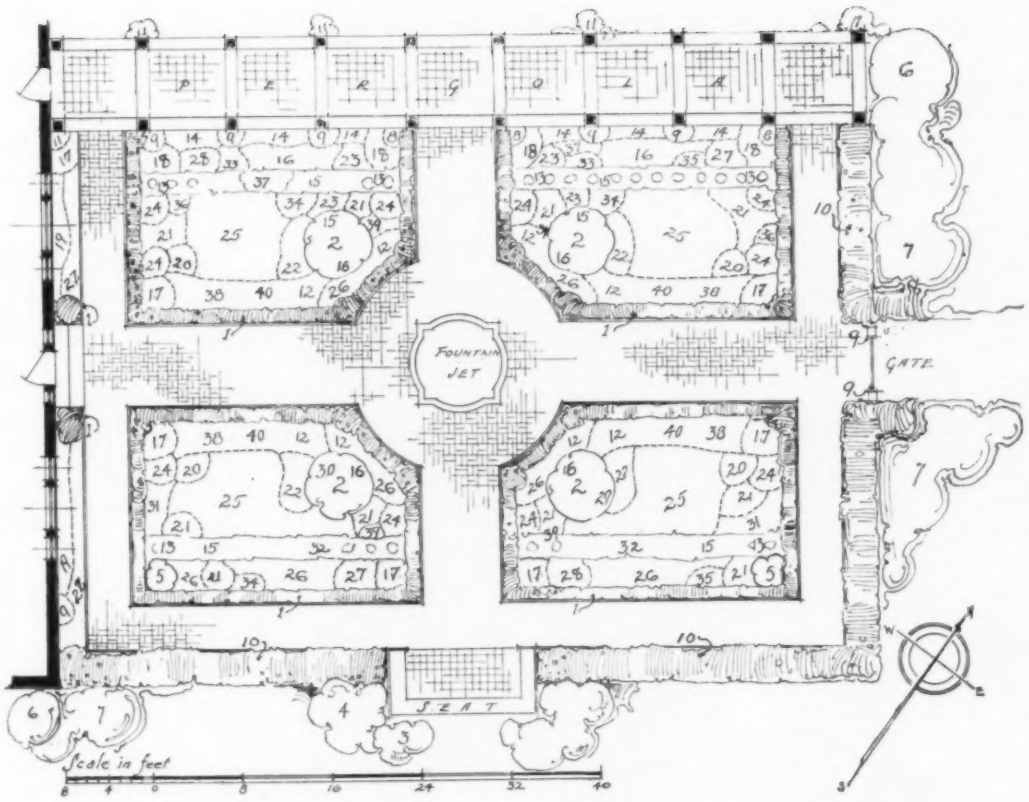
between the stepping stones of the service walks, are white, pale blue, flesh and primrose yellow hyacinths.

This choice of shrubs and bulbs for early spring effects reserves the greatest possible amount of space for the flowers of summer. The trunks of the little trees may have bulbs or aromatic ground-covers planted close up to them; then the bulbs are removed after their blooming period, and their places filled with annuals.

In late May the luminous yellow globes of the Darwin tulip Moonlight accent the center beds on the large clumps in front of the flowering peach, and spaced at intervals in front of the pergola, the white flowers of the dictamnus exhale a fine scent. This plant is sometimes called gas plant, because of a vapor which it exudes. Between these are the waxy bells of the lily-of-the-valley; and among the stepping stones where they may be easily kept in check if inclined to spread too much, are small single sweet violets.

In June come the peonies, white, sulphur yellow and blush pink, early and late varieties of the most fragrant sort having been chosen. Their scent is delicately permeant. Ere these have passed the roses arrive in showers of bloom, and they in turn usher in the bold clumps of snowy white madonna lilies which, distributed throughout the garden, form one of the most striking effects

(*Cont. on page 70*)



The general design is formal, with walks broad enough to accommodate two abreast. At one side is a pergola twined about with fragrant roses. The pungent, ever-pleasing box borders the beds, so that overhanging plants wet with dew may not injure filmy evening gowns

PLANTING LIST FOR AN EVENING GARDEN OF FRAGRANCE

Trees, Shrubs and Climbers

1. *Buxus semper irens* (bush box): 15″ high.
2. *Prunus persica alba fl. pl.* (double flowering white peach): small tree, blooms April and May.
3. *Lonicera fragrantissima* (fragrant bush honeysuckle): medium shrub, small, very sweet scented yellowish-white flowers in early spring.
4. *Magnolia Soulangeana* (Soulange's magnolia): small spreading tree, large pink and white cup shaped flowers in May.
5. *Viburnum Carlesii* (Korean viburnum): low shrub, pink and white fragrant flowers in May.
6. *Syringa vulgaris alba* (common white lilac): tall shrub, blooms May.
7. *Philadelphus coronarius* (sweet scented mock orange): tall shrub, white flowers in June.
8. *Rosa wichuraiana var.* Triumph (memorial rose): small double sweet scented flowers in clusters.
9. Climbing rose, Silver Moon: very large single white flowers, golden stamens.
10. Hybrid sweet-briar rose var. Brenda: single flowers of peach-blossom pink.
11. *Actinidia arguta* (silver vine): dense green foliage for pergola.

Herbaceous Perennials and Bulbs

Spring

12. Early tulip var. Joost van Vondel White (syn. Lady Boreel): pure white, long flowers on tall stems. Plant 6″-8″ apart.
13. Hyacinths, 8″-10″ apart:
    Primrose Perfection, soft yellow.
    Corregio, pure white.
    Schotel, soft light blue.
    Ornament Rose, soft flesh pink.
14. *Convallaria majalis* (lily-of-the-valley): white, half shade or shade. Clumps 12″ apart.
15. *Viola odorata* (single sweet hardy violet): small plants 12″ apart, lavender, purple or white flowers.
16. Darwin tulip var. Moonlight: Tall egg-shaped pale yellow flowers in late May. 6″-8″ apart.

Early Summer

17. Hardy herbaceous peonies, 2½′ apart, half shade, 3′-4′ high:
    Madame de Verneville, fragrant, extra early, double creamy white and blush.
    Duchesse de Nemours, fragrant, early, double sulphur white.
    Festiva maxima, very fragrant, early mid-season, pure white flecked crimson.
    Edulis superba, very fragrant, early, semi-double pink, lasting.
    Duke of Wellington, fragrant, late, double sulphur white.
18. *Dictamnus fraxinella* var. *alba* (gas plant): fragrant white flowers, half shade, June-July, 2′-3′ high. Plant 12″ apart.
19. *Hesperis matronalis* (sweet rocket): fragrant white or purplish pink flowers, half shade, June-July. 2′-3′ high.
20. *Valeriana officinalis* (garden heliotrope): fragrant heads of small pink flowers, sun, 2′-5′ high. 12″ apart.
21. *Lilium candidum* (madonna lily): white, fragrant, June-July, sun or half shade, 3′-5′ high. 12″ apart, covered with 2″ of soil.
22. *Iris Kaempferi* (Japanese iris): pure white or gold banded varieties, sun, June-July, 2′-3′ high. 8″-10″ apart.

Midsummer

23. *Physostegia virginiana* (false dragon-head): flesh white or purple spikes, sun, July-Aug. 1′-3′ high. 12″ apart.
24. *Gypsophila paniculata* (baby's breath): tiny white flowers in spreading panicles, sun, July-Aug., 3′-4′. 18″ apart.
25. *Phlox paniculata*, 15″ apart, sun, 2′-5′ high; July-Sept.:
    Tapis Blanc, early dwarf white.
    l'Evenement, coral pink, medium height, very early.
    Miss Lingard (*suffruticosa*), white, pale lavender eye, medium early.
    Madame Paul Dutrie, lilac rose, medium height, August.
    Pink Beauty, cool rose, tall, late August.
    Dawn, pale rose pink, medium height, late.
    Eugene Danzanvilliers, lavender, white eye, medium, August.
    F. G. von Lassburg, white, tall, very late.
26. *Lilium speciosum* (pink spotted Japanese lily): half shade, August-Sept., 2′-4′ high. 12″ apart.

Autumn

27. *Anemone japonica* var. *alba* (Japanese anemone): sun or half shade, September-Oct. 2′-3′. 8″ apart.
28. *Boltonia asteroides* (aster-like boltonia): small white flowers in dense clusters, sun, 2′-8′ high, Aug.-Sept. 15″ apart.

Plants for Green or Fragrance

29. *Myrrhis odorata* (sweet Cicely): white flowers in May, half shade, 2′-3′. 12″ apart.
30. *Asperula odorata* (sweet woodruff): small white flowers in May, foliage with bay-like scent when dried, half shade, 6″-12″. 8″ apart.
31. *Artemisia abrotanum* (southernwood): aromatic foliage, dark green, 2′. 8″ apart.
32. *Rosmarinus officinalis* (rosemary): dark green foliage mat, 2″-4″ high, needs protection. 6″-8″ apart.
33. *Osmunda regalis* (royal fern): coarsely lobed leaves particularly interesting, 2′-3′ high. 2′ apart.
34. Rose geranium: planted for both foliage and fragrance, not hardy. 1 plant here and there.
35. Lemon verbena: very noticeable fragrance, but plant straggly in appearance. 1 plant here and there.
36. *Lavendula vera* (sweet lavender): gray foliage, lavender blossoms, not hardy. 1 plant here and there. All three of the above may be potted for winter indoors.

Annuals for Flowers and Fragrance

37. *Nicotiana affinis* (tobacco plant): pure white flowers particularly fragrant in the evening. Seed and thin to 12″ apart.
38. Heliotrope: use light lavender varieties. Grows luxuriantly in sun, may be cut back and potted for winter bloom, 12″-15″ high.
39. Tuberoses: extremely fragrant waxy white flowers on tall stalks. Plant bulbs in May or June, in clusters of a dozen or more, 12″ apart.
40. Stocks (cut-and-come-again): ten weeks varieties, 8″-12″ apart. Colors white, canary yellow, pale violet and flesh pink. Fragrant, annual, start plants in greenhouse or sow in open ground.

FRENCH TABLES *and* SEATING FURNITURE *of the* 17th CENTURY

Sturdiness of Structure, Varied Material and a Great Delicacy of Ornamentation Characterized this Epoch

H. D. EBERLEIN *and* ABBOTT McCLURE

FRENCH tables and seating furniture of the 16th and 17th Centuries have quite as much of a lesson for us as has the wall furniture of the same date. From a study of its forms and characteristics we may gain just as many valuable and practical suggestions as are to be derived from the contemporary cabinetwork.

Elegance and richness may be either simple in presentation or intricate. In tables, seating furniture, and cabinetwork alike, of the 16th and 17th Centuries, we shall find both phases. One or two of the illustrations show pieces in which rich materials and intricate adornment have been managed with admirable restraint and dignity; other examples show the same qualities expressed in simple fashion and in less costly materials.

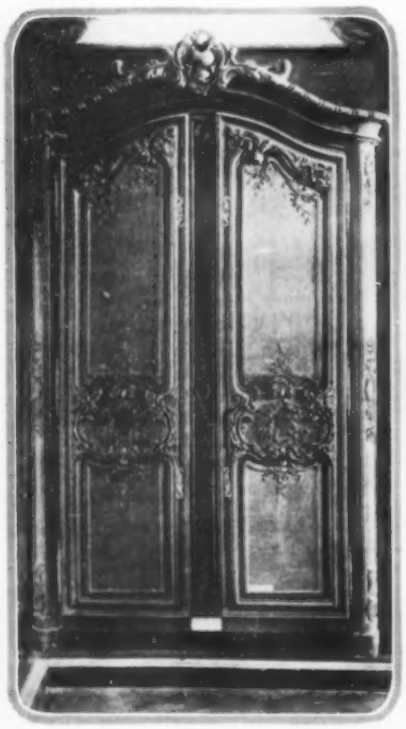
The tables of the 16th Century may be divided into these two principal types:

(1) The tables with trestle or truss supports at the ends, and

(2) Tables with pillar or colonette legs.

(1) The trestle or truss type of table derived its inspiration from the 15th and early 16th Century tables of similar form in Italy, and received a strong impetus from the designs of du Cerceau, whose Italian training was responsible for his designs. The truss and supports were generally elaborately carved and often assumed the shapes of human figures, animals, or grotesque mythological creatures which were further embellished with the customary Renaissance details. Between the truss and supports, or rather between the runner feet on which the trestles or trusses rested, was a broad and heavy stretcher, oftentimes resting upon the floor and really forming a

Empire mahogany console with brass mounts and mirror in back

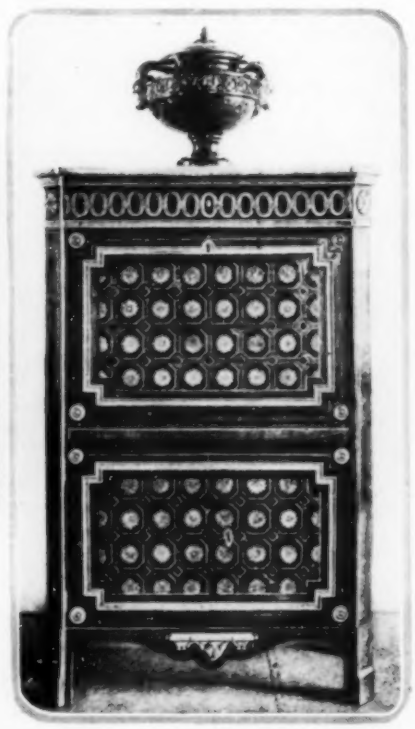


(Left) An armoire of carved oak made in the style of Louis XV

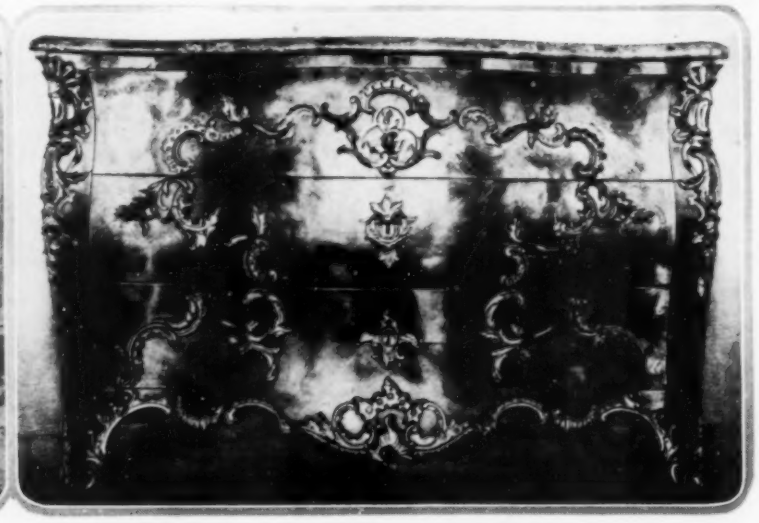
Commode of vari-colored marqueterie, Louis XVI. Rosenbach Galleries

Black lacquer, slant top secretaire designed in the style of Louis XV

(Right) Falling front secretary with marqueterie and ormolu. Louis XVI



Sturdiness of structure and delicacy of ornaments are found in the Louis XVI example of mahogany commode with gilt bronze mounts



Marqueterie of vari-colored woods and ormolu mounts used with restraint characterize this commode in the style of Louis XV

continuous base as well as a brace between the feet. The space between the top of this stretcher and the under side of the table was frequently filled with elaborate pierced carving, extending all the way from one truss to the other, or else with carved arcading, the bases of the little pillars or colonettes resting upon the stretcher.

A variation of this style of table had pillared supports at the ends—usually a pair or a triplet at each end—instead of the ornately carved trusses. The space between the pillared end supports was occupied by a row of much smaller pillars, with or without arcading, which rested (as in the closely related form previously described) upon the heavy stretcher base that formed a continuous and exceedingly stable substructure with the transverse end bases. In some of these tables the stout end pillars, the bases, the colonettes and the arcading were richly carved. In others the pillars at the ends, and the connecting row of colonettes, displayed simple baluster turnings, the whole general appearance closely approximating the Italian prototype. Tables of this design, necessarily oblong from the very nature of their structure, could readily be made as long as desired and thus serve the same function as the long refectory tables of England or the corresponding Italian types.

(2) The pillar-legged or colonette-legged type of table was also oblong in shape. It had sometimes as many as eight or nine slender supports connected and braced by stretchers and arranged in the manner shown in the illustrations. The stretchers were generally two or three inches from the floor. Tables of this type were made either to stand against a wall or to stand out in the room. When intended for the latter purpose and for use as dining tables the stretchers were arranged so as not to interfere with the feet of the sitters. The tops of these tables were frequently of the draw type so that their seating capacity could be practically doubled. Thus a table that would seat four or six without the draw leaves extended could readily accommodate ten or even more with the draws pulled out. Draw tables of this pattern might advantageously be used now for

(*Continued on page* 98)

(Above) A canopied bedstead showing the characteristics which mark the period

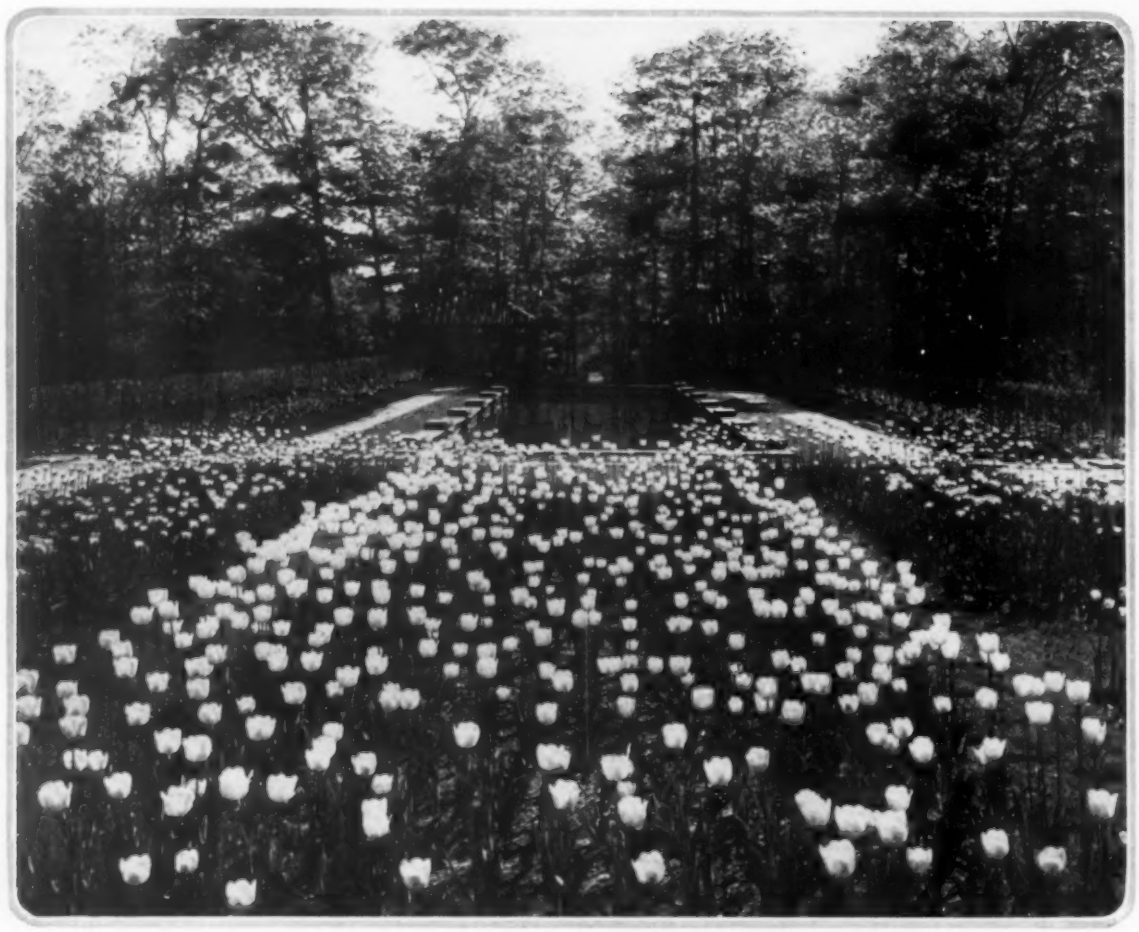
(Center) Washington's Louis XVI—Directoire rolltop desk of mahogany and inlay

Louis XV console cabinet of parquetted veneer and ormolu

Louis XVI console cabinet of marqueterie with ormolu mounts

A commode in the style of Louis XV of figured walnut veneer with carved and gilt legs and apron. Pennsylvania Museum

A Louis XV Bahut or console cabinet; shaped front and sides, marble top, sides of checkered wood marqueterie, gilt bronze mounts and legs



An unusually striking "architectural" effect with bulbs has been achieved in the gardens of Willard D. Straight, Esq., Old Westbury, L. I. White Queen tulips have been bedded in such a manner that the lines of the plantings are in complete harmony with the formal character of the pool. Courtesy Stumpp & Walter

BETTER EFFECTS WITH BULBS

Suggestions for Planting Arrangements Which Are Pleasing and not Oppressively Formal—Securing a Succession of Bloom

F. F. ROCKWELL

WHY is it we make progress so slowly in the way we plant bulbs?

We have long since broken the shackles which so long bound us to old ways of planting shade trees, shrubs and hedge plants. The day when every home planting, regardless of surroundings or conditions, had to include a formal, closely clipped hedge, shrubs set out with more or less geometric precision, and a *Catalpa Bungeii* on either side of the front entrance, has passed into oblivion. These things, of course, still have their uses where formal gardening is desirable, as is sometimes the case. But they have become the exception and not the general rule. We have come to realize that for the majority of cases the formal treatment is not permissible.

We have not yet, however, got this far in the use of bulbs. Whatever the reason may be, we still adhere, as a general thing, to the old-fashioned formal methods of using this particular form of landscape material. One reason, undoubtedly, is that the spring flowering bulbs naturally lend themselves to uses of this kind. If you want to make a "design" planting in the middle of the front lawn or against the veranda, with blocks or ribbons of strongly contrasting colors, and flowers of even height all in bloom at the same time, it would be difficult to find anything more ideally suited to your purposes—with the possible exception of some of the formal bedding plants—than hyacinths, crocuses or the old-fashioned, rather fragrant colored tulips.

Narcissi can never be stiltedly formal—their form and habit of growth forbid that. The variety which has been used here is Poetaz

Some bulb catalogs offer collections of bulbs especially selected for planting round beds so many feet in diameter and including the standard bright but not always artistic colors. Then, too, bulbs are recommended for bedding, and people naturally associate them with that style of planting.

But we are gradually breaking away from the bedding idea. The amateur gardener is beginning to realize that the spring flowering bulbs, like other forms of plant material, can be used at will in painting the garden picture beautiful; that bulbs are a legitimate medium available for him who wishes to create a living vision of loveliness out of doors.

So it is coming to be realized that the spring flowering bulbs are much more important than we have usually considered them to be. Their uses are almost unlimited, where heretofore they have been considered quite limited. For high-lights in the garden picture, for splashes of color, either brilliant and glowing or more subdued and restful, they are unsurpassed. The bulb bed and the bulb border have their uses, although in the past they have been atrociously misused. These

A good example of tulip border planting. The plants are not too closely set, nor are they aggressively prominent in the general scheme of the surroundings

In certain settings, bulbs are invaluable as contrasts to the rest of the planting. Here Ouida and Rev. Ewbank tulips have been used in connection with evergreens

suggestions are not so much of a criticism of what has been done, as a plea for what can be done and has not been done, except in individual cases.

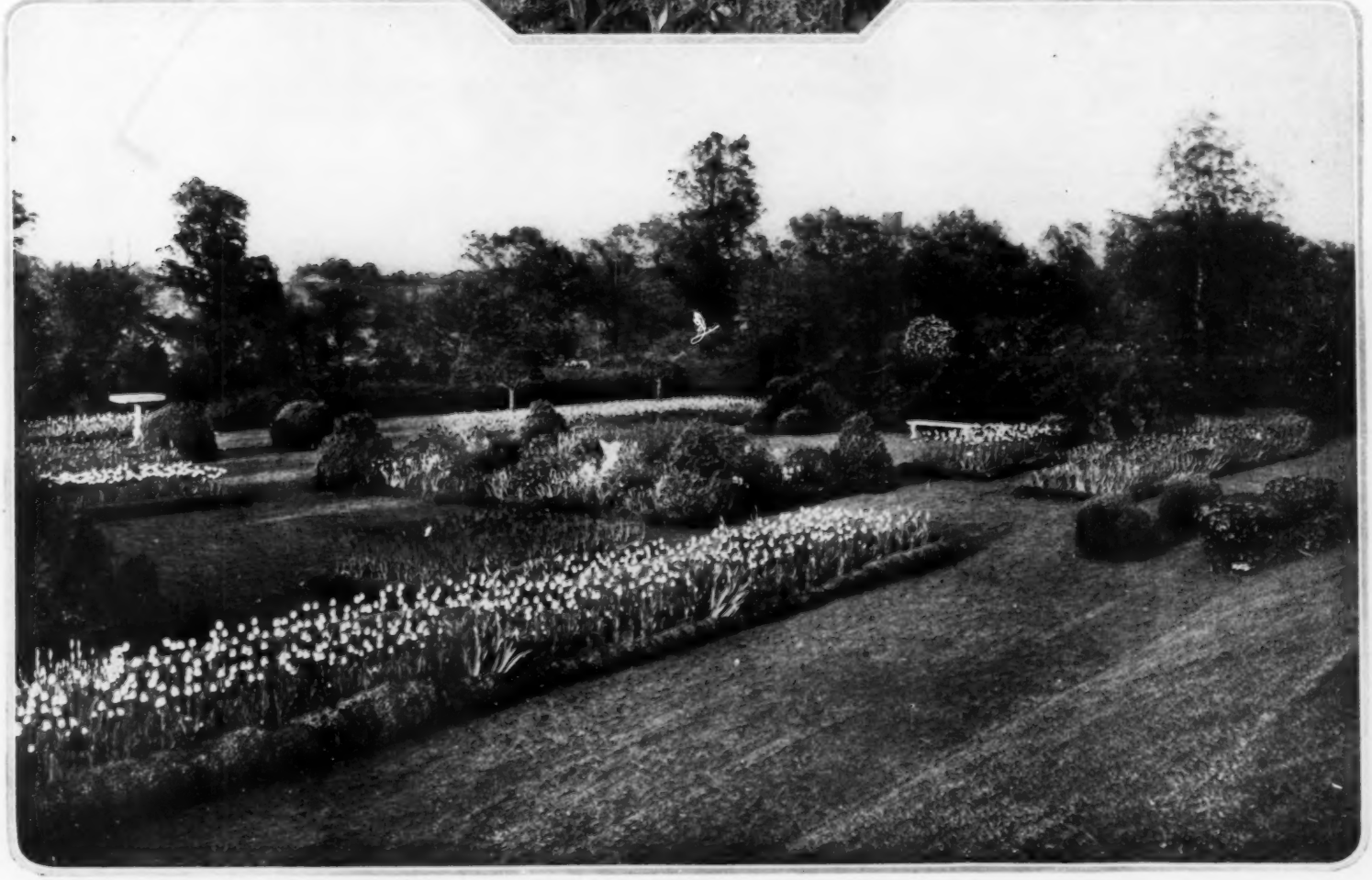
In a word, there is needed in the planting of bulbs a more general realization of the fact that they can be used just as freely, and for just as wide a variety of effects, as shrubs or perennials.

Before making up your order for this fall, don't merely take up your bulb catalog and figure out how many bulbs you will need for a border 20′ long and 4′ wide or a lawn bed 10′ in diameter, but go outdoors and make up your list somewhat according to the following plan.

If you have no map of your place showing the general outline of the landscaping drawn to scale, make one. Such a map is useful for different purposes many times during the year. Stand on the porch, at the living room window, or whatever place may serve as the point from which your planting of shrubs,

(*Continued on page 66*)

(Right) An excellent example of bulbs used in a perennial border for early effect. Notice how their blossoms add character to the arrangement of the other plants



Another case of justifiable formal bedding, bearing about the same relation to front-lawn bulb stars and circles that Georgian architecture does to houses of the jigsaw period

TRANSPLANTING A FRENCH FARMHOUSE

"The Yellow Patch" at Narragansett Pier Reproduces An Old World Spirit In Its Architecture and Gardens

A FRENCH peasant cottage, typical of the thatched roof homes of the well-to-do farmer class in rural France, transplanted to a famous New England summer resort is something far removed from the conventional in architecture. Such a cottage, however, has been recently added to the fashionable villa colony at Narragansett Pier, and known by the name of "The Yellow Patch."

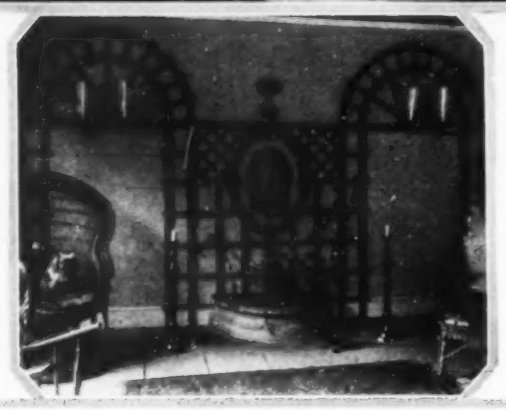
The "Patch" stands some distance back from the ocean. Before the war the owner, Mrs. William S. Richardson, spent many summers in rural France where she revelled in the artistic architecture of the region as she saw it in the picturesque and colorful homes of the country with the thatched roofs, the flower filled window boxes, and blossoming door yards.

The Site

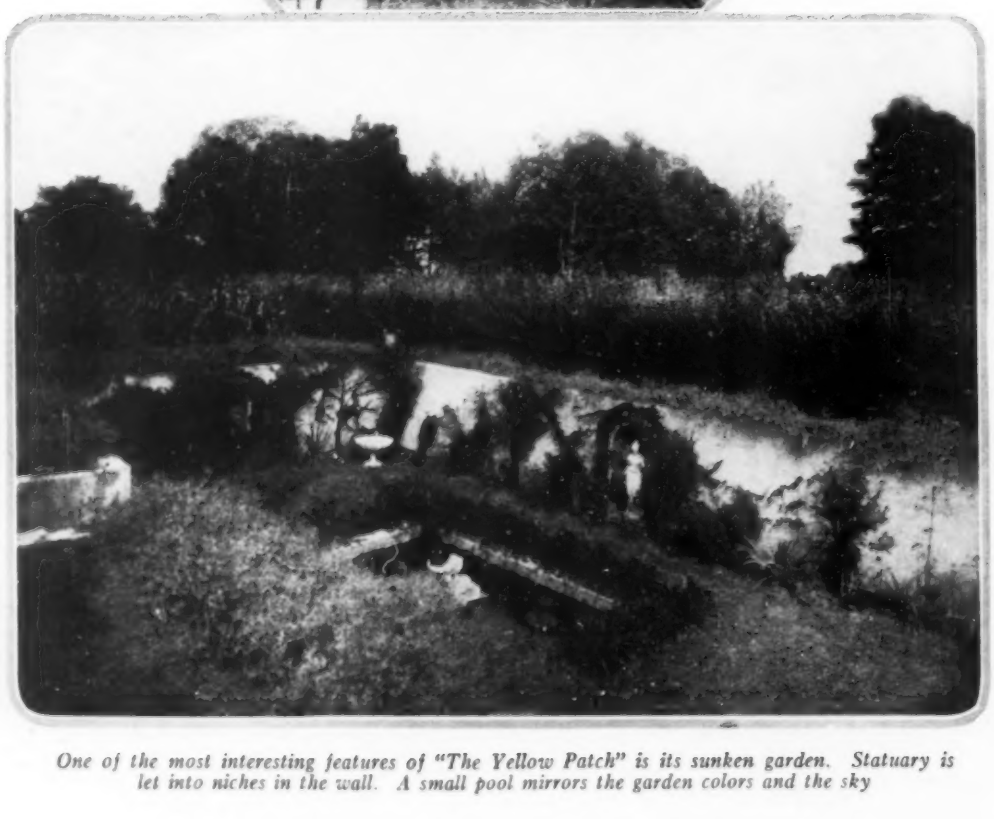
In her scheme for reproducing the architectural memories she had visualized in France, however, she was careful to choose a location which would prove a fitting setting for her ideal. That it must be roomy with ample space for door yard gardens and flower bordered walks was imperative: that its environment must be in the midst of green fields was also necessary.

The passerby emerges from a maple bordered street with its luxuriant growth of green and comes upon the brilliant patch of yellow with the house in the background and in the foreground the kitchen garden, the flower bordered walks, the sunken garden in its setting of yellow and lavender flowers, and the stepping stones leading to the house through an aisle of yellow poppies.

The house is set back from the road; one comes to it through a flower garden of massed loveliness



A wall fountain and pool with a backing of lattice make a pleasant addition to the sun room



One of the most interesting features of "The Yellow Patch" is its sunken garden. Statuary is let into niches in the wall. A small pool mirrors the garden colors and the sky

It is as if one were suddenly set down in the once peaceful country of France where the homes of the peasants have always appealed to artists and poets because of the grace of the thatched roofs and fascinating exteriors.

The house is of cement in pale lilac with yellow trimmings, several coats of liquid glass being used instead of paint to give the delicate effect of lilac. The small paned windows with their brilliant yellow awnings and yellow painted window boxes, filled with yellow and lilac flowers are charming reproductions of rural French farmhouses. In front of the house is the sunken garden, this, too, being filled with masses of yellow and lavender flowers amid which canary birds sing all day long. To the north of the house Mrs. Richardson has this summer a "Victory Garden" in which the vegetable beds are fringed with blossoming shrubs.

The Interior

The interior of the dwelling is quite as unusual as its exterior. A spacious piazza of stone with tiled floor extends to the south from the living room. Both the enclosed piazza and living room are heated by one big stone fireplace, this being possible because of a flue in each room.

In the center of the living room is a long refectory table of polished mahogany, patterned after the refectory tables seen in Old World monasteries. Rare old metal lamps, picked up in shops in Europe, light the interior.

METHODS OF HEATING THE HOUSE

The Principles and Details of the Hot Air, Steam, Vapor and Hot Water Systems —The Advantages and Limitations of Each

FRANK CHOUTEAU BROWN

HEATING the dwelling is a science that has long depended upon the most rudimentary application of practically the same principles as those upon which most ventilating systems are devised.

The tendency of heated air to rise (and of cold air to drop) was probably discovered by some aboriginal inventor, who noticed that the rising smoke from the fire burning on the hearth stone in the center of his conically-shaped cave dwelling, rose to an aperture provided by nature in the roof, taking with it a considerable proportion of the heated air as well. Probably his first attempt to make better use of the heat was to devise some method of reducing this opening to a point where it was only large enough to permit the smoke alone to escape! When he finally became convinced of the impracticability of this idea, his next move was probably to provide an artificial passage through which the smoke would escape and, possibly in the endeavor to draw it out at the side of his cave dwelling, he discovered that heat radiated from the walls of the flue, and itself gave the same comforting warmth that he found in the original source of the heat and smoke, around the fire itself!

This discovery has been made use of down to the present day. It was the origin of the old-fashioned "drum," a barrel-shaped enlargement of the smoke pipe from a stove or range, generally located in the second story room over the stove below, and still in use in the country and Middle West. The same principle was utilized in the old systems of heating found in Pompeii, and excavations in ancient Greece, where steam or heat rising in hollow walls from furnaces below produced heated chambers or warmed water in bathing pools in the public and private baths.

GRADUALLY the smoke passage was extended and brought down nearer and closer to the fire; then the hearth stone was moved from the center of the room to the side wall and partly recessed or enclosed by projecting wings or buttresses on the wall, until it gradually took on the recognized form of the modern fireplace on the one hand, while on the other, it shaped itself into the stove—made of various materials but always with the same intention of providing radiating surface for the heat, while carrying off the smoke, gas and odor from the burning wood, charcoal or coal.

Some of the best types of stoves were the old-fashioned, circular, sheet iron heaters, of which occasional remnants still survive in remote suburban New England railway stations. There also exists a hybrid type—a cross between the two breeds just described—which has taken its best known and most attractive form in the so-called "Franklin stove," which is actually an open fireplace constructed entirely of iron and placed a foot or so into the room and clear of the wall behind, to which the smoke pipe connection is made, thus taking advantage of every possible inch of radiating surface provided by the fire.

Modifications of this type sometimes show doors or shutters pulling in from the sides to enclose the front, thus reducing the draught and enabling the fire to be kept over night with the utmost economy of fuel; while still another type takes the form of a soapstone box with iron door on one end or the side, and of almost the same shape or proportions as the Franklin grate. This, too, is of unequaled radiating value; and when found in some old house or country village should still be cherished as a rarely efficient and economical source of heat, to which we may be forced—or perhaps even be glad!—to return, if the present tendencies in strikes and higher freight rates combine to bring the cost of coal much higher!

TODAY, there are three kinds of heating which are of most general use, and therefore of probably greatest interest to the readers of this article. First, because it is both the cheapest to install and the most generally in use, is hot air. By this method of heating cold fresh air is taken from without the building, drawn down through a box conduit which ends in an air chamber beneath the heater, and then drawn up around the fire pot, heated, and sent up through tin pipes to registers, located in the floor, or in the walls just above the floor, in the rooms to be heated.

This system possesses many advantages—especially for the small house of compact plan, for which it is peculiarly adapted. To provide the best results, care has to be taken with its installation; the cold air duct has to be of a properly proportioned area, taken from the north or west sides of the house; the furnace has to be located near the center—or, better still, somewhat north of the center—of the house, about equidistant from the location of the registers in the plan. The pipes supplying the registers have to be properly proportioned, and taken off the hot air chamber that forms the top of the furnace in such a way that the rooms to the north of the heater will connect with the more favored locations. The registers have to be properly located in the rooms, with the piping connections between them and the furnace of even inclination, direct in their arrangement, and not too much flattened in shape when enclosed and carried in partitions. It is also important to have a separate pipe for each register, as whenever two registers open from the same box, one is bound to steal the heat from the other.

This system cannot be used to advantage in a long and narrow house, as it is difficult to force the air into those rooms in the directions from which come the coldest winds or weather; but for the small house with nearly square plan it makes the cheapest and most economical heating system. A still cheaper variant of this is a "single pipe" installation, where all the heat is delivered through a single flue directly over the top of the heater, pouring the warmth up through the center of the house, leaving it to "mushroom out" to all the various rooms. As the air cools it settles down near the outside walls and then is drawn back over the floor to the center of the house and down through a hollow circular collar or ring surrounding the hot air supply pipe, which conducts the air down into the furnace, where it is reheated and again circulated through the house.

THIS system has no cold air box bringing air in from outdoors. To be successful, the heat has to be supplied to a central room or hallway from which it passes uninterruptedly to surrounding rooms through open doorways. A certain economy is effected by this method, first in the installation, in the saving of pipes and registers to the different individual rooms; and second, by reheating and using over again the air inside the house, instead of continually drawing in air of the outdoor temperature, which requires a greater amount of heat to warm it sufficiently to heat the dwelling.

On the other hand, it is this continual supply of cold air, fresh from outdoors, which makes the hot air heating system the healthiest possible method, because it is impossible to obtain results without a constant supply of air to be heated, the circulation of which also provides in itself the best possible ventilation system! It is also possible and, indeed, desirable with a hot air furnace to humidify the atmosphere inside the house by placing inside the furnace a water receptacle, which, if kept filled, will evaporate and distribute the water in the form of moisture over the house, at the same time as the warm air itself is circulated. This moisture in the air prevents furniture from being dried up and falling apart, while it also makes the heat more effective in the case of the dwelling's inhabitants—according to a principle which requires no convincing argument to those individuals who have been rendered additionally uncomfortable in hot weather by an unusually moist or "muggy" day.

To produce the best results in the individual rooms, it is necessary to install the hot air register near an inside partition, so that the air can rise and fill the upper part of the room before it becomes cooled by contact with an outer wall or window. It should also be on the opposite side of a room from an open fireplace or doorway. Rooms must be kept open, however, as it is impossible to heat a room which is closed, because the warm air will not enter—being held back by the cushion of dead air already filling the closed room—until a door or window is opened, thus starting up a circulation which, by the formation of a current of air, begins to move the cold air out and allow the warm air to enter the room.

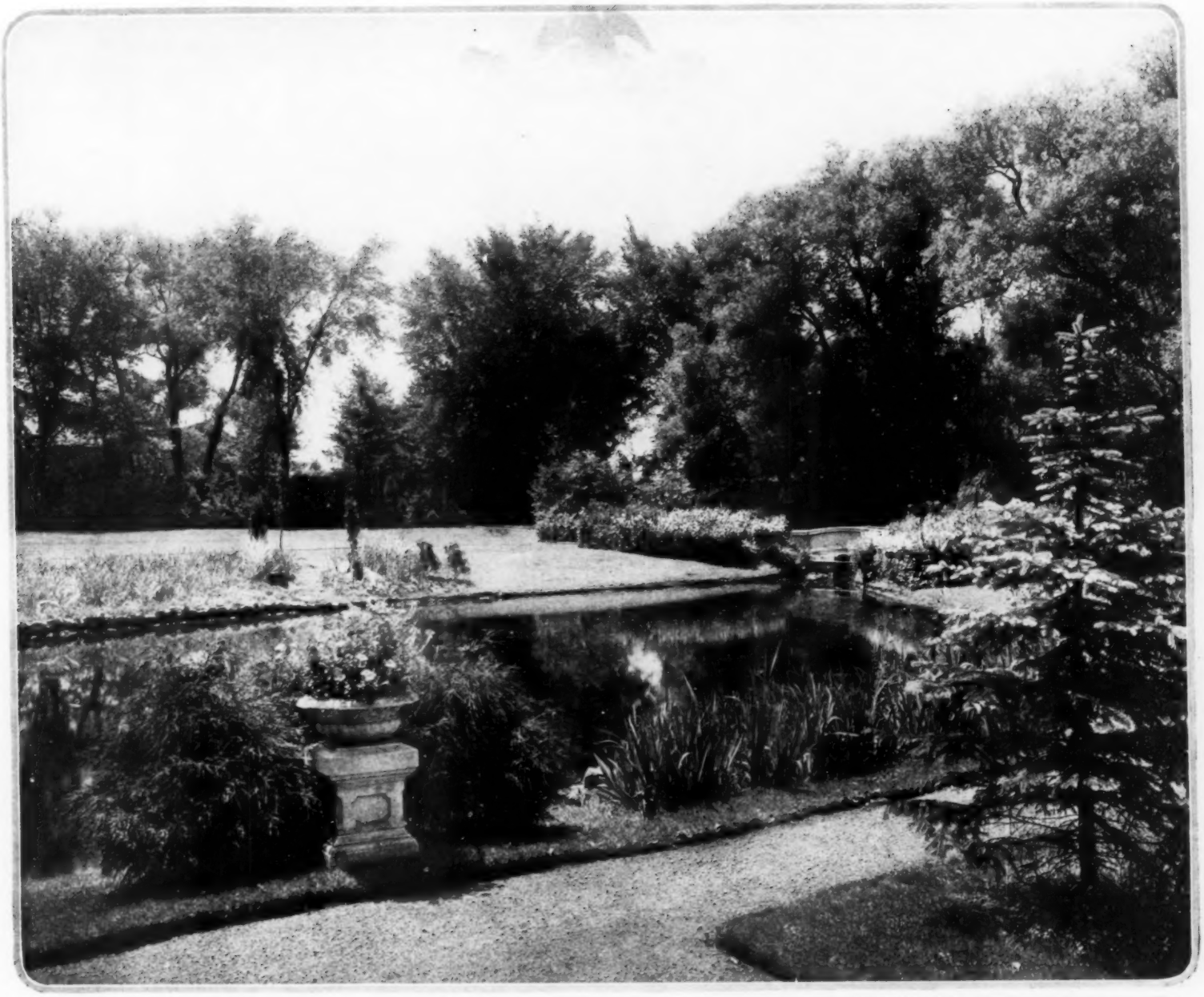
THERE are also various modifications of the hot air system to adapt it better to meet special conditions. On a larger house two furnaces, one large, the other small, can be installed under a common hot air chamber, permitting one furnace to be run in the milder weather, and requiring both to be lighted only in the middle of the winter. The firepot can also be surrounded by a water-jacket, in which a certain amount of water can be heated and then circulated through hot water coils or radiators in the bathrooms or to the most

(*Continued on page* 72)

Hewitt

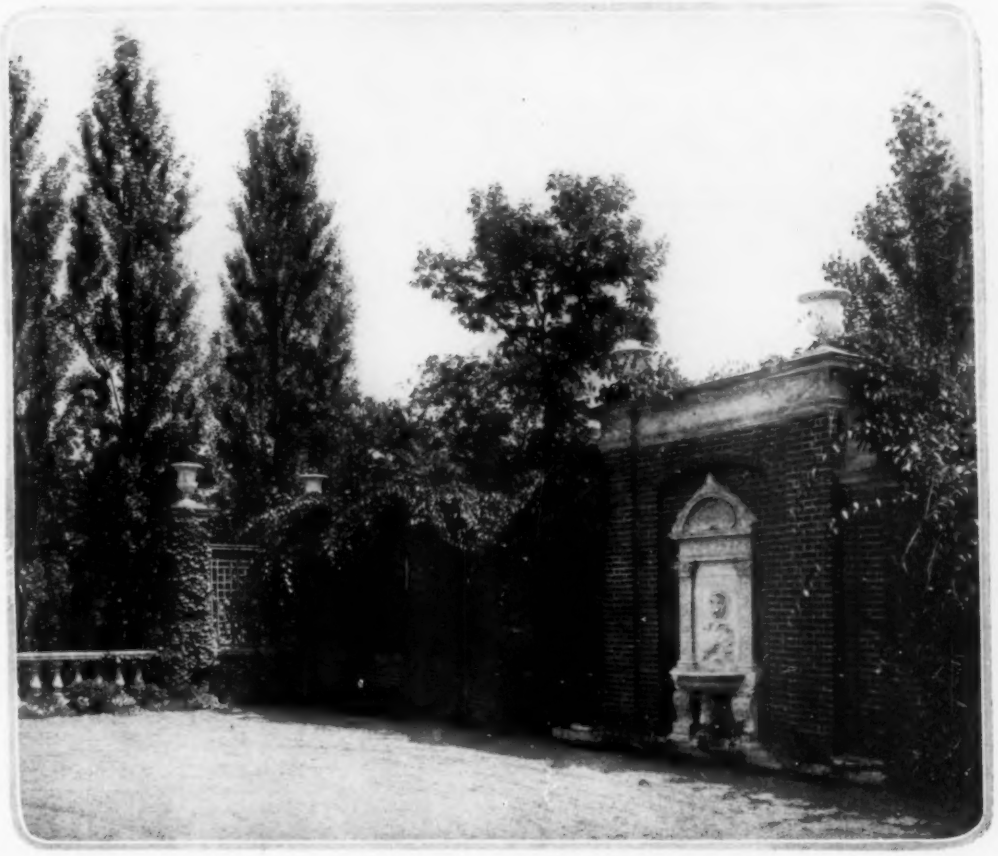
The decorative value of vines against a wall of dazzling whiteness is shown in this garden of Mrs. John C. Phillips at Beverly, Mass. They hang in profusion over the balustrade and clamber up from the border of perennials, making a charming background for the quaint old statue of St. Francis that surmounts the bird bath and fountain

Most successful is the arrangement of this garden vista. The dark background of luxuriant trees, the rich beauty of the perennial borders, the accentuating potted hydrangeas, all lead up to and enhance the delicate grace of the little Diana at the end of the path. This is a bit of the garden on Mrs. Gordon Abbott's estate at Manchester, Mass.



It's a far cry from the humble "swtm-min' hole" of bygone days to this regal pool set amid the formal beauty of graveled walks and far-stretching lawns and surrounded by majestic trees that cast their shadows in its mirrored depths. The effect is one of unusual simplicity and dignity. It is on the estate of Mrs. Gordon Dexter, Beverly, Mass.

AN INTERESTING GROUP OF NORTH SHORE GARDENS



This might be the corner of some garden in Italy. Italian is the wall fountain of white marble, exquisitely carved and effectively placed in a setting of contrasting brick. The marble balustrade and graceful urns, also reminiscent of Italy, have for a background, most Italian of all, the imposing beauty of Lombardy poplars. Mrs. Frank P. Frazier's garden, Manchester, Mass.

The rococo style of Louis XV affords one of the most exacting tests for the wood carver. This mirror frame was photographed "in the white" before finish was applied, and shows the fact that it is honest wood carving

WHAT TO KNOW ABOUT FURNITURE

The Grades of Makes—Woods and Their Handling—Good and Bad Cabinet Making—The Maker's Integrity—Hardwood—When Furniture Bargains Pay

MATLACK PRICE

THE careful examination of a great deal of furniture makes it apparent that there are important differences even as between two pieces of furniture of corresponding grade, suggesting to one who would buy carefully that some bases for appraisal might prove very valuable.

Among the essential points which the writer intends to bring out here, no allusion will be found to historic styles, considered either with reference to their appropriateness or the accuracy of their stylistic rendering. The technicalities enumerated cover points which exist irrespective of style, but associated, rather, with the grades of furniture.

While there are a great many grades of furniture made and sold in this country, three broad divisions must suffice for our immediate survey; their designations, according to the parlance of the trade, being cheap, medium or good, and "custom."

The first division obviously includes, at its lower end, a vast output of outright worthless furniture, graded up to furniture which possesses some degree of merit—in design, if not in quality and construction.

The first division includes, at its upper end, a great deal of very fine furniture, really too good to be designated "medium." Perhaps it should be rated "good," or "fine," with the custom-made furniture called "super." There is but a very short distance between the better makes of this "medium" group and the average "custom" piece. The distinction, indeed, is one of trade phraseology rather than of actual merit or value.

By "custom" furniture is meant that grade which is intended for a very limited market, and a market in which price competition does not exist to anything like the extent it exists in furniture of the first two classes.

The real point of drawing these distinctions is to call attention to the frequently seen mistake of judging a given piece of furniture by

In overstuffed furniture it is especially necessary to rely upon the manufacturer's reputation because the essential points of construction are hidden

(Left) The antique feeling of this cabinet and the carefully executed finish cannot be done with speed or volume. It is typical of the best work

(Right) Here is good construction — drawers and doors fit perfectly, hinges and hardware are applied in a workmanlike manner, moldings are well mitered

a set of considerations which actually belongs to another class. In many instances, everyday furniture is a more serviceable choice than furniture of the higher grades, and may be equally desirable from purely technical points.

First of all, then, when considering a piece of furniture, its grade should be ascertained, and judgment of its merit be passed accordingly. If it is a piece of cheap furniture do not expect too much. If you buy it, do so with the knowledge that it is cheap, and that its deficiencies cannot be condemned by comparison with a more expensive piece.

In the examination of more expensive furniture, you are in a position to demand more, and to feel more justly shocked at the discovery of deception or technical flaws. In a piece of custom made furniture, you may demand the utmost in the designer's art and the cabinetmaker's craft, for both, along with sundry and various other items, are included in the cost total which you are paying.

Perhaps, for the sake of clearness, and in response to the editor's request for a practical and useful article, the reader will accept an itemized table of "points," which will then be enlarged upon more or less in detail. The literary aspect of the essay in hand may be hopelessly impaired by "tabulation," but the loss, making for practical utility, will really figure as a gain.

Furniture Points

The reader, then, when about to buy furniture, whether a single piece or a houseful, might take cognizance of the following points:

1. To begin with, what grade of furniture am I buying? Cheap furniture? Medium or good furniture? Or "custom" furniture? If I were buying a motor car I could not expect to get a Rolls-Royce for $650.00.

2. Therefore, what shall I expect and demand, and what shall I not?

3. Some elements which distinguish "cheap" furniture and make possible its low cost are: inferior and substitute woods, low grades of wood, imitation carving, no carving at all, no lacquer or decorations, poor decorations, poor finish, poor construction, especially in drawers, poor hardware, for the fittings, and poor design.

4. Some elements which distinguish good furniture, and contribute to its high cost are: fine woods, real carving, inlay and marqueterie, real lacquer decorations by real artists, fine finishes, honest and thoroughly workmanlike construction, fine hardware, fine design.

5. Consider: cabinet woods and commercial substitutes.

6. How about veneering, and how about solid vs. "built up" panels?

7. Consider: construction in general stability, drawers, blocking, application of hardware.

8. Consider: hardware, moldings and profiles, turnings, miters.

9. Consider: finishes "antique" vs. "piano." "High-light," varnish, wax and oil.

10. Lacquer or painted decorations must be well done.

11. What do I know about "overstuffed" (upholstered) furniture?

12. Reputation—the integrity of maker and seller.

13. Are "Bargain Sales" all that they claim to be? How about buying "Samples"?

This may seem a complicated list—yet a fairly well-formed knowledge of furniture is just that complicated.

Taking this tabulation now, as a basis for the rest of our study, we find that items one and two were disposed of, or at least discussed earlier, which brings us to number three.

Here seems to be a dark list of furniture crimes—and yet, if a good part of the public wants a bureau that looks like a hundred dollars and can be bought for thirty, the manufacturer has to save on the cost somewhere.

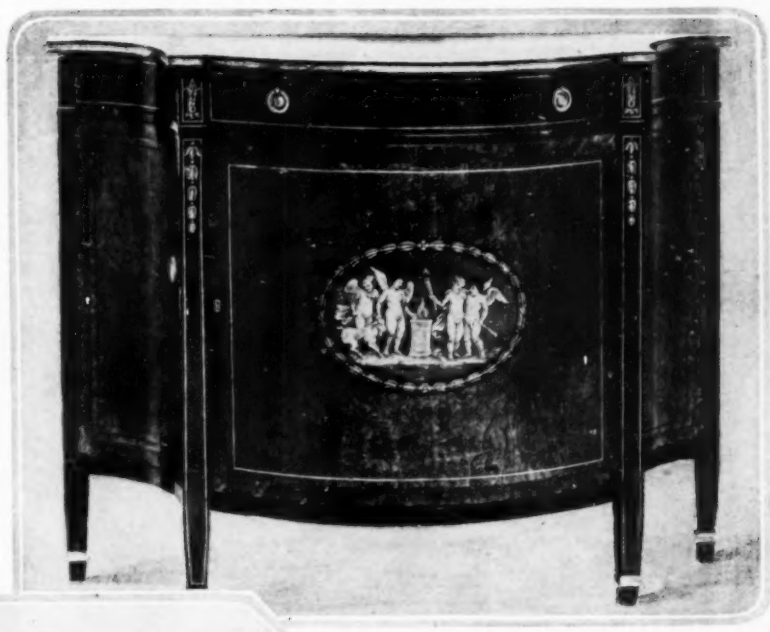
The Woods Used

Really inferior woods should never be used, but the usual substitutes are really splendid woods. Their greatest misfortune is in being misnamed to suit the public demand.

Birch, for instance, is a fine wood, which can be finished in close imitation of mahogany. For frames and posts, as in a bed, it is struc-

(*Continued on page* 84)

The Brothers Adam had the best artists of the day execute the medallions on their furniture. Equal care was shown in the production of this modern example



Doors as large as these must be well hung and truly fitted, and the sliding trays and drawers demand conscientious workmanship in every respect

An interesting piece from a finely made dining room set shows veneer of rare woods laid with a precision and accuracy worthy of the best traditions

COLONIAL PORTRAITS *as* DECORATIONS *in* MODERN HOMES

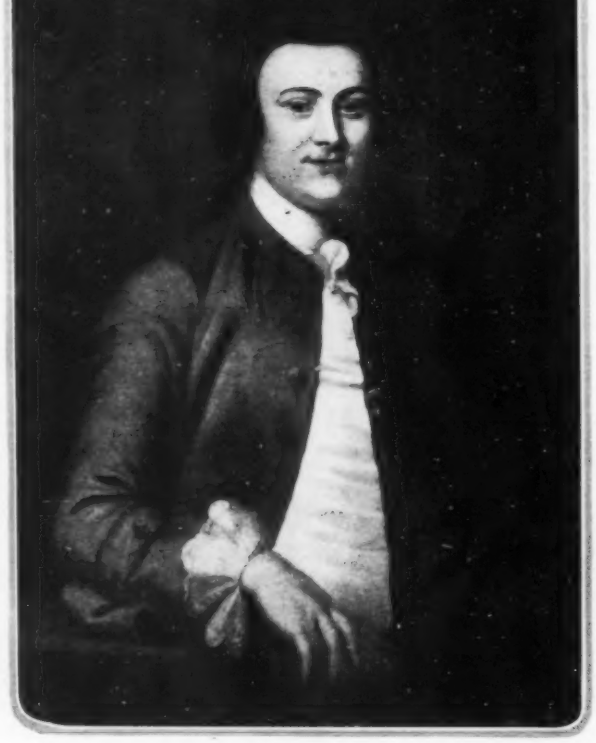
The Works of Smibert, Blackburn, Copley and Other Famous Masters—Their Analogies with Colonial Furniture and Decoration

PEYTON BOSWELL

"Mrs. William Allen," by J. Wollaston, who painted in the South about 1750, with fine color and romantic dash. Courtesy Macbeth Gallery

"Mr. Webb," by Gilbert Stuart, (1755-1828), who, following the traditions of the English school, could even make the portrait of a man decorative. Courtesy Knoedler Galleries

"Mrs. William Allen," by Wollaston. She was Mr. Allen's second wife and was wed at fifteen. Note the doll. Macbeth Gallery



"Mr. William Allen," by Wollaston. Smiling and at ease, he was a typical gentleman of the South. Courtesy Macbeth Gallery

THIS is the day of indigenous art in America.

Partly due, perhaps, to the new awakening of patriotism in the country, it is nevertheless pleasing to think that the wave of appreciation for native works of art also has much of its origin in a real development of our good taste, which has at last led us to see that nothing can be quite so appropriate in America as that which America itself inspired. Therefore the connoisseur hails with joy the new tendency of the people to prefer contemporary American paintings to those that came from abroad and contemporary American sculpture to the product of Europeans.

In the realm of the antique this predilection for native art is reflected no less strongly in the popularity of Colonial furniture, which is most eagerly sought by the collectors, and the search for old American portraits to be used as decorations in our homes. Both movements have developed in the last few years. The same stateliness and beauty that characterizes one characterizes the other. The substantiality and austerity that are the charm of Colonial decoration, have their concomitant qualities in the purity and rigid integrity of Colonial portraits.

Analogous Painting and Furniture

The analogy between Colonial furniture and Colonial painting is so close that their development may be said to have been not only similar, but identical.

The cabinet makers of the early American era used as their models the furniture created in the mother land. However, they did not slavishly imitate the English originals but adapted them in a free manner. Some of the delicate beauty of the prototypes was left out, but in its place appeared an element of rugged and austere individuality—a crudity that is now cherished because it so aptly represents the character and personality of our forefathers, upon which the structure of American achievement is founded. Yet some of the Colonial cabinet makers were so endowed with the worship of beauty that their products rank in artistic value with the best that their contemporaries did across the Atlantic.

Likewise, the portraitists of Colonial times found their inspiration in the work that their fellow painters had done in England. A few of them went to Italy, where they drank from the same font as their English brethren, but they invariably spent more time in London. However, by far the greater number developed their art in America and never left its shores. Beginning by copying prints, they learned their art mainly from actually painting men and women; hence, like Colonial furniture, early American portraiture owes its chief charm to its truthfulness and its perfect reflection of the times.

Decorative Qualities

Now, because early American painting owed its inspiration and much of its origin to England, it had to be decorative in color and arrangement. It would be hard to find anything more beautiful in the whole world of art than the great paintings of the Eighteenth Century English school of portraiture. Bright color and carefully composed arrangement were their very essence. One has but to recall the masterpieces of Reynolds, Gainsborough, Romney, Hoppner and Raeburn to appreciate this truth. The works of Jonathan Blackburn, John Singleton Copley and Benjamin West show the direct analogy that existed between the early English and Colonial schools. These artists aimed to achieve beautiful compositions that would grace the walls of the

owners, as well as faithful portraits of the sitters.

The perfect consonance between Colonial furniture and Colonial painting has an important bearing on the uses to which these old portraits can now be put, and gives the key to their increasing popularity as decorations in the homes of modern Americans, aside from the patriotic and sentimental aspect.

Of course, it goes without saying that old American portraits make ideal decorations for Colonial rooms; nothing could be more appropriate. But, due to the similarity in development pointed out above, these old pictures are equally at home in rooms of pure Old English design; as decorations they are in the same tempo and are just as appropriate as a Reynolds or a Romney or an Old English mezzotint. This is more important than first appears. There are French rooms and Italian rooms, but Americans at the present time, as well as for the generation past, are showing marked preference for Old English and Colonial rooms. Is it any wonder then, that these early American pictures, after reposing through the dusty years in attics and out of the way nooks in the houses of unappreciative owners, are being brought out and, after having the grime cleaned away, are being displayed in the dealers' galleries and eagerly acquired by home builders and collectors?

"Duke of York," by Benjamin West (1738-1820) a splendid decoration in the grand style of English portraiture. Vose

"The Spanish Mantilla," by Thomas Sully (1783-1872). A typical work by the first American romanticist. Vose Galleries, Boston

The Day of the Portraitist

The public generally has the idea that artists were few in Colonial times and in the early days of the Republic, and it will be a surprise to many to know that, in proportion to population, there were far more portraitists working in those times than now. Though much of the work was so crude it has not survived, there was no scarcity of painters and no scarcity of commissions. There was no photography in those days, and the art of engraving, which in a way filled its place in England, was not very far developed in the colonies, so that almost the only means which our ancestors had of preserving the features of themselves and those dear to them was to call in either a portrait painter or a miniaturist. There was just as much personal vanity then as now, and artists were always in demand. They travelled sometimes from city to city, setting up a studio and inserting an announcement in the local paper that they were ready for business. Italian and French and German artists came to America.

The Carriage Painting School

How would you like to have your portrait done by a carriage painter? At first thought the idea seems very curious. Yet in scores of instances the young portraitist graduated from the carriage shop. In those days, before the coming of the machine age, a gentleman's carriage was a work of art. It was built out of the choicest of materials, just as carefully as was the furniture in his drawing room, and when it was done it was embellished just as beautifully as is a millionaire's $10,000 motor car of today. The carriage painter had a calling he was proud of, and with painstaking honesty he turned out the finest job that was in him. He worked with the finest pigments money could buy — with just as good colors as Reynolds or Romney used. What was more natural than for him to try to represent the human lineaments with his brush? In many instances he tried and succeeded, at first crudely, and then, with practice and study, so artfully that, at length, he developed into a portraitist of talent.

Another easy stepping stone to portraiture was the sign painter. As everybody knows, instead of street numbers, locations of business houses and inns in Colonial towns were given by signs. "In-Such-and-Such a street, near

(*Continued on page 82*)

"Anna Izard," by Gilbert Sully, shows what a splendid decoration the artist could paint

"Caroline Ritchings," by Thomas Sully. Courtesy Vose Galleries, Boston

"Mrs. Van Rensallaer," by James Sharples (1751-1811). Knoedler Galleries

USING THE COUCH END TABLE

With a Settee or a Large Upholstered Chair These Little Stands and Tables Comprise a Convenient Grouping

MARY H. NORTHEND

IN the assembling of furniture, three essential things should be thought of—comfort, decorative value, and space saving. All three of these ideas are combined in table ends, or elbow tables, as they are sometimes called. They are small, picturesque pieces that tuck away most conveniently at the end of the davenport or chair, yet are large enough to hold a few books, an ash tray or a lamp.

Willow is occasionally used for this purpose, but is preferable for the sun room or porch. Its lightness of construction is an advantage in moving about the room and it often adds an effective note to the color scheme.

In the history of English furniture, table ends are definitely connected with certain periods. Consequently for reproductions to be authentic they should be made of the same wood that was used in that period.

A pleasant hallway grouping consists of a sofa and a turned table

An Italian table assists in a corner group. Lee Porter, decorator

Periods and Woods

The earliest known in England was of oak, which was in favor throughout the Elizabethan and Jacobean period. This wood lent itself readily to carving, for the furniture of that time was especially rich in ornamentation. Toward the end of the reign of the Stuarts, walnut was imported from the Continent, and during Queen Elizabeth's reign this wood was generally used for furniture construction. William and Mary, as well as Queen Anne tables are largely made of walnut. It was not until the Georgian Period that mahogany was extensively employed, Chippendale being the first to make it popular. He was followed by Hepplewhite, who chose it for his most characteristic wood, and Sheraton and the Adams Brothers used it largely for marquetry. In England, particularly during the Georgian Period, it was accepted universally as the most popular material for furniture. The American Colonists followed this example, and produced wonderful bits of mahogany furniture.

Two Adaptable Styles

The two periods that are most adaptable for our use are the William and Mary and the Queen Anne. Both of these are easily determined, the former by the bell-shaped turning in the legs, the latter showing graceful carving, and the cabriole leg, which was a favorite in all Queen Anne pieces. Of these the clever little William and Mary corner table affords a maximum amount of comfort and usefulness, demanding as it does, a limited amount of space and solving often the problem of decorating an awkward corner. To the lover of the Colonial, however, the small gate leg table especially appeals, as it adapts itself to so many different purposes.

Much attention is being devoted today to the styles of furniture which originated during the reigns of the four Louis of France. The

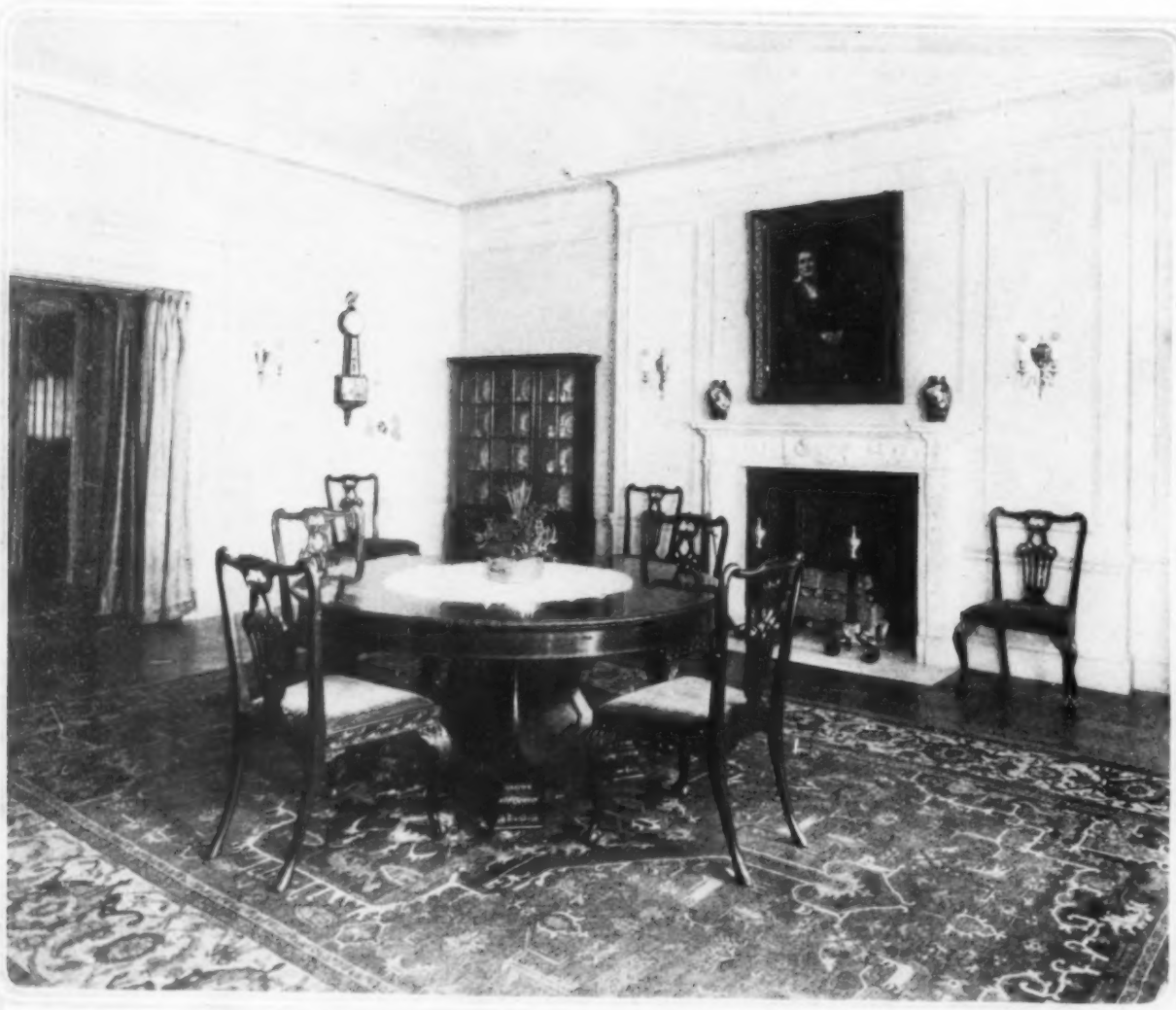
(*Continued on page 76*)

While beautiful settees of this type require no end tables, the proximity of a small stand assists the ensemble. H. F. Huber & Co., decorators

This interesting three-legged table with Dutch feet, gives a note of contrasting color as a sofa end. Earle Campbell, decorator

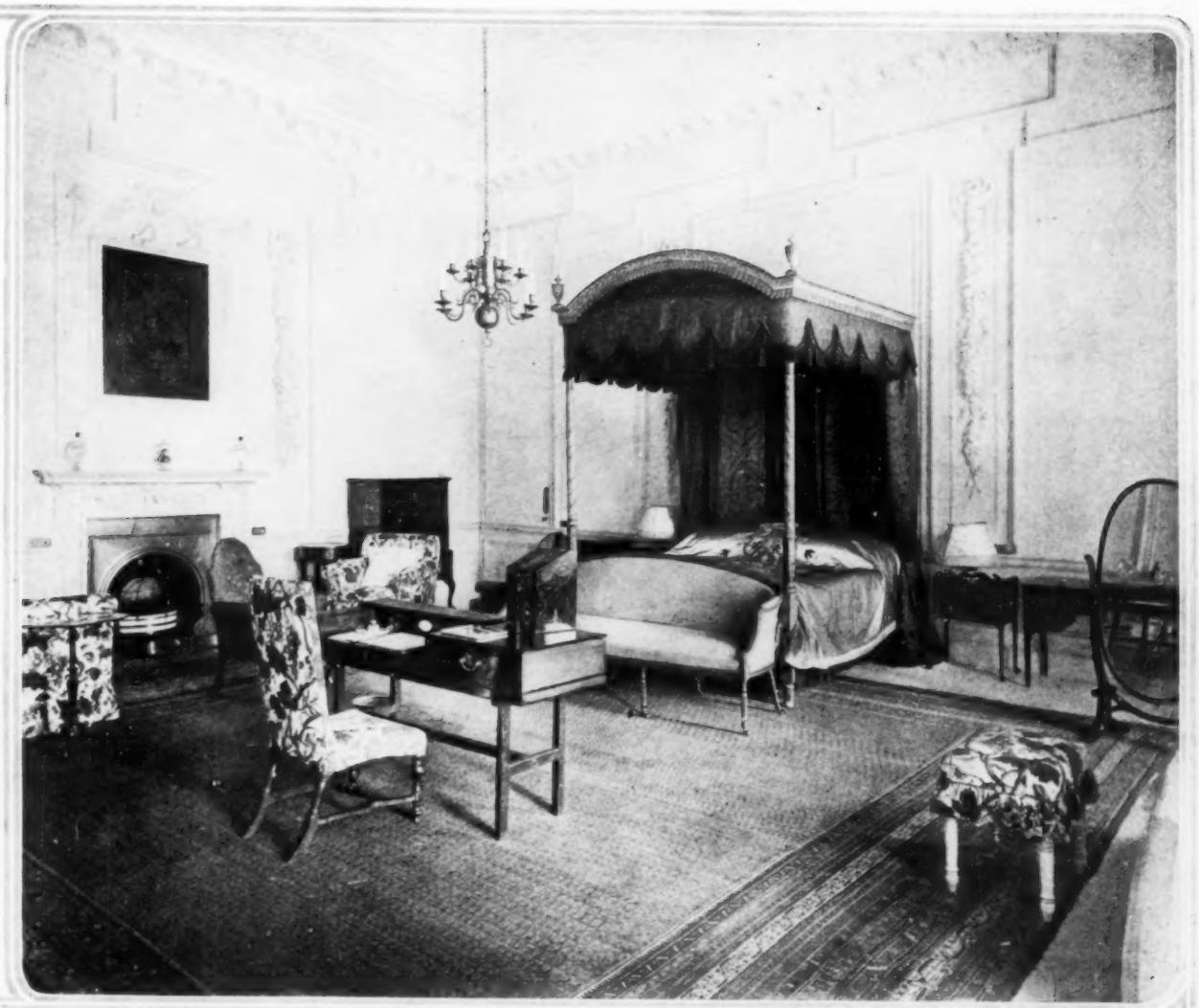
A LITTLE PORTFOLIO OF GOOD INTERIORS

Purely classic architecture is not always a success when applied to interiors. There is an aloofness about it, that, although we admire, leaves us cold. The happy combination of simple lines and delicacy of ornamentation is what makes this English drawing room one of rare beauty. The eye is caught and held by the pure grace of the figures in the frieze—reminiscent of old Greece. It is carried up to the delicate feather motif of the molding and on the perfectly balanced ornamentation of the ceiling. And herein lies the secret of success in this room. The classic lines have been followed with judgment and appreciation, but relieved and softened by unusual beauty of decoration, the whole creating an effect of dignity and warmth. Atkinson & Alexander were the architects

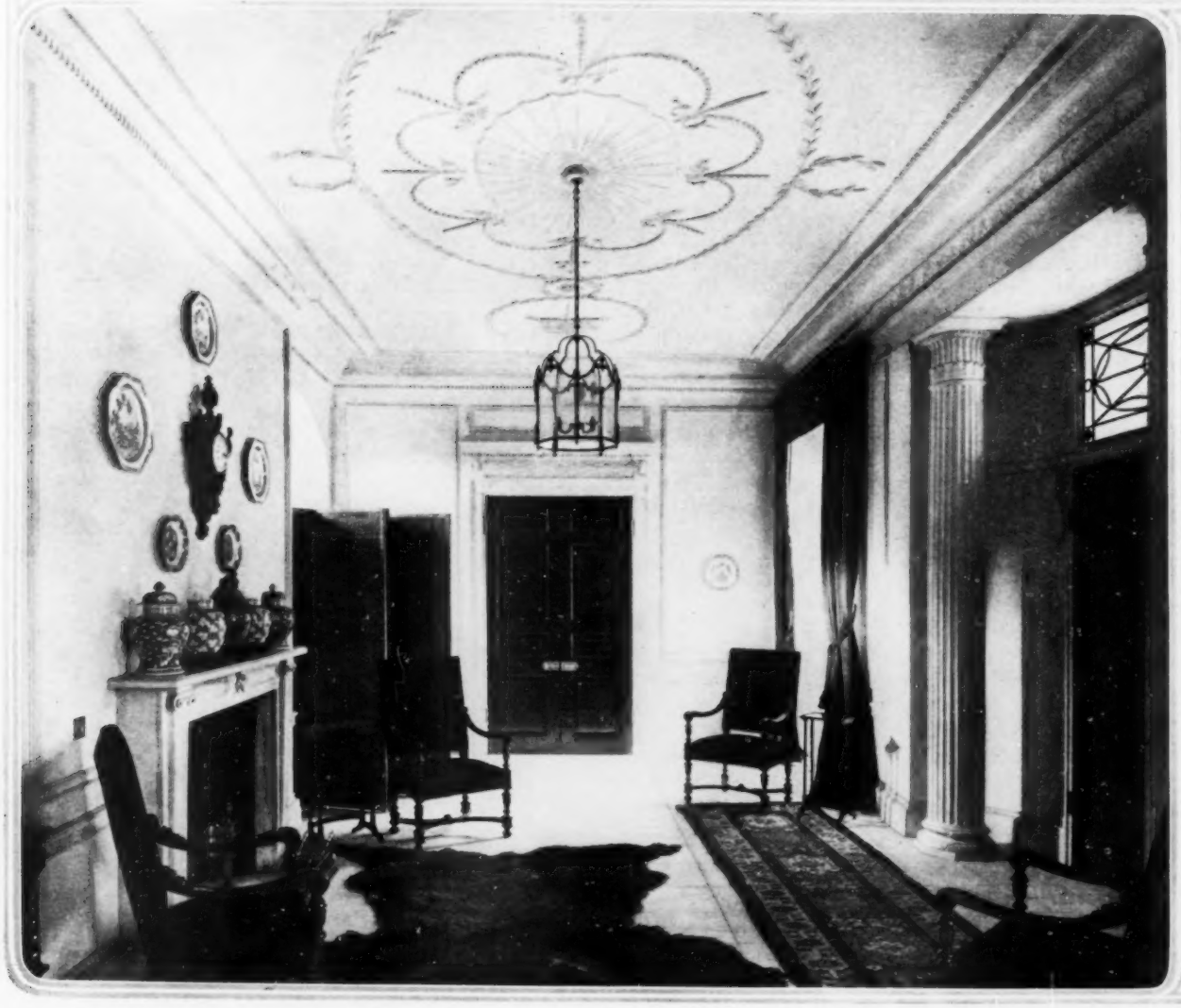


The importance of just the right background is aptly shown in the soft gray of these plaster walls. They emphasize the beauty of old Chippendale furniture and throw in relief the dull coloring of Chinese porcelain jars. Hofstatter & Co., were the decorators of the room

The simplicity and dignity of this drawing-room are an admirable setting for the shimmering beauty of a crystal chandelier. The tworooms shown on this page are in the New York home of Alfred G. Paine, Jr., Esq. C. P. H. Gilbert was the architect



The walls and ceiling are especially interesting in this State bedroom at Lees Court, Kent. The delicacy of coloring and richly carved panels and border make an excellent background, alternating in interest with the stately Hepplewhite, Sheraton and William and Mary furniture



Rare Chinese porcelains demand an unusual setting, and what is more perfect than the classic simplicity and beauty of this hall in an English town house? In contrast is the hanging chandelier of wrought iron. Atkinson & Alexander were the architects

The new box-barberry is admirably adapted to use, as here, for formal edgings. It requires little pruning to keep it low and compact, and is perfectly hardy. Courtesy Elm City Nursery Co.

DO YOU KNOW ALL THE HEDGES?

The Hedge Is the Frame of the Garden Picture, and It Should Be Carefully Selected—New Good Hedging Plants

F. F. ROCKWELL

MOST garden pictures are incomplete without a frame—and the frame is the hedge. In landscaping on a large scale, of course, trees, or the shrubbery masses, may take the place of the hedge, in forming the outside framing for the whole planting; but even in such cases there are likely to be smaller units, pictures within the picture, which are to be "tied together" by a hedge of some sort.

Hedges constitute one of the most important features in a planting of any kind, especially in limited areas, and yet how frequently one sees a garden picture where the frame is an absolute misfit! A stiff, formal hedge around a planting that in every other respect is along naturalistic lines is about as much in keeping as a heavy gilt frame about a Japanese print. A solid mass of evergreens around a small suburban lot planting, or a little low-growing border hedge surrounding a life-size place, with real trees and roads and gardens inside, are equally inappropriate.

The Sort of Hedge Desired

The first point to decide about your prospective hedge is, in most cases, its height. It should be in keeping with the rest of the planting. Furthermore, it may be needed to shut out the street or an undesirable view. It is often desirable to have a boundary hedge of different heights at various points; this may call for several different kinds of plants.

The next consideration is the purpose of the hedge. If it is to be purely ornamental, then the range of selection is wide. If, in addition to being ornamental, it is desirable to serve as a protection against dogs and children, or effective as a windbreak or screen in the winter as well as summer, the number of things that answer your purpose is more limited.

And then there is the character of the planting to think of. Do you want something prim, trim and formal, or natural and informal in its growth?

As a group, the privets probably still come first in importance as hedge plants. One of the reasons for the wide popularity of the California variety has undoubtedly been that its easy propagation makes it available at a low price. But it has many other good qualities.

It produces a dense, thick growth in a remarkably short time; it is green clear down to the ground; it lends itself readily to training or shearing, which is often desired; it thrives in sun or shade, and the foliage is attractive throughout the season. But it is not hardy, and this is a vital drawback to its making a perfectly satisfactory hedge. While it will withstand zero weather, it is not safe north of Washington. While it recovers quickly from a freeze that merely kills it back to the ground, it will occasionally be killed outright north of New York; and in the north and northwestern states it is so uncertain that it has never come into general use.

For these reasons hardier forms of privet have been coming into more general use during the past few years. Three which have become quite generally known are *Ibota*, Regel's and Amoor River. *Ibota* is similar in habit of growth to California privet, but the foliage is not so glossy as that of the latter. Regel's is a low growing, spreading form of *Ibota*, equally hardy. It is especially desirable where only a low hedge is wanted, and requires little attention in pruning. Incidentally, plants raised from cuttings should be procured, because seedlings vary greatly from type.

A New Privet

The most recent of all, and, so far as I know, the result of the only intentional, scientific attempt to produce a really hardy form of California privet, is *Ibolium*. This, as the name implies, is a cross between *Ibota* and California (*Ovalifolium*). Out of some thousand seedlings this was selected, after seven years' experimenting and testing, as the most like California in type and habit of growth that was absolutely hardy. I saw the stock that came through the winter of 1917-18 unscathed in Connecticut, where California in the same vicinity was killed to the ground and below. Fortunately, *Ibolium* may be propagated as readily as California, so it should soon be generally available. *Ibolium* was given a certificate at the last Convention of the American Association of Nurserymen.

The Barberries

Next to privet, barberry has been more generally used as a hedge than any other one plant. The Japanese barberry (*Berberis Thunbergii*) has been rapidly gaining favor at the expense of the common barberry. It is about ideal as a low, spreading hedge, especially for the front boundary line where it is usually desirable to have a low hedge and at the same time one which affords effective protection. The dense growth of the Japanese form, with its tri-pronged thorns, makes a hedge that even a cat will avoid. It may be left to take care of itself, being perfectly hardy and growing in a graceful, spreading form; or you may trim it. It colors up superbly in autumn, and its bright scarlet berries make it attractive in winter, especially as the dense growth often catches and holds the snow with a charming effect. The common green or purple leaved sorts of barberry are host plants for the rust disease which attacks wheat, and for this reason they are taboo in the western grain-growing states. But the Japanese form, the Department of Agriculture has decided, is free from this peculiarity.

(*Continued on page* 80)

The Tudor window is a distinctive and formal contribution to a room. Grosvenor Atterbury, architect

A cottage room is enhanced with small pane windows. F. Sterner, architect

Rounded arched windows suit the stairs. E. B. Gilchrist, architect

The Colonial window and its decorative trim has a simplicity worth copying

Arched triple windows will lighten the sun porch. Kenneth Murchison, architect

WINDOWS FROM THE INSIDE

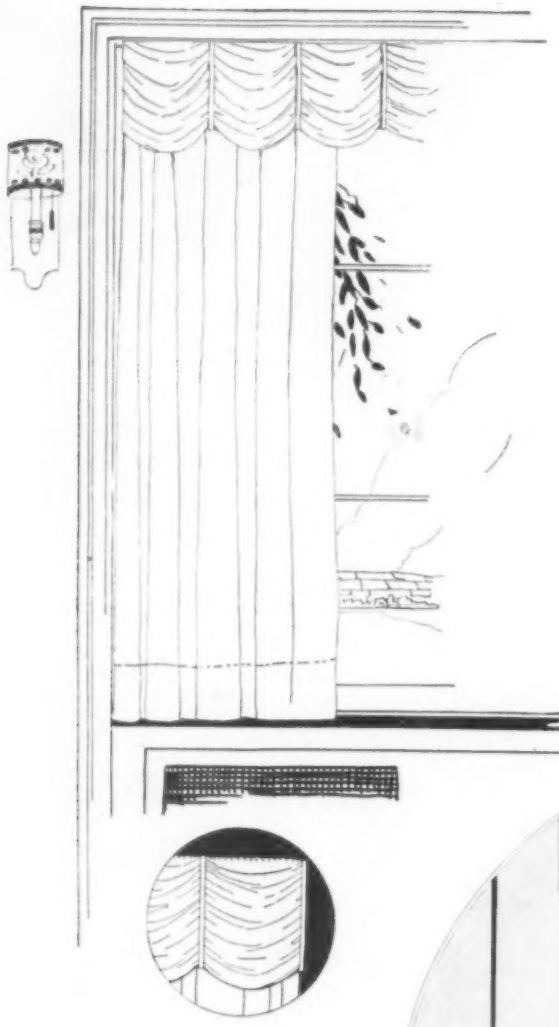
Leaded casement windows add finish to this dining room. Cross & Cross, architects

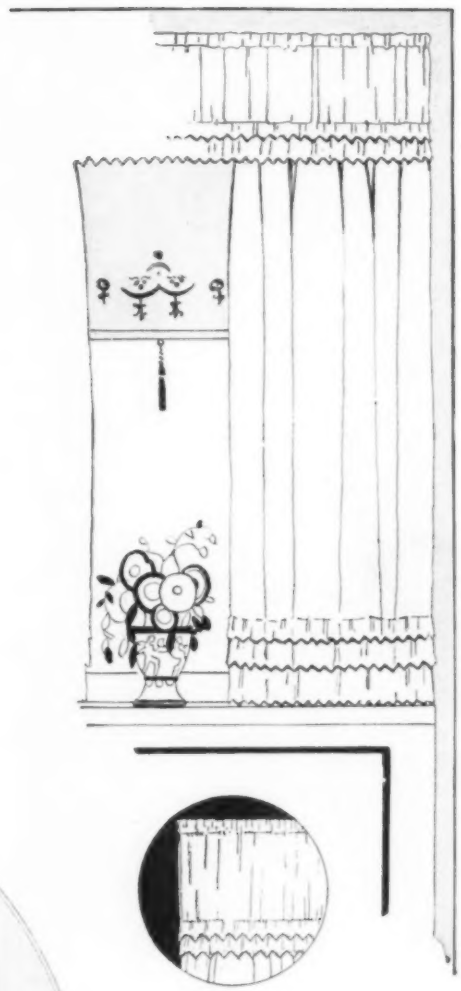
French doors and windows are fitted for interior passages and exterior entrances

HOW TO MAKE YOUR OWN CURTAINS

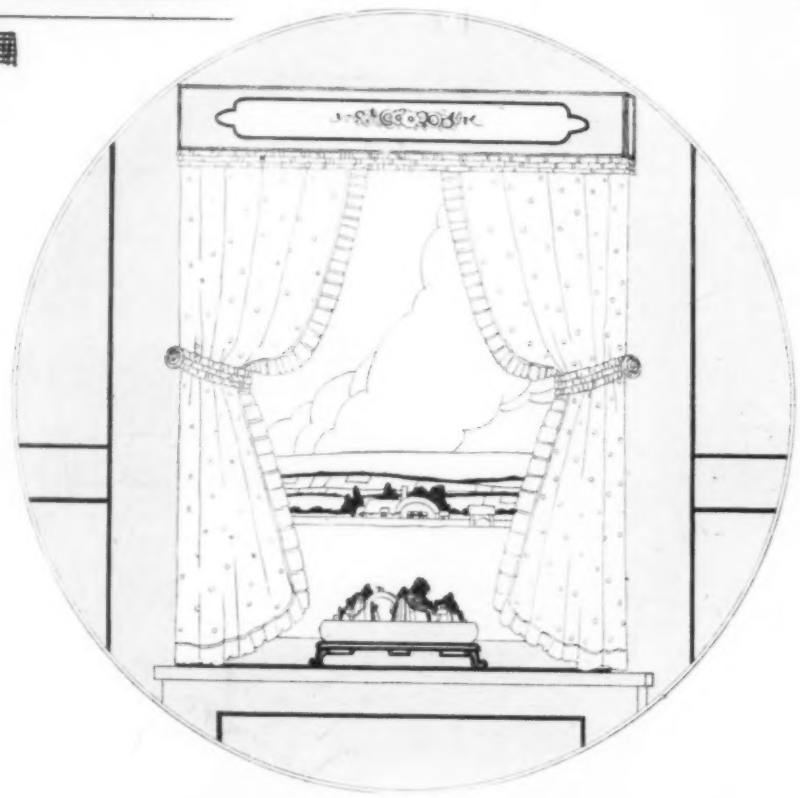
Designed by AGNES FOSTER WRIGHT

Suggested Color Schemes will be found on Page 82

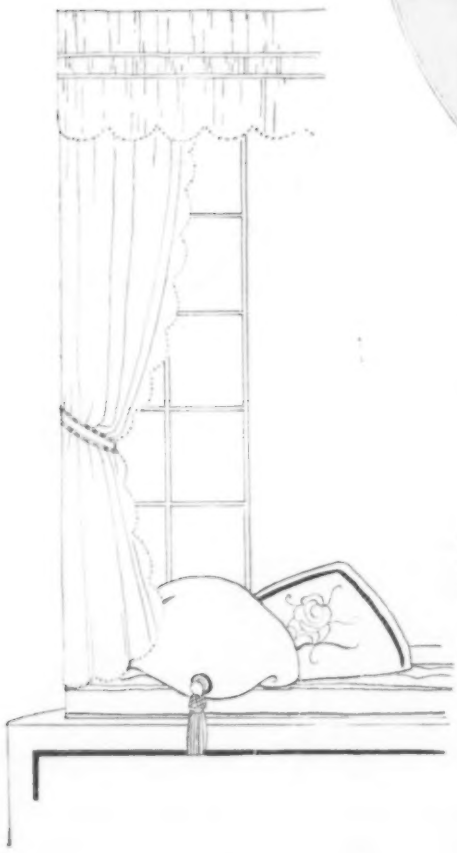


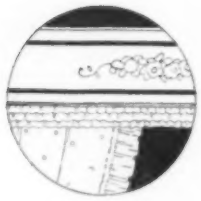


Where only one set of curtains is required use a French valance. Gathers are made onto a narrow tape. Across the top the fullness is taken in a tuck between each tape



Both the valance and the hem of this curtain are finished with ruffles—a 12" ruffle with two 3" ruffles applied and edged with rick-rack braid. Suitable for a cottage room

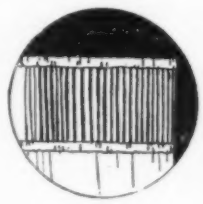


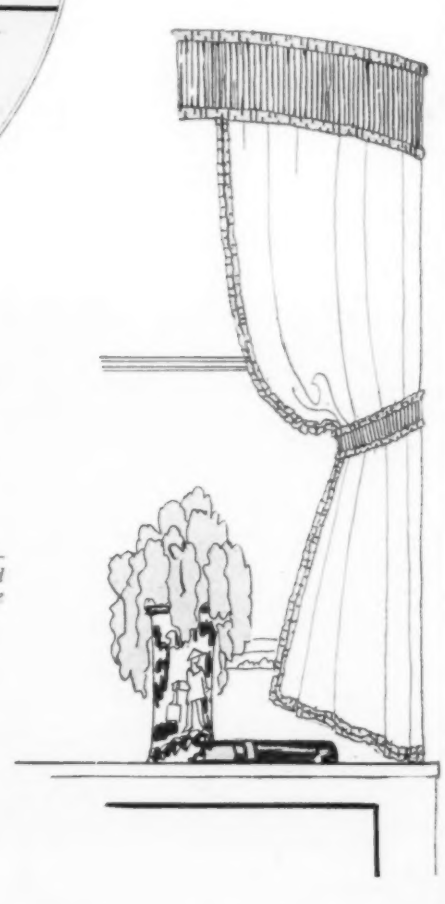


On the bottom of the painted valance board is tacked a 3½" band with three full taffeta ruffles pinked on the edge. The tie-back has the same ruffles, and the curtain ruffles are of plain muslin

A simple valance can be made by using two 3/8" bandings applied 2½" apart. Valance and curtains are picoted

On buckram or a semi-circular frame is gathered the striped material with a ruffle, to make this interesting valance





FALL PLANTING TABLE

The questions of what, where and how to fall plant puzzle many home gardeners. Here they are answered briefly and without unessential verbiage. Let the following table be the basis of your flower and shrub planting this fall

	Name	Blooms	Height	Colors	Remarks
Hardy Perennials	Aquilegia	May—June	3 — 4	Yellow, red	Aquilegia. Graceful and airy, especially valuable in mixed border.
	Aconitum	June—Sept.	3 — 5	Blue	Aconitum. One of the best for shady and semi-shady positions.
	Anchusa	May—June	3 — 5	Blues	Anchusa. The new varieties are great improvements. Give full sun.
	Anemones	Sept.—Oct.	1 — 2	White, rose	Anemones. Beautiful flowers, lasting until hard frost. Good for cutting.
	Carex (Sedge)	May—June	1 — 2½	Foliage	Carex (Sedge). Good for marshy places or wet spots.
	Chrysanthemums	Sept.—Nov.	2 — 4	White, maroon, yellow	Chrysanthemums. Most important of the late fall flowers.
	Dicentra	May—June	2 — 3	Pink	Dicentra. Old favorite, thriving in either shade or sun.
	Dictamnus	May—July	2 — 3	Pink, white	Dictamnus. Showy for the mixed border; give rich soil and sun.
	Delphinium	June—Sept.	3 — 6	Blue	Delphinium. Indispensable for background in the mixed border.
	Ferns	May—Oct.	1 — 4	Foliage	Ferns. Good for shady positions, especially massed around the house.
	Foxgloves	June—July	4 — 5	White, purple, lilac	Foxglove. For backgrounds in the mixed border. Dominate whole garden.
	Hardy grasses	May—Oct.	2 — 5	Foliage	Hardy grasses. Should be used freely both by themselves and in mixed border.
	Hardy pinks	May—June	1	Crimson, white	Hardy pinks. Old favorite. Among the easiest to grow of border plants.
	Hibiscus	July—Aug.	5 — 8	Pink, white	Hibiscus. Full sun, but prefer moist soil. Robust growth with immense flowers.
	Helianthus	July—Sept.	5 — 6	Orange, yellow	Helianthus. Desirable for shrubbery planting and in clumps. Newer varieties.
	Iris	May—July	2 — 3	Blue, lavender, yellow	Iris. Select varieties for succession of bloom and character of soil.
	Peonies	June	2 — 4	Red, white	Peonies. Strong soil and sun or partial shade. Cover crown 2" deep.
	Perennial poppies	June—Sept.	1 — 3½	Red, white	Perennial poppies. "Iceland" bloom all season; "Oriental" in May and June.
	Primroses	April—May	½— 1	White, yellow	Primroses. Good for half shady position and rockeries. Rich soil.
	Phlox	June—Aug.	2 — 3	Pink, red, white	Phlox. Select for succession of bloom; replant every three or four years.
	Rudbeckia	July—Aug.	4 — 6	Yellow, orange	Rudbeckia. Hardy, robust; spreads by itself; excellent for screening.
	Saxifraga	April—June	½— 3	Pink, white	Saxifraga. Very hardy; thrives everywhere; good for bordering shrubbery.
	Shasta daisy	July—Sept.	1½	White	Shasta daisy. The popular original has been improved in later varieties.
	Spirea	May—June	3 — 5	White, pink	Spirea. Prefers semi-shade and moist soil; good for borders; permanent.
	Stokesia	July—Aug.	1½— 2	Blue, white	Stokesia. Good for masses and beds in sunny positions; very hardy.
	Sweet William	June—Sept.	1½	Pink, white	Sweet William. Extremely hardy and permanent; fine for cutting.
	Salvia	June—Oct.	3 — 6	Blue, red	Salvia. Prefer moist and semi-shaded positions; several new varieties.
	Trillium	May—June	1½	Red, white	Trillium. Good for moist, shady positions in the hardy border.
	Veronica	June—Aug.	1½— 4	Blue, white	Veronica. Long spikes of flowers; extremely effective in mixed border.
	Vinca	April—Nov.	½— 1	Foliage	Vinca. Good as ground cover in shady position and under shrubs.
	Violets	April—May	½— 1	Blue, white	Violets. A generous number should be included in every mixed border.
Shrubs	Berberis	April—Nov.	2 — 3	Foliage	Berberis. Best general plant for informal hedges; color in autumn.
	Deutzia	May—July	6 — 8	Pink, white	Deutzia. Very hardy, permanent, and free-flowering; any soil; full sun.
	Lilac (Syringa)	May—June	15 —20	White, lilac	Lilac. Tall hedges, screens, and individual specimens.
	Hydrangea	June—Sept.	10 —15	White, pink	Hydrangea. Lawn specimens, hedge terminals, screening hedges.
	Forsythia	April—May	8 —10	Yellow	Forsythia. Single specimens and in mixed border. Best early shrub.
	Japanese maples	May—Oct.	10 —15	Colored foliage	Japanese maples. Invaluable alone on the large or small lawn.
	Rhus	July	15 —20	Foliage	Rhus. Unique and effective. Good background shrub.
	Spirea	May—June	15	White, pink	Spirea. Invaluable in the mixed border; also isolated. Many varieties.
	Althea	Aug.—Oct.	15 —20	White, red	Althea. Tall hedges and single specimens. Very hardy.
	Viburnum	May—June	12 —15	White	Viburnum. Hardy and effective. Flowers followed by white or scarlet berries.
	Weigela	June—Aug.	8 —12	Pink, white	Weigela. Extremely pretty and free-flowering. Graceful single specimens.
		Plant—Inches Apart	Deep		
Bulbs	Tulips	4— 8	4— 6	1 — 3	Pink, purple, white	Tulips. Most effective in long borders and in front of shrubs.
	Narcissus	6—12	5— 7	1 — 2	White, yellow	Narcissus. *N. poeticus* and *N. P. ornatus* good for naturalizing.
	Jonquils	6— 8	4— 6	1 — 1½	Yellow	Jonquils. For the mixed border and for cutting. Plant early.
	Hyacinths	6—10	5— 7	1 — 1½	Blue, white, pink	Hyacinths. Best for formal and design bedding. Mass in variety.
	Lilies	12—24	6—10	2 — 6	White, red, yellow	Lilies. Plant soon as received. Succession of bloom throughout summer.
	Snowdrops	2— 4	3— 4	½	White	Snowdrops. Earliest flowering; naturalize in open woods or in rockery.
	Scillas	2— 4	2— 4	½	Blue, white	Scillas. Under trees or on shady lawn; will stand close mowing.
	Crocus	2— 4	3— 4	½	Blue, white, yellow	Crocus. Brightest of the early spring blooming bulbs. Naturalize.
	Spanish Iris	6—12	3— 4	1 — 2	Blue, purple	Spanish Iris. Prefer a light, friable soil; good for the mixed border.
	Grape Hyacinth	2— 3	3	½	Blue, white	Grape Hyacinths. "Heavenly Blue" the best variety; plant in groups.
	Anemones	4— 6	3	½	Blue, white, scarlet	Anemones. Prefer well-drained, sheltered position; good for rockery.
	Allium	6	2— 4	1	Yellow, blue	Allium. Naturalize where grass does not have to be cut and in borders.
	Chionodoxa	3— 6	2— 4	½	Blue	Chionodoxa. Prettiest of the early blue spring flowers; naturalize in grass.

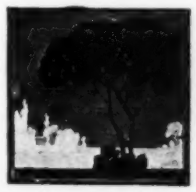
FALL PLANTING INSTRUCTIONS

For the details of fall planting, turn to various other pages in this issue.

Be sure that the plants are in a healthy condition. Plants set out in the fall in a dormant or semi-dormant state do not give evidence of infestation. Buy from a reliable nurseryman. Plants should be well matured; the wood should be firm and hard in the case of trees, shrubs and small fruits, and the season's period of flowering over in the case of perennials. Set out immediately upon arrival.

Any ordinary good soil will answer for most plants. Avoid extremes of sand or clay. Thorough drainage is essential. Heavy soils will be benefited by an addition of coarse sand, gravel, coal ash, or broken brick. Lime is good for both extremely heavy and light soils; it should be used with discretion.

The amount of soil preparation will depend on the quality of the soil and the culture it has received a year or two previous. Add rotted manure and ground bone where plant food is necessary.



Before planting see that all roots are in proper condition. Cut off broken or straggly roots. Prepare holes for shrubs and put in plant food. Keep roots moist. Most perennials that form in clumps or crowns should be set out so that the tops are about level with, or slightly lower than, the surface. Firm in soil about roots. Tag all plants.

After soil is well frozen, apply winter mulch. This protects plants from weight of snow and prevents premature root growth. Use fine, dry manure, marsh hay, dry stable litter or leaves. A depth of 3" to 5" is sufficient.

Of the larger fruits, apples and pears may be set out now, but cherries, peaches and plums should be left until spring. Of the small fruits, raspberries, blackberries, gooseberries and currants may be set out to advantage this fall.

ROCK GARDENS AND THEIR ALLIES

Suggestions for Creating a Garden of Alpine Plants, with those Variations of It, the Bog Garden and the Naturalistic Pool

FRANCES E. REHFELD

TODAY the pleasure which is derived from the cultivation of small Alpine plants is fully recognized and enjoyed by the owner of the medium and small sized property. The rock garden—or Alpine garden, as it is sometimes called—has become a popular feature of modern landscaping and is no longer found only on large estates and public parks. It is a place of informal outline, closely akin to the wild garden, and is developed along naturalistic lines, aiming toward the picturesque in landscape design.

There are two types of rock gardens: the natural and the artificial. In the first, the rocks have been placed by nature; and in the second they have been arranged by man. The old quarry, the rocky bank, and the rocky knoll and valley all lend themselves to the development of the natural rock garden. Suggestions for the construction and care of an artificial rock garden, as well as planting lists of reliable Alpine flowers, evergreens and ferns for the natural rock garden, are given on the following pages.

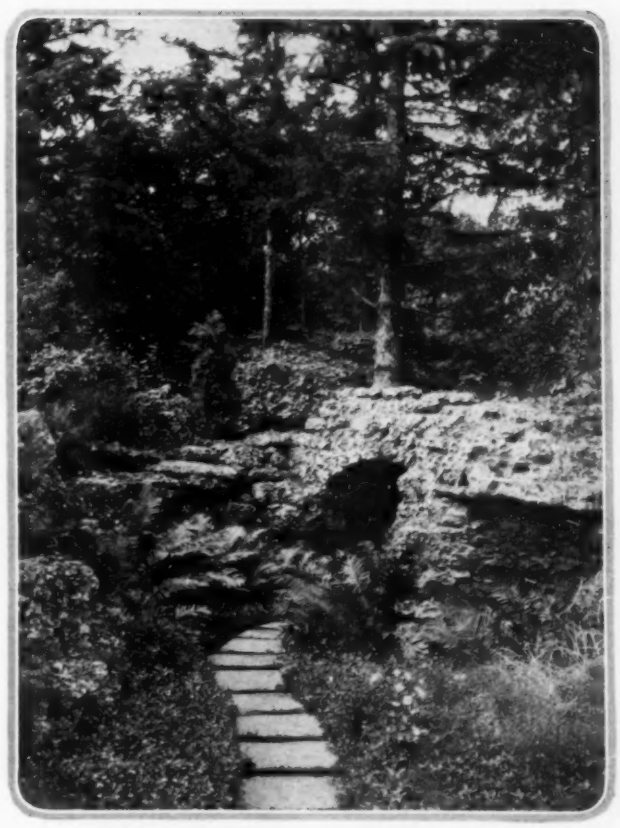
A remarkably successful development of the rock garden. The site is well chosen for its seclusion and freedom from cold winds. In the left center can be seen the entrance to a grotto. John Handrahan, landscape architect

The true rock garden should be treated as an isolated feature of a property. The site chosen for this type of garden, when circumstances permit, should be away from and out of sight of anything formal. No hard and fast rule for the choice of a site can be given, for it obviously depends upon what sites are available. While a

PLANT MATERIAL *for the* ROCKY BANK

Abronia latifolia (sand verbena): trailing, lemon yellow, blooms July.
Achillea tomentosa (wooly yarrow): 1′, bright yellow, blooms July-October.
Adonis amurensis (pheasant's eye): 8″, yellow, blooms March.
Adonis pyrenaica: 1′, deep yellow, blooms May-July.
Adonis vernalis: 1′, yellow, blooms April-May.
Aethionema coridifolium (aethionema): 6″, rosy-pink, blooms June-July.
Aethionema grandiflorum: 12″, rosy purple, blooms June.
Ajuga genevensis (bugle-weed): 8″, bright blue, blooms May-June.
Ajuga reptans: 6″, blue, blooms May-June.
Alyssum alpestre (madwort): 3″, golden yellow, blooms May-July.
Alyssum montanum: 3″, yellow, blooms June-July.
Alyssum saxatile compactum (rock madwort): 1′, yellow, blooms April-May.
Androsace lanuginosa (rock jasmine): trailing, rose, blooms May-October.
Aquilegia alpina superba (columbine): 2′, blue and white, blooms May-June.
Aquilegia canadensis: 2′, red and yellow, blooms May-June.
Aquilegia chrysantha: 3′, yellow, blooms June-August.
Aquilegia coerulea: 18″, blue, blooms May-June.
Aquilegia flavellata: 1′, pure white, blooms May-June.
Aquilegia nivea grandiflora: 2′, white, blooms May-June.
Aquilegia Skinneri: 2′, greenish yellow, blooms May-June.
Aquilegia vulgaris alba fl. pl.: 2′-3′, white, blooms May-June.
Arabis albida (rock cress): 5″-9″, pure white, blooms April-May.
Armeria alpina (thrift): 6″-10″, pink, blooms May-June.
Armeria maritima: 6″, pink, crimson, blooms May-June.
Asperula hexaphylla (woodruff): 6″-8″, white, blooms May-June.
Asperula odorata (sweet woodruff): 6″-12″, white, blooms May-June.
Aster alpinus (blue mountain aster): 5″-10″, bright purple, blooms May-June
Aubretia deltoides (purple rock cress): 4″-6″, dark violet, blooms April-May.
Aubretia purpurea: 4″-5″, purple, blooms April-May.
Bellis perennis (English daisy): 5″, white and pink, blooms May-June.
Bellis rotundiflora coerulea: 4″, white, tinged lavender, blooms May-June.
Caltha palustris (marsh marigold): 1′, golden yellow, blooms April-May.
Caltha palustris fl. pl.: 6″, bright yellow, blooms April-May.
Campanula alpina (bell-flower): 6″-10″, blue, July.
Campanula carpatica 9″-18″, blue, blooms June-July.
Cerastium alpinum (chickweed): 2″-4″, white, blooms May-June.
Cerastium tomentosum (snow in summer): 6″, silvery foliage, white flowers, blooms June.
Centaurea dealbata (bachelor's button): 18″, deep pink, blooms July-August.
Chrysanthemum arcticum: 12″-18″, white, blooms September-November.
Claytonia virginica (spring beauty): 6″, light pink, blooms April-May.
Convallaria majalis (lily-of-the-valley): 6″-12″, pure white, blooms May-June.
Crucianella stylosa (Crosswort): 6″-9″, crimson, pink, pale rose, blooms June-September.
Delphinium chinense (larkspur): 12″-18″, gentian blue, blooms June-September.
Dianthus barbatus (sweet william): 12″-18″, red, white, rose, blooms June-July.
Dianthus deltoides (maiden pink): 8″-9″, pink, white, blooms June-July.
Dianthus neglectus: 8″, bright rosy pink, blooms June-September.
Dianthus plumarius (grass pink): 1′, various colors, blooms June-September.
Dicentra canadensis (squirrel corn): 6″, white, blooms May.
Dicentra spectabilis (bleeding heart): 1′, pink, blooms May-June.
Dracocephalum Ruyschiana (dragon's head): 8″-12″, purple, blooms June-July.
Doronicum excelsum (leopard's bane): 18″-2′, bright yellow, blooms April-May.
Epimedium alpinum (barrenwort): 9″, dark crimson, yellow, blooms May-June.
Epimedium violaceum: 9″, violet, blooms May-June.
Euphorbia polychroma (milkwort): 2′, chrome yellow, blooms April-May.
Gentiana acaulis (gentianella): 18″, deep blue, blooms August-September.
Gentiana Andrewsii (bottle gentian): 18″-24″, deep blue, blooms August-September.
Geranium sanguineum (crane's-bill): 1′-18″, deep purple, blooms June.
Geranium sanguineum var. *album:* 18″, white, blooms June.
Globularia trichosantha (globe daisy): 6″-8″, blue, blooms May-June.
Gypsophylla repens (baby's breath): 4″-6″, bluish white or pale pink, blooms June-July.
Helleborus niger (Christmas rose): 9″-15″, white and purple, blooms March-April.
Hepatica triloba (common hepatica): 4″-6″, white, lavender, pink, blooms April-May.
Heuchera sanguinea (coral bells): 18″, bright crimson, blooms June-September.
Heuchera brizoides: 18″-2′, purple, pink, blooms June-September.
Hypericum calycinum (Aaron's beard): 1′, golden yellow, blooms August.
Hypericum Moserianum: 18″, golden yellow, blooms June-September.
Iberis sempervirens (candytuft): 10″, white, blooms April-May.
Iberis sempervirens var. Little Gem: 6″, white, blooms April.
Incarvillea Delavayi (Delaway's incarvillea): 1′-2′, purplish rose, May-July.
Incarvillea grandiflora: 1′, bright rose color, blooms May-June.

Boulders and a tiny stream well combined. Notice how effectively the large elm tree focusses the whole effect. The foreground flowers are Phlox subulata



Artificial rock-work must be handled with restraint to avoid grotesqueness. Quite fittingly, the entrance to this naturalistic grotto is flanked by tall ferns

rock garden can be made almost anywhere upon a property, a natural site often exists and needs only to be recognized.

The ideal situation involves the finding of a sequestered and sheltered part of an estate where sufficient but not too much sunshine can be obtained and in which the plants will be protected from the cold winds of winter. If it is possible, select a place with an approach through the wild garden or shrubbery. A stream should be brought through the garden if there is not already running water. A stream greatly increases the variety of plants that may be grown, affords unlimited possibilities, and adds much to the charm of the garden. An open situation, away from the roots of encroaching trees or tall shrubbery, should be selected, with sloping, undulating ground and preferably facing south or south-east. There should be no trees within fifteen yards of the garden, for their roots extract the plant food from the soil and the dripping from their branches is detrimental to most Alpine plants.

The proper building of the garden is of the utmost importance, and should be done step by step. Remember that the object of a rock garden is to grow plants and not rocks. It is well to go to Nature and study some natural geological formation rather than try to build a second Stonehenge. Have a definite design from which to work. Aim at variety and balance in your plan and avoid fussy effects. Place your stones so that the finished effect will reproduce in small rock gardens some portion of an Alpine scene, and in medium sized or large ones the scene in its entirety but on a small scale.

In placing the rocks remember that the object is to make the visible ones appear to be

Iris pumila (dwarf iris): 4″-8″, deep violet, blooms May.
Iris pumila florida: 6″, lemon yellow, blooms May.
Iris pumila formosa: 6″-8″, light and dark violet, blooms May.
Linum flavum (yellow flax): 1′-2′, yellow, blooms June-July.
Linum perenne (perennial flax): 1′, blue, blooms June-August.
Lychnis Haageana (shaggy lychnis): 8″-12″, red, blooms June-August.
Lysimachia nummularia (moneywort): 1″-2″, yellow, blooms June-July.
Mertensia virginica (mertensia): 18″, blue, blooms May-June.
Myosotis palustris semperflorens (forget-me-not): 8″, blue, blooms May-September.
Myosotis alpestris: 3″-8″, blue, blooms May-September.
Nepeta glechoma (ground ivy): 3″, blue, blooms May-June.
Oenothera missouriensis (Missouri evening primrose): 1′-2′, yellow, blooms June-August.
Oenothera cespitosa (syn. *marginata*): 9″, white, blooms July-September.
Oenothera fruticosa Youngii: 18″, yellow, July-October.
Oenothera taraxacifolia (syn. *acaulis*): 6″-9″, white changing to rose, blooms July-October.
Pachysandra terminalis (spurge): 6″-9″, greenish white, blooms May-June.
Papaver alpinum (Alpine poppy): 6″, white, blooms May-June.
Papaver nudicaule (Iceland poppy): 12″, white, yellow, orange, red, blooms May-October.
Pentstemon digitalis (beard tongue): 4″-8″, white, blooms August-October.
Phlox amoena (hairy phlox): 4″-6″, bright rose, blooms May-June-July.
Phlox divaricata (wild sweet william): 12″, lilac, blooms April-May.
Phlox divaricata alba: 4″-6″, white, blooms May.
Phlox subulata (moss pink): 4″-6″, various pink, blooms April-May-June.
Phlox subulata rosea: 3″-6″, rose, blooms April-May.
Plumbago larpentae (leadwort): 6″-12″, deep blue, blooms August-September.
Podophyllum peltatum (May apple): 6″-8″, white, blooms April-May.
Polemonium reptans (Jacob's ladder): 6″-8″, light blue, blooms April-May.
Polygonatum multiflorum (Solomon's seal): 6″-12″, greenish white, blooms April-June.
Primula Sieboldii (primrose): 6″-12″, white and various, blooms April-May.
Primula veris (cowslip): 6″-9″, canary yellow, blooms April-May.
Pulmonaria angustifolia (blue cowslip): 6″-12″, blue, blooms May.
Pulmonaria saccharata (lungwort): 1″-2″, pink changing to blue, blooms May-June.
Ranunculus repens fl. pl. (creeping double buttercup): 6″-12″, yellow, blooms May-August.
Sanguinaria canadensis (bloodroot): 6″, white, blooms April-May.
Santolina incana (lavendar cotton): 18″, silvery white foliage.
Saxifraga crassifolia (saxifrage): 12″-15″, pink, blooms April-May-June.
Saxifraga cordifolia: 12″, lilac-purple, blooms April-May.
Sedum acre (stonecrop): 2″-3″, yellow, blooms May-June.
Sedum spectabile (showy stonecrop): 18″, lavender-pink, blooms September-October.
Sedum stoloniferum: 6″, purplish pink, blooms July.
Silene alpestris (catch-fly): 4″, white, blooms July-August.
Spiraea filipendula (dropwort): 15″, white, blooms June-July.
Trillium erectum (wake-robin): 12″-18″, purple, blooms April-May.
Trillium grandiflorum: 12″-18″, white, April-May.
Trollius europaeus (globe flower): 18″-2′, pale yellow, blooms May-August.
Tropaeolum polyphyllum (nasturtium): trailing, orange yellow, blooms June-July.
Veronica Allionii (speedwell): 6″, blue, blooms May-June.
Veronica spicata 1′-18″, bright blue, June-July.
Vinca minor (periwinkle or myrtle): 6″, evergreen.
Viola cornuta (tufted pansy): 5″-8″, various, blooms April to frost.

PLANT MATERIAL FOR THE BOG GARDEN

Adonis amurensis (pheasant's eye): 9″-1′, yellow blooms March-May.
Adonis pyrenaica: 1′-19″, golden yellow, blooms March-May.
Adonis vernalis: 9″-1′, deep yellow, May-July.
Andromeda floribunda (andromeda): 2′-3′, white, blooms early May.
Andromeda polyfolia: 1′, pink, blooms May.
Anemone alpina (anemone): 6″-1′, white, blooms May.
Arethusa bulbosa (arethusa): 8″, rose-purple, blooms May.
Azalea amoena (azalea): 12″-15″, rosy crimson, blooms May.
Azalea hinodegira: 12″, brilliant red, blooms May-June.
Azalea procumbens: 2″-3″, pink, blooms April-May.
Azalea rosaeflora: 3″-″, salmon, blooms April-May.
Azalea vaseyi 3″-4″, light pink, blooms early May.
Berberis empetrifolia (barberry): 18″-2′, orange.
Boltonia latisquama var. *nana* (false chamomile): 2′, pinkish lavender, blooms August-September.
Calceolaria plantaginea (calceolaria): 12″, yellow, June-August.
Caltha palustris (marsh marigold): 1′, yellow, blooms April-May.
Caltha monstrosa fl. pl.: 12″, white, blooms April-May.
Caltha parnassifolia: 12″, yellow, blooms April-May.
Campanula hederacea (bellflower): 3″, bluish purple, blooms May-June.
Convallaria majalis (lily-of-the-valley): 8″, white, blooms May-June.
Cypripedium spectabile (lady's slipper): 8″, white, blooms May.
Daphne blagayana: 12″, creamy white, blooms April-May.
Daphne cneorum (garland flower): 12″, rose, blooms May-June.
Daphne Genkwa: 3′, lilac, blooms May-June.
Daphne mezereum: 18″, pink, blooms March.
Dicentra canadensis: 6″, white, blooms May.
Dodecatheon integrifolia (shooting star): 4″-6″, rosy crimson, blooms May-June.
Dodecatheon Jeffreyi: 18″, dark rose, blooms May-June.

only a small part of what is hidden by the soil. Place the additional rocks so that the strata all run in the same direction, putting the largest rocks and boulders at the bottom and burying them one-third in the ground. The size of the stones used should depend upon the size of your garden. Build the rocks and soil carefully together, eliminating air spaces between the rocks. The stones should be placed in such a manner that the water will drain into the soil rather than run off. Finally, remember to leave plenty of pockets for the soil and plants between the rocks.

It is advisable to use rocks that will give an old, weather-beaten appearance, such as moss-grown stones; but it is of the utmost importance to avoid anything which will crumble with exposure. Artificial rocks, bricks, old tree stumps or wood of any kind should never be used. Sandstone and mountain limestone are good to use because they are soft and porous and of a moisture-retaining character.

Alpine plants, contrary to a quite widespread belief that they will grow in almost any kind of earth, require a good rich soil. Porous soil mixed with leaf mold and well rotted manure, used to a depth of 2′ or 3′ with a light, sandy subsoil, will give the best results. Avoid a heavy clay soil. The garden must be constantly watched in summer and the ground kept from drying out. An annual top-dressing of soil every spring will prove beneficial to all the plants.

To one standing near the rock house shown in the photograph on page 50, this view is presented Lombardy and Bolles poplars mark the skyline above the golden elders which form a background for the smaller plants

Good drainage is essential to the success of this type of garden. The correct placing of the rocks and the presence of a tiny stream are great aids to proper drainage but are not sufficient in all cases. For dry stone wall gardens it is sometimes necessary to install a sub-irrigation system consisting of a perforated wrought iron pipe placed along the top and rear of the wall. In most cases it is not necessary, however, to irrigate if care is taken in the location and building of the garden.

The planting calls for care and a fine sense of fitness. One's aim should be to have the garden present the best possible appearance throughout the year; this can be accomplished by providing for a continuity of bloom. By using the early spring flowering bulbs such as snowdrops, scillas, crocuses, grape hyacinths, chionodoxa, colchicum and poet's narcissus for early spring bloom, the Alpines and small, compact growing shrubs for spring and summer, and dwarf evergreens for winter when the flowering plants have died down, a pleasing year-round effect results.

(*Continued on page 82*)

Gentiana asclepiadea (gentian): 2′, blue, blooms July.
Gentiana bavarica: 1′, blue, blooms July.
Gentiana Favratii: 1′-2′, deep blue, blooms July.
Gentiana Kurroo: 1′-18″, blue, blooms September.
Gentiana pneumonanthe: 6″-8″, deep blue, blooms August.
Gentiana verna: 1′, blue, blooms May-June.
Iris cristata (iris): 6″, azure blue and lilac, blooms April-May.
Iris sibirica: 1′, lilac, blooms April-May.
Linnaea borealis: 8″-12″, pale pink, blooms June.
Lobelia cardinalis (cardinal flower): 2′-3′, red, blooms August-September.
Lobelia syphilitica: 2′-3′, blue, blooms August-Sept.
Muscari botryoides (grape hyacinth): 6″, blue, blooms March-April.
Oenothera Arendsii (evening primrose): 1′-18″, pink, blooms May.
Oenothera cespitosa: 12″, white changing to rose, blooms May.
Oenothera fruticosa: 18″, yellow, blooms May.
Oenothera speciosa: 18″, white changing to pink, blooms May.
Orchis foliosa (Madeira orchid): 18″, rosy purple, blooms May.
Orchis latifolia: 12″, purple, blooms June.
Orchis maculata var. *superba:* 18″-2′, lilac spotted purple, blooms June.
Primula Bulleyana 1′, orange scarlet, blooms June.
Primula involucrata: 6″, creamy white, blooms April-July.
Primula japonica: 1′, deep crimson to pure white, blooms May.
Primula pulverulenta: 1′, crimson, blooms April-May.
Primula rosea: 6″, rosy carmine, blooms April.
Primula sikkimensis: 1′, yellow, blooms May.
Ranunculus aconitifolius (crowfoot): 2′, white, blooms May.
Ranunculus alpestris: 4″-6″, white, blooms June-July.
Ranunculus parnassifolius 6″, white, blooms June.
Sanguinaria canadensis: 6″, white, blooms April-May.
Saxifraga cespitosa: 4″, red, blooms April-May.
Saxifraga sanguinea superba: 4″, scarlet, blooms May-July.
Saxifraga exarata: 4″, white, blooms June.
Saxifraga globulifera: 4″, white, blooms May-June.
Trillium erectum: 1′, purple, blooms May.
Trillium grandiflorum: 1′, white, blooms May.

PLANT MATERIALS FOR POOLS AND PONDS

(* Plants suitable for 1′ or less of water, or on banks)

Butomus umbellatus (flowering rush): 2′-3′, rose, blooms summer.
Caltha palustris (marsh marigold): 1′-2′, bright yellow, blooms April-June.
Carex (sedge): 1′-3′.
Epilobium hirsutum (willow-herb): 2′-4′, purplish.
Hippuris vulgaris (horse-tail): 2′.
Hotonia palustris (feather-foil): light purple, blooms summer.
**Iris laevigata* (Japanese iris): 2′-3′, various, except red, blooms June, July.
**Iris pseudo-acorus:* 2′-3′, yellow, blooms June.
Iris versicolor (native blue flag): 2′-3′, purple marked with yellow, blooms June.
**Iris sibirica:* 2′-3′, lavender, blooms June.
**Lysimachia thyrsiflora* (loose-strife): 4″-6″, yellow.
**Myosotis palustris* (forget-me-not): blue, blooms June.
Nuphar luteum (European yellow pond lily): blooms June.
Nymphaea advena (yellow water lily): yellow, blooms June to August.
**Nymphaea alba* var. *candidissima* (white water lily): white, blooms June to August.
**Nymphaea Marliacea* (Marliac's hybrids): white, blooms June to August.
Nymphaea odorata (native white pond lily): white, blooms June to August.
Nymphaea odorata var. *rosea* (Cape Cod water lily): pink, blooms June to August.
Polygonum amphibium: spreading, light rose.
Pontederia cordata (pickerel weed): 2′-4′, purple, blooms June to August.
Ranunculus aquaticus var. *lingua major.*
Sagittaria latifolia (arrowhead): 6″-4′, clear white.
**Typha latifolia* (cat-tail rush): 4′-8′, brown, July to August.

PLANT MATERIAL FOR THE DRY WALL

(Those which thrive best when planted flat against a perpendicular rock face are marked (*). The color, height and period of bloom of these plants may be found under the list of material for the rocky bank.)

**Androsace alpina.*
**Androsace pyrenaica.*
Arabis albida.
Ajuga repens.
**Armeria cespitosa.*
Aubretias of all kinds.
**Campanula Elantines.*
**Campanula fragilis.*
Campanula rotundifolia.
Cheiranthus alpinus.
Aquilegias of all kinds.
Dianthus arvernensis.
**Dianthus suavis.*
**Gentiana acaulis.*
Primula marginata.
Primula viscosa.
Saponaria cespitosa.
Saxifrages.
Sedum acre.
Silene alpestris.

PLANT MATERIAL FOR CREVICES BETWEEN WALKS AND STONY STEPS

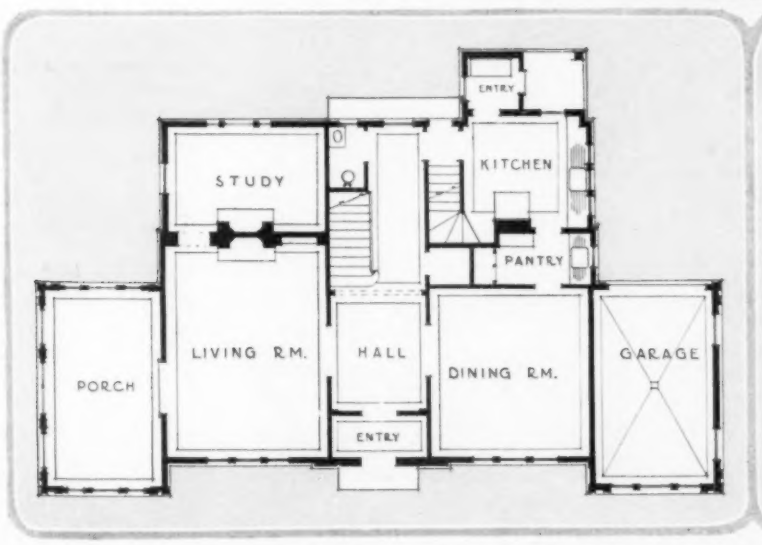
Ajuga repens (bugle weed).
Alyssum saxatile compactum (silver madwort)
Aquilegias (columbine).
Arabis albida (rock cress).
Campanula cespitosa (bellflower).
Campanula rotundifolia (harebell).
Cerastium tomentosum (snow-in-summer).
Cheiranthus alpinus (wallflower).
Gentiana acaulis (gentianella).
Geranium maculatum (crane's bill).
Gypsophila repens (baby's breath).
Phlox subulata (moss pink).
Portulaca grandiflora (rose moss).
Sanguinaria canadensis (bloodroot).
Saponaria ocymoides (soapwort).
Sedum acre (wall pepper).
Tunica saxifraga (saxifrage).
Veronica rupestris (speedwell).

The rear view shows the study with a sleeping porch above, the screened-in porch at one side and the kitchen entrance at the other

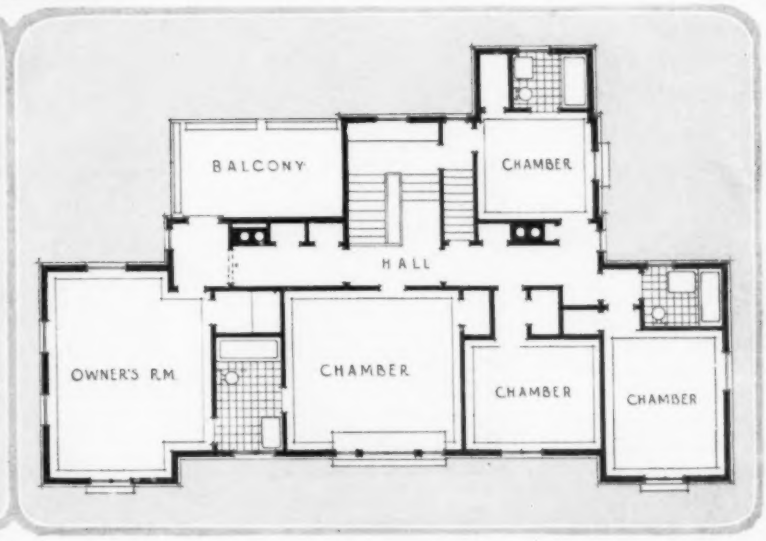
The garage is an integral part of the house, its windows being curtained to camouflage its real purpose. The kitchen porch faces the road

THE RESIDENCE *of* JOS. E. BRUSH, Esq. *at* FIELDSTON, N.Y.

DWIGHT J. BAUM, *Architect*



A simple plan adds to the livable quality of the house. Living room, study and porch on one side; dining room, kitchen and pantry on the other



Upstairs are five chambers, a sleeping balcony and three baths, arranged in suite with abundant closet space, cross ventilation and plenty of light

In a certain kitchen in Maine the walls are decorated with stencils—terra cotta and black on a pinkish orange wall. This design is above the pastry table

THE KITCHEN EXALTED

Make It a Pleasant Place to Work in and See That the Servants React to Good Taste

BIRDALINE BOWDOIN

IT came about that a "kitchen" (please observe the word) a kitchen was created where epicurean dreams became realities under most desirable conditions.

Below is a picture of it.

You see the walls are painted a warm deep cream color and a silly little black fret design wanders about outlining the structure of the room as though to say "here is the door and here are the windows." The curtains are bright gay-colored printed linen taffeta and the floor is covered with a linoleum of harmonizing design.

When the room was finished the owner found it to be the most attractive room in the apartment though the others boasted richer furniture and rare and costly hanging and rugs, so she resolved,

"I shall put a table in here and we will dine in the kitchen!" And she became so emotional that she clapped her hands, though usually of a restrained and reasonable disposition.

China and Chintz

She bought those gay dishes with large splashy flowers on them and she had chintz table cloths (she did everything she had never heard of others doing and she was happy because she was at last free from the burdensome conventionalism she had always had forced upon her). As a concession or as an added beauty, she placed a screen in front of the bashful gas stove that stood decently in its own alcove as all retiring gas stoves should, instead of flaunting its utilitarian ungainliness out into the best space in the room as so many "cook-stoves" do. Such pop-overs as came from that modest little stove to the neighborly table, not having time to cool off in transit! Such everything!

First only the family of three dined there, till one day came a friend and some others and presently it became the desirable thing to be invited to dinner in "The Kitchen." Christmas parties were given here, a chandelier was added (it is not in the photograph) a circle of wood about a yard in diameter and 6" from outer to inner rim with places to hold a dozen and a half candles. It is painted black and the candles are red.

The sink, always an unsightly affair no matter how white enamel it is, hides itself in a butler's pantry, and here the unpretty part of the work is done, that aftermath of a good dinner—the dish-washing. The ice-chest that stands in plain sight by the door of this utility place, wears a charming cover of chintz with adjustable curtain over the front, and so even this necessity is made attractive.

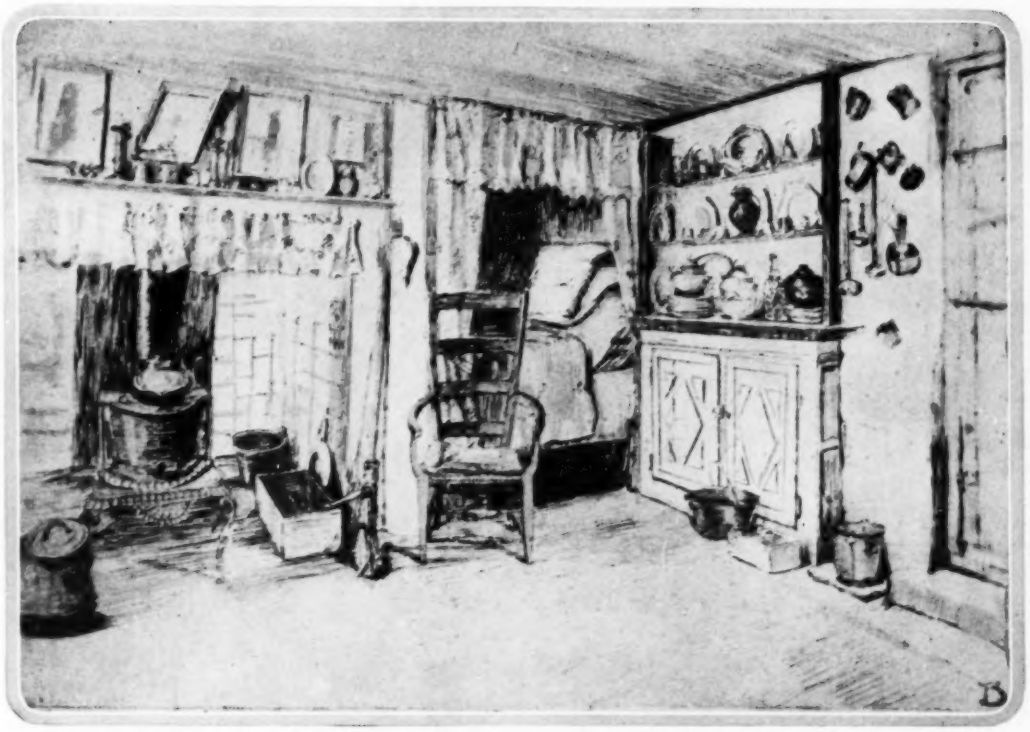
Not that we are very new or original in this matter of the kitchen being the heart of the house, for look you, how this old kitchen from Etaples, France (where lived an old, old woman who everlastingly patched an antiquated skirt as she sat by the open window) answers all the requirements of living. When she had used all the thread in the needles some passerby had threaded for her, she would fold her skirt and "house-clean."

The kitchen in this New York apartment was made so attractive that the family insisted on eating in it. Interesting chintz and china and a cream colored painted wall accomplished the transformation

A French Example

The floors were red tile and these she would sweep clean with the broom of twigs that leans near the fireplace. Then from a pail standing near the stove, she would bring forth clean, yellow sand and carefully sprinkle it on the floor. Her stove stood in a sort of alcove as you see

in the pen sketch and shining blue and white tiles reflected it at either side. She had the blue and white chintz on both bed and mantelpiece and her shelves were filled with blue and white dishes and pewter plates and candlesticks. The walls were practical, for one-third of the distance up from the floor they were painted black which made the white two-thirds look whiter still.



In Etaples, France, is an old kitchen that serves for living and bedroom—a quaint place with a red tiled floor, a blue and white tiled fireplace and a cupboard filled with blue and white china

Table and Stove

She had a folding round table which she brought forth at meal time and served herself with wondrous soup cooked on the tiny stove (over a coal fire) and French bread without butter and a pewter mug of water.

She had no vacuum cleaner, no electric motor, nor any of the modern "efficiencies" so necessary to-day but she made of her kitchen a home, a living-room, her work room, her rest room, and in it she was happy and welcomed anyone who would be her guest.

Kitchens are beginning to attract the attention of the householder in various parts of the country. There is a woman in Maine who inherited an old house which she carefully kept in the old-time atmosphere by furnishing and decorating it as nearly according to its own period as possible—all but the kitchen. This she equipped in the most modern and up-to-date manner, introducing every modern device that could contribute to the efficiency of the work.

There is the electric motor to turn the bread-mixer, the ice-cream freezer, the meat-grinder, the coffee-mill—in fine, whatever crank needs turning. And there are the fireless cookers running by clock-work, certain to have breakfast ready at the prescribed moment, and vacuum-cleaners, electric stove—oh, all the newest inventions that make for dispatch and its reward, leisure.

A Kitchen Scheme

The color scheme is carefully planned. The walls are the color of a ripe peach or a certain shade of pinkish orange very dull in tone that is found in that dear old-fashioned flower, the zinnia. The floor is terra-cotta tiling. You know that, too, is reddish orange; the furniture, motor and cooking apparatus are shining black with a little of the terra-cotta color introduced in certain showy places in the construction.

For wall decoration, instead of picture calendars, or pictures from colored weeklies, there are actual wall-painting silhouettes of ladies really working, but dressed as William Morris himself would have had them, in clothing pleasant to look upon. (You know how he advocated men at road-making, habited in beautifully embroidered garments and ladies hay-making in delicately clinging silks!)

Over the service-table two of these are dancing, in their hands a plum pudding held aloft on a large platter. This in itself illustrates the use of the table where foods are prepared or arranged to carry into the old dining room where guests are awaiting with keen appetite.

While the maids are making bread or pastry and all floury foods and cereals, it gives them fresh inspiration to look up and exchange a friendly smile with the demure Priscilla sort of person who is pictured as in the corn field picking ripe ears and putting them into her commodious basket.

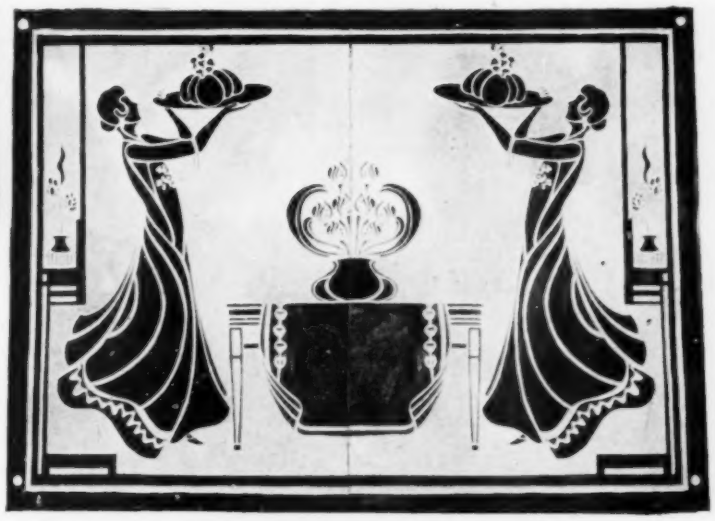
The Cook's Rest

Now it occurred to the lady and to the "household engineer" who planned this kitchen, that there were times when even those who work in kitchens would feel tired and wish to rest! So there is a rest corner. Only imagine such a thing in a kitchen, rather a contrast to the woman who discharged her maid because she asked for a rocking-chair in her kitchen, the only room in which she was allowed excepting at meal times.

In this corner are book shelves well filled with diverting or improving books and paper to write upon, with accessories. There are comfortable seats with satine covered cushions on them, the table having the same for a cover, washable and fresh: in this corner at this table

(*Continued on page 78*)

Above the fruit and flower table is this stencil of a decorative girl at work



The decoration over the service table shows two William Morris sort of working ladies bearing gorgeous plum puddings

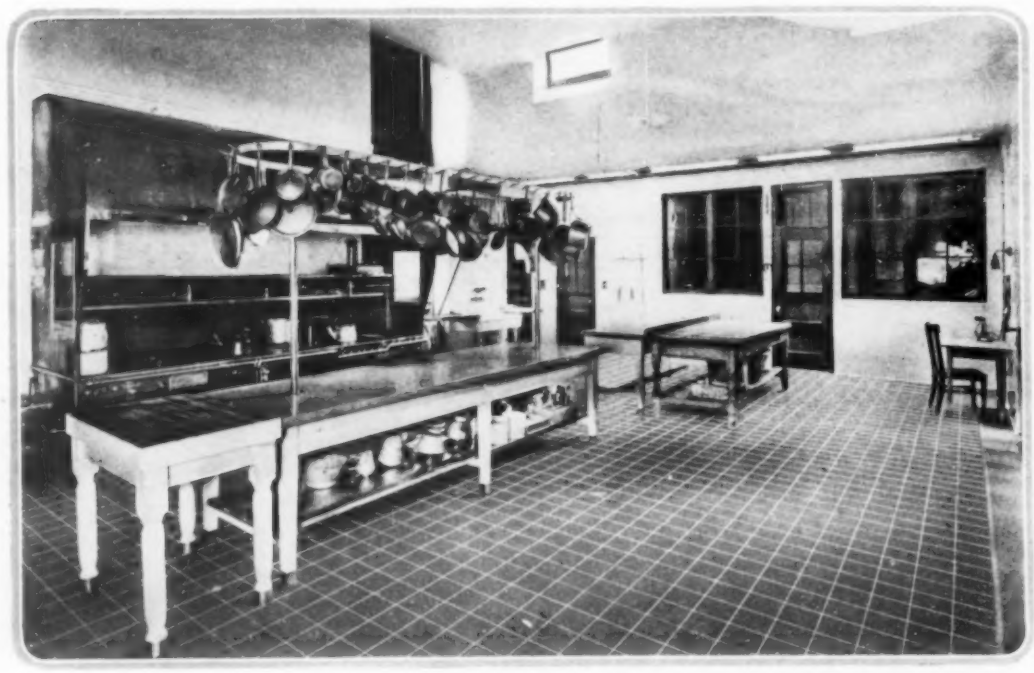
The rest corner for the servants has this decoration of a girl blown by the wind

FLOORS OR FLAWS IN YOUR KITCHEN

What to Expect From and How to Use Linoleum, Tile, Cork, Wood, Concrete and Composition for Flooring

ETHEL R. PEYSER

MRS. EBEN MALLORY had just built a beautiful home and because of this her friends believed that she knew everything about home equipment and therefore was looked upon as a domestic crank. And so it turned out that she and her secretary after finishing up the usual round of social notes and unsocial bills, took up much of the morning each day writing to friends and friends of friends about her latest and most profitable finds. Today she asked Miss Wentworth to collect all the letters about kitchens, especially the inquiries about kitching flooring, which had been stacking up.



The kitchen in the New York residence of Otto H. Kahn, Esq., is equipped with the most modern facilities. The walls are tile with cove corners and the floor is of cork composition

So they sat down for a technical morning.

"Really one letter will do for both Mrs. Pennington and Mrs. Allen, I think," suggested Miss Wentworth, "and if there is anything I don't understand as you dictate the data, I shall ask you to explain and in that way you will make it clear to the inquirers. The most uninformed will then know how to avoid flaws in their floors."

"That will be splendid," and Mrs. Mallory settled herself comfortably in her big chair for a long morning of dictation. "And now we're off—

"My dear Mrs. Pennington," she began, "it's a good thing that you and Claire Allen are building your houses in the wilds, far from the madding crowd, or I should not spoil either of you by giving you of my minute finds. But as you are pretty far off from the source of information I am more than glad to help you in any way whatever.

Floor Requirements

"Of course, you realize that every kitchen flooring should, as nearly as possible, be:—

Attractive,
Easy to keep clean,
Noiseless,
Odorless,
Vermin and dust proof,
Comfortable to feet and back,
Non-slippery whether dry or wet,
Durable (no upkeep but washing and polishing),
Fire proof or fire retardent,
Impervious to changes in temperature,
Laid over any kind of floor base,
Light weight enough to be suitable to any structure,
Seamless or joined so as to be virtually seamless,
Non-warping, non-expansive or non-contracting."

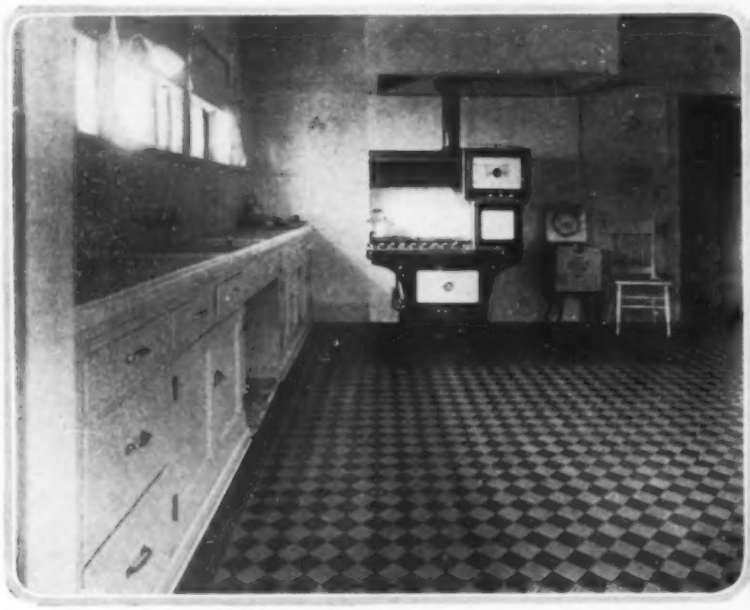
"Wait, Mrs. Mallory—what do you mean by fire retardent?"

"I'll come to that point. These qualifications, my dear friend, are what a good flooring should have, and strange as it may seem there are many which include all of these requirements and many filling all the most important ones, so you can choose any one of the floorings that are described in this letter and you will be more than satisfied.

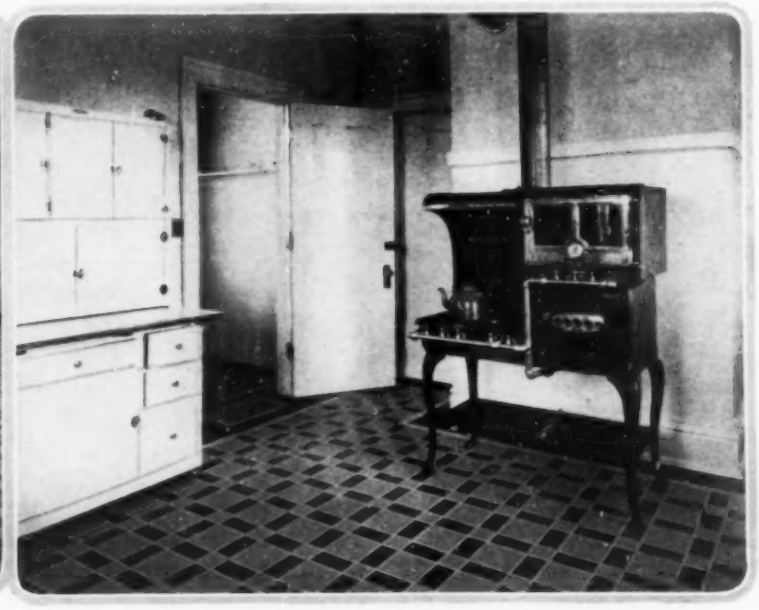
"Here is a list of the most important kinds of flooring in use:—

Marble,
Wood and wood block,
Linoleum,
Cork,
Composition and concrete,
Tile,
Terrazzo.

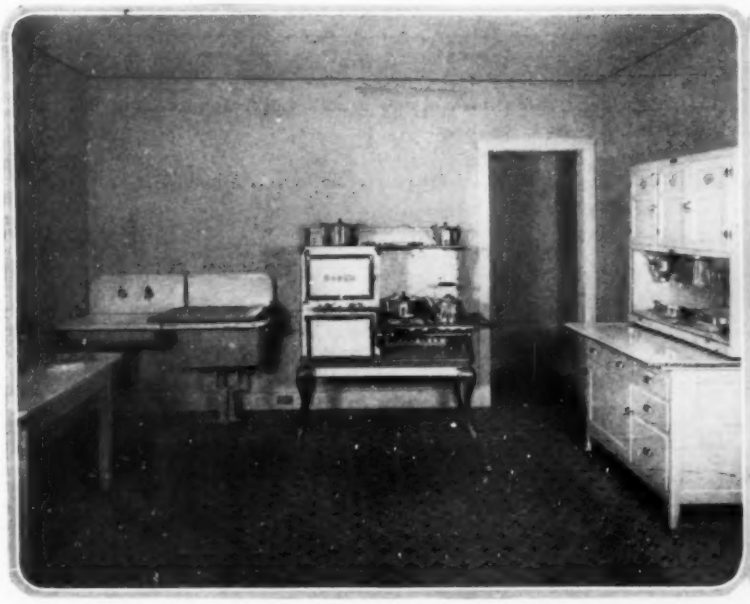
"Marble we can dismiss as being too ex-



A light gray and blue cork tile with a dark blue border has been used in the kitchen of the Harry Chandler residence at Hollywood, Cal.



Light and dark gray cork tile give a serviceable flooring to this modern kitchen in the home of A. T. Lloyd, Esq., at Dallas, Texas



Inlaid linoleum for the floor, painted walls, a serviceable cabinet and stove and sink properly placed make this an ideal small kitchen

In another Western residence, the home of G. C. Greer, Esq., at Dallas, Texas, a linoleum tile has been used for the flooring

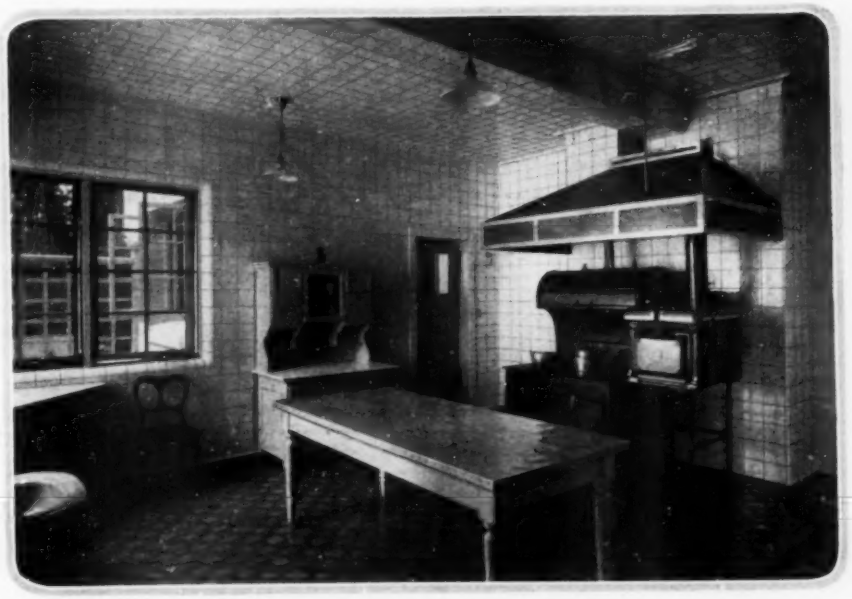
pensive, too beautiful and too unresisting to the feet. It is also too cold under foot.

"Wood is very popular because in the commoner varieties it is the cheapest flooring. In whatever grade a wooden floor is used, it has the disadvantage of needing attention. It always needs refinishing. The better the floor the more attention it will need. It will splinter eventually and show marks if things are dragged over it. Although the scraping down and refinishing always makes the floor look like new, the wooden floor is better in any room in the house than the kitchen, laundry or pantry. There are some housekeepers who wouldn't have anything else but the hard wood floors in their kitchens—oak, maple or Georgia pine, etc.

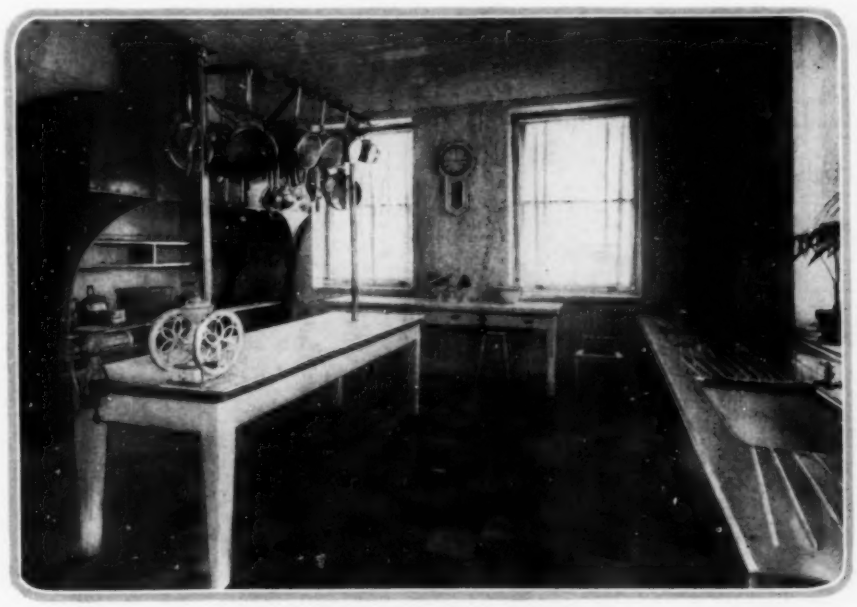
Laying the Floor

"The wooden floor must be carefully laid or else the cracks become traps for germs and dust. Of course, this applies to all flooring. And while on the subject of laying floors, let me say that even though you order the best kind of flooring in the world, if it is laid badly, you might as well have bought the worst sort of material. It is imperative that you have the manufacturer or the manufacturer's delegated dealer lay your floor. Don't go to your village builder or carpet man. It won't pay; in fact, it will cost you dearly, as in such case the maker of these products has developed a way to lay flooring which is inseparable from the life of the flooring itself.

"Many a householder knows a good floor, but few know what to look for in the laying of it."



Tile walls with rounded corners at the base and on the windows and an inlaid floor are two elements of this modern, conveniently arranged kitchen



The kitchen in the New York residence of Harry Payne Whitney has marble walls, a long range of sinks and drain boards down one side, work tables, hooded range and a floor of pure cork tile

Mrs. Mallory stopped to ask Miss Wentworth if she had been clear up to this point.

"Seems so to me," was the reply.

The Linoleum Family

"Then let's go on," and continuing, "among the best known floorings for kitchen use is linoleum. It is so well known and so popular that purchasers in their ignorance often accept, unwittingly, substitutes and lay felt paper instead of the real thing!

"If you decide to buy linoleum, go to the best maker or his dealer. I can't begin to tell you the value of following their gospel *Buy the Best*. If you heed this you make an investment. If you do not, you make an expenditure.

"So when you decide to buy linoleum first look on the wrong side of it, and if it has burlap on the back and if it is very difficult to tear, it is pretty definitely linoleum. It also carries the name of the maker.

"I think it well for the prospective buyer to know something of the manufacture of a popular article. It makes one appreciate and understand how to take care of it better.

"You know I am a crank on the subject of not wanting women to buy unless they know exactly what they are buying.

"Linoleum is made of burlap, linseed oil and cork, as the main ingredients. The oil is first boiled to thicken it. When it is cooled it is

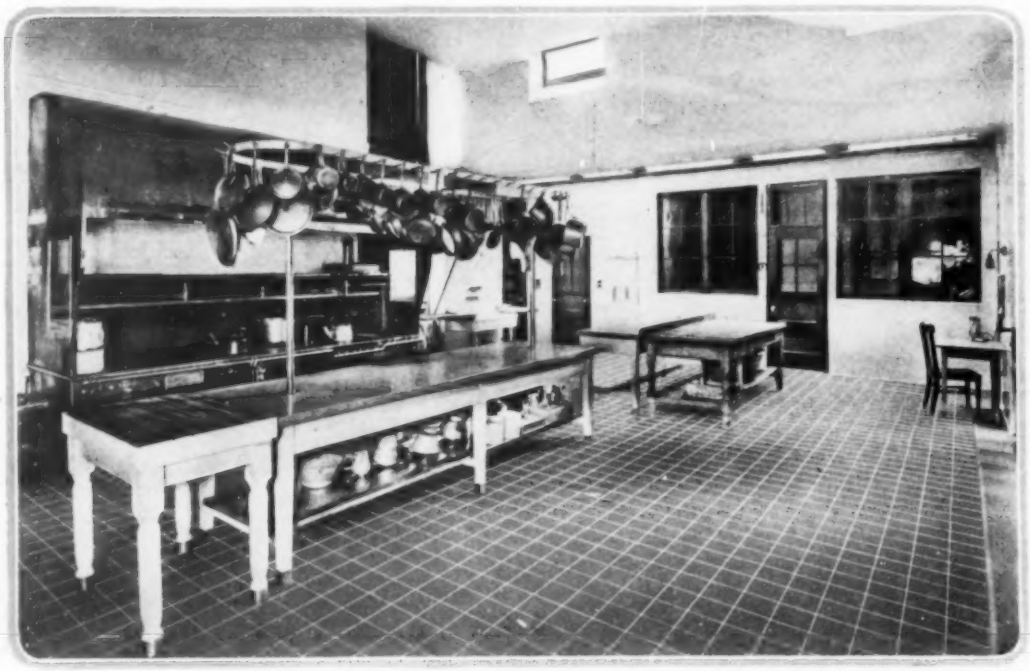
(*Continued on page* 68)

FLOORS OR FLAWS IN YOUR KITCHEN

What to Expect From and How to Use Linoleum, Tile, Cork, Wood, Concrete and Composition for Flooring

ETHEL R. PEYSER

MRS. EBEN MALLORY had just built a beautiful home and because of this her friends believed that she knew everything about home equipment and therefore was looked upon as a domestic crank. And so it turned out that she and her secretary after finishing up the usual round of social notes and unsocial bills, took up much of the morning each day writing to friends and friends of friends about her latest and most profitable finds. Today she asked Miss Wentworth to collect all the letters about kitchens, especially the inquiries about kitching flooring, which had been stacking up.



The kitchen in the New York residence of Otto H. Kahn, Esq., is equipped with the most modern facilities. The walls are tile with cove corners and the floor is of cork composition

So they sat down for a technical morning.

"Really one letter will do for both Mrs. Pennington and Mrs. Allen, I think," suggested Miss Wentworth, "and if there is anything I don't understand as you dictate the data, I shall ask you to explain and in that way you will make it clear to the inquirers. The most uninformed will then know how to avoid flaws in their floors."

"That will be splendid," and Mrs. Mallory settled herself comfortably in her big chair for a long morning of dictation. "And now we're off—

"My dear Mrs. Pennington," she began, "it's a good thing that you and Claire Allen are building your houses in the wilds, far from the madding crowd, or I should not spoil either of you by giving you of my minute finds. But as you are pretty far off from the source of information I am more than glad to help you in any way whatever.

Floor Requirements

"Of course, you realize that every kitchen flooring should, as nearly as possible, be:—

Attractive,
Easy to keep clean,
Noiseless,
Odorless,
Vermin and dust proof,
Comfortable to feet and back,
Non-slippery whether dry or wet,
Durable (no upkeep but washing and polishing),
Fire proof or fire retardent,
Impervious to changes in temperature,
Laid over any kind of floor base,
Light weight enough to be suitable to any structure,
Seamless or joined so as to be virtually seamless,
Non-warping, non-expansive or non-contracting."

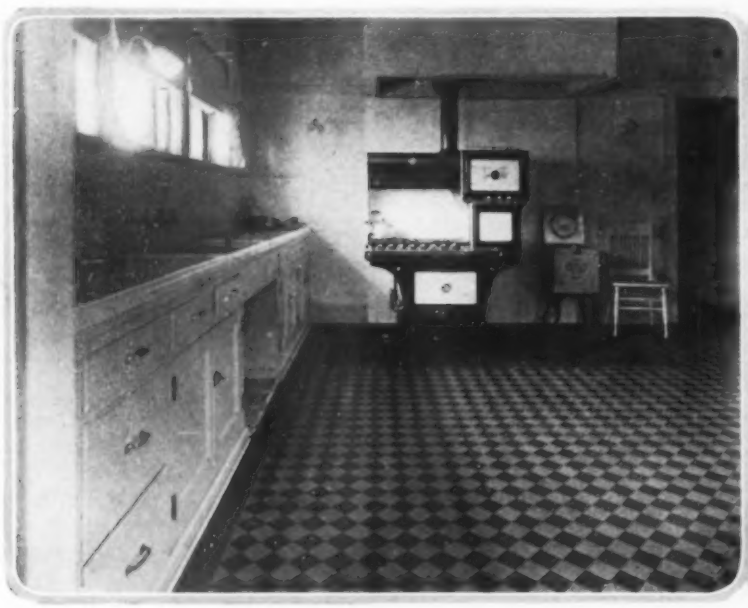
"Wait, Mrs. Mallory—what do you mean by fire retardent?"

"I'll come to that point. These qualifications, my dear friend, are what a good flooring should have, and strange as it may seem there are many which include all of these requirements and many filling all the most important ones, so you can choose any one of the floorings that are described in this letter and you will be more than satisfied.

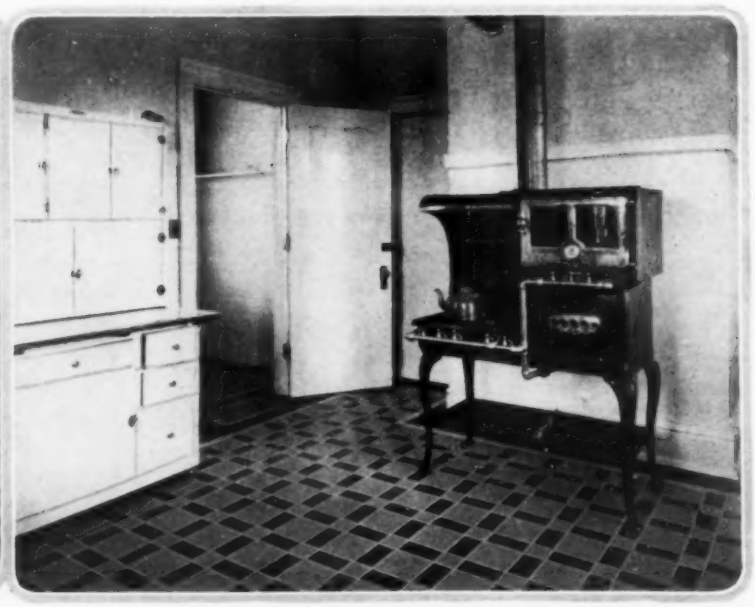
"Here is a list of the most important kinds of flooring in use:—

Marble,
Wood and wood block,
Linoleum,
Cork,
Composition and concrete,
Tile,
Terrazzo.

"Marble we can dismiss as being too ex-



A light gray and blue cork tile with a dark blue border has been used in the kitchen of the Harry Chandler residence at Hollywood, Cal.



Light and dark gray cork tile give a serviceable flooring to this modern kitchen in the home of A. T. Lloyd, Esq., at Dallas, Texas

Inlaid linoleum for the floor, painted walls, a serviceable cabinet and stove and sink properly placed make this an ideal small kitchen

In another Western residence, the home of G. C. Greer, Esq., at Dallas, Texas, a linoleum tile has been used for the flooring

pensive, too beautiful and too unresisting to the feet. It is also too cold under foot.

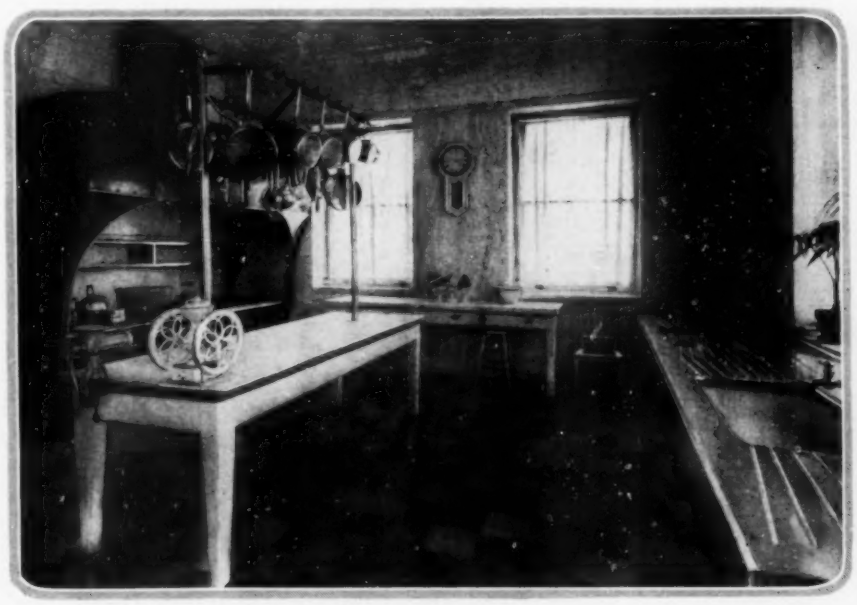
"Wood is very popular because in the commoner varieties it is the cheapest flooring. In whatever grade a wooden floor is used, it has the disadvantage of needing attention. It always needs refinishing. The better the floor the more attention it will need. It will splinter eventually and show marks if things are dragged over it. Although the scraping down and refinishing always makes the floor look like new, the wooden floor is better in any room in the house than the kitchen, laundry or pantry. There are some housekeepers who wouldn't have anything else but the hard wood floors in their kitchens—oak, maple or Georgia pine, etc.

Laying the Floor

"The wooden floor must be carefully laid or else the cracks become traps for germs and dust. Of course, this applies to all flooring. And while on the subject of laying floors, let me say that even though you order the best kind of flooring in the world, if it is laid badly, you might as well have bought the worst sort of material. It is imperative that you have the manufacturer or the manufacturer's delegated dealer lay your floor. Don't go to your village builder or carpet man. It won't pay; in fact, it will cost you dearly, as in such case the maker of these products has developed a way to lay flooring which is inseparable from the life of the flooring itself.

"Many a householder knows a good floor, but few know what to look for in the laying of it."

Tile walls with rounded corners at the base and on the windows and an inlaid floor are two elements of this modern, conveniently arranged kitchen



The kitchen in the New York residence of Harry Payne Whitney has marble walls, a long range of sinks and drain boards down one side, work tables, hooded range and a floor of pure cork tile

Mrs. Mallory stopped to ask Miss Wentworth if she had been clear up to this point.

"Seems so to me," was the reply.

The Linoleum Family

"Then let's go on," and continuing, "among the best known floorings for kitchen use is linoleum. It is so well known and so popular that purchasers in their ignorance often accept, unwittingly, substitutes and lay felt paper instead of the real thing!

"If you decide to buy linoleum, go to the best maker or his dealer. I can't begin to tell you the value of following their gospel *Buy the Best.* If you heed this you make an investment. If you do not, you make an expenditure.

"So when you decide to buy linoleum first look on the wrong side of it, and if it has burlap on the back and if it is very difficult to tear, it is pretty definitely linoleum. It also carries the name of the maker.

"I think it well for the prospective buyer to know something of the manufacture of a popular article. It makes one appreciate and understand how to take care of it better.

"You know I am a crank on the subject of not wanting women to buy unless they know exactly what they are buying.

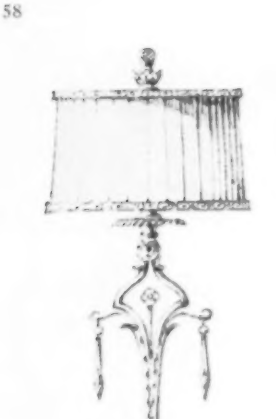
"Linoleum is made of burlap, linseed oil and cork, as the main ingredients. The oil is first boiled to thicken it. When it is cooled it is

(*Continued on page* 68)

EQUIPPING *the* ELECTRICAL BOUDOIR

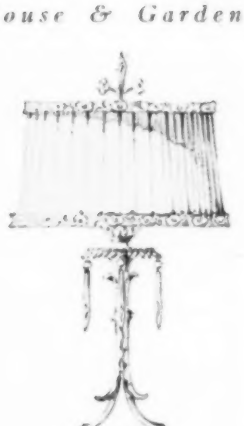
Accessories of Decoration and Use Make for Comfort and Convenience

These may be purchased through the House & Garden Shopping Service. Cheque must accompany order. Name of shops will be furnished on application



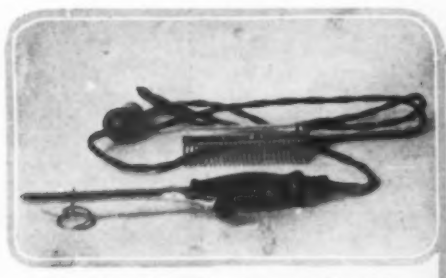
Among the portable lights for the dressing table is this design in either antique gold or two tone ivory with polychrome. With a silk shade and colored guimp at top and bottom, it sells for $32.50 each, as shown

Good light is a prime requisite on the dressing table. Fixtures should not be placed too high. The best arrangement is a pair of portable lights as shown here

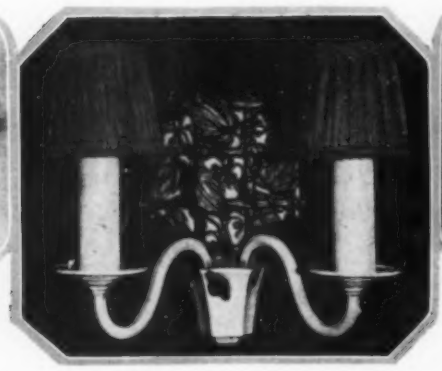


A variation of the design shown opposite comes in either antique gold or two tone ivory polychrome, and can be used for the dressing table, bureau or boudoir desk. Silk shades. Changeable glass pendants. $28.50

In placing the lights shown above on the dressing table we give the approximate position for their greatest usefulness. Their delicate lines are pleasing in effect

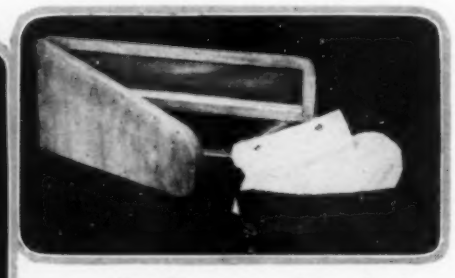


An electric curling iron outfit with aluminum comb attached for drying the hair comes, with full instructions, at $6.25



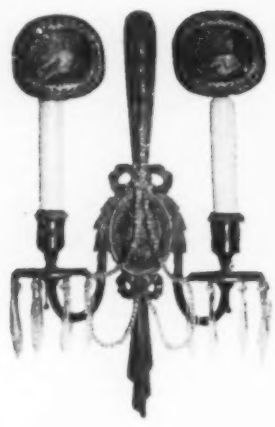
A two light electric bracket in ivory and colors. $20 each

Adam design fixture in ebony and antique gold. $38 each



A collapsible pressing board of aluminum on wood frame weighs 3½ pounds and opens to 44" long, 9" wide. In cretonne bag. $5

An electric vibrator comes packed in a black leather case. Guaranteed for a year and all repairs made free of charge in that time. $18



For that chill morning we suggest an electric heater, at $9.50. An electric heating pad, with three heats, at $9 completes the comforts

THE IRISH *and* AIREDALE TERRIERS

Two Rough-Coated Breeds of Sterling Worth for Either Country or City—Some of the Outstanding Traits Which Have Won for Them Respect and Genuine Affection

ROBERT S. LEMMON

IN a way they are somewhat alike, these two contenders for honors in the All-Around Dog Qualification Contest. Both are rough-coated, free from any white markings, hard as nails, and bully good companions. Beyond these points their paths of similarity begin to diverge, somewhat after this fashion:

The Airedale is considerably the larger of the two, and as if his weight added dignity to his thoughts, he is more self-contained than his smaller cousin. Where the Irishman is a rough-and-ready little rascal overflowing with that snappy vigor of mind and body colloquially known as "pep," the Airedale is steadier though by no means sluggish. One might compare them to a motorcycle and a 90 H.P. touring car: both can pass everything on the road except each other, but they go about it in a different way.

There is no little of the true Celtic fire in the make-up of the Irish terrier

Levick

A prize-winning Airedale—in the show as well as in the country or city home. (Below)

Their Versatility

Of the Airedale it has been said that "he can do anything any other dog can do, and then lick the other dog." Well, sometimes, I almost believe that is true. He certainly is 200 per cent dog, and while his logical place is in the country, he readily adapts himself to city living conditions. Woe be unto the burglar or tramp who interferes with him or his, for when his forty pounds or more of bone and muscle get started they move fast and in a straight line. Yet, with all his defensive and offensive ability, he is ideally dependable and affectionate with children as well as grown-ups. In the matter of intelligence, he is probably second to none.

Somehow, the Irish terrier, on the other hand, always makes me think of a red-headed boy about twelve years old on a summer vacation in the country. Perhaps this is because such a boy would relinquish all his dreams of piracy, machine gunnery and driving the Twentieth Century Limited for one Irish terrier to pal around with—and also because the Irishman would appreciate the boy to the full. If an Irish terrier's brain is ever dull or his body ever sluggish in getting up and at anything which may be doing, no one has been able to catch him at it. He is all steel springs, mentally and physically. There is no little of the true Celtic fire in his make-up, and if he were able to put his general philosophy of life into words (he can't *quite* talk) it would probably be, "Let me at it!"

Breeding and Hardiness

Without taking the time to delve deeply into the history of these two representatives of the terrier tribe, it may be well to say that they have been developed primarily as vermin destroyers and to withstand all the hard knocks which the pursuit of such four-footed fighters as badgers, otters and woodchucks entails. Such breeding, continued through many generations, has given them great natural resourcefulness, strength, health and adaptability. They will come through a day of mud, snow, briars or brooks without a scratch; a shake and a roll, and they're ready to start out again. They are true sportsmen, which term, in its broader application, means that they know how to conduct themselves in the drawing-room as well as in the field. They are easily trained, either in a purely utilitarian sense to make them good house dogs and general companions, or for various special purposes. The Airedale especially is qualified by his size and ancestry to be developed into a first

(*Continued on page* 80)

The Airedale's coat is tan with a blackish saddle. He "can do anything that any other dog can do, and then lick the other dog"

An Irish terrier is an ideal dog for a live boy. He is keen and eager, and his tan coat is a good protection against briars and cold

October — THE GARDENER'S CALENDAR — Tenth Month

Carrots and other roots should have their tops removed before storing

Changes in the perennial flower border should be made during this month

If the last clipping of evergreens has not been finished, there is still time

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
This Calendar of the gardener's labors is aimed as a reminder for undertaking all his tasks in season. It is fitted to the latitude of the Middle States, but its service should be available for the whole country if it be remembered that for every one hundred miles north or south there is a difference of from five to seven days later or earlier in performing garden operations. The dates given are, of course, for an average season.			1. Don't neglect to get hyacinths and other early flowering types of bulbous plants boxed up or planted in pots preparatory to forcing them in the greenhouse. They should be buried out-of-doors to facilitate rooting.	2. If you have heated frames of any kind, why not use them for the forcing of quick maturing vegetables such as radishes, spinach, beans, etc. They may be sown now, to yield crops during the winter months.	3. Don't fail to make arrangements to pick the fruit and store it properly. The best method is to wrap each fruit separately in tissue paper, storing them in boxes in a dark, cool place. Be careful that they are not bruised.	4. Flower beds composed of tender plants can be made to last considerably longer by a slight covering to protect them from frost. An old sheet or blanket of any kind, with a few supports, may be used for this purpose.
5. The first few days in the house are the critical period for indoor plants. Use great care in watering and keep the foliage sprayed or moistened. If the plant dries up too quickly, plunge the entire pot in a pail of water.	6. In case of a severe frost being threatened, it is wise to cover the flowers of outdoor chrysanthemums with paper or other material at night. This will prevent their being damaged and add to their life.	7. Dig up and store all tender bulbous plants such as gladioli, dahlias, etc. These must be stored in sand or sawdust in boxes and kept in a cool cellar. Dryness of packing material and surrounding air is essential.	8. Hay thrown over tender garden crops such as eggplant, peppers, lettuce, will protect them from damage by light frosts. It must be removed during the day and applied only at night. Do not use enough to break them.	9. Celery must be kept hilled. Hold the stalks together tightly with the hand to prevent dirt from getting down into the heart. Keep hilling as they grow, since it is contact with the earth that gives celery flavor.	10. Cauliflower just starting to head up should be lifted very carefully and placed in frames where it will mature properly. The plants may also be planted in tubs and moved to a barn, garage or other frost-proof place.	11. Why not have some fruit trees around your garden, preferably on the north side? Or perhaps you have room for a small orchard. This is the proper time to set the trees out, except the plums, cherries and other pit fruits.
12. Start mulching rhododendrons with leaves or manure. This is not only for the purpose of protecting the roots, but it will also furnish the plants with considerable nourishment. In the spring the leaves may be dug under.	13. All shallow rooting crops should be afforded the protection of a winter mulch of manure. This applies to strawberries, raspberries, blackberries, etc. With strawberries, manure should not touch the crown.	14. This is an excellent time to put into execution any changes in your garden, such as sod borders, dwarf hedges, trellises for fruit plants, changes in watering systems, etc. A good map of the grounds will help.	15. The plantings of new trees may be attended to at this time. With the dry summers which have prevailed for the past few years, fall plantings have given better results than where work of this sort was done in spring.	16. What about some bulbs for house forcing to bloom about Christmas time? Paper whites, Pottebaker tulips, narcissus and various other early forcing bulbs may be grown successfully in the house.	17. Don't neglect successional sowing of the vegetable crops planted in the greenhouse. Lettuce, cauliflower, spinach, radishes and beans require seeding about every two or three weeks in order to insure a supply.	18. Stop feeding the chrysanthemums just as soon as the buds show color. It is a good practice to shade the greenhouse slightly. This will give considerably longer petals and larger flowers.
19. Any changes in the flower borders should be made now, as the different types of flowers may be easily determined at this time, even by the beginner. Old plants that are not yielding should be divided.	20. Carrots, beets and other root crops should be gathered and after the tops are removed they can be stored in trenches out-of-doors, or in a cool cellar. If stored outdoors, they should be protected from the frost.	21. A few roots of parsley, planted in pots and placed on the kitchen window-sill, will keep any ordinary family supplied with an abundance of this valuable green for garnishing and other kitchen uses all winter.	22. Don't neglect to mulch heavily with manure or any loose material, all evergreens that have been transplanted during the current year. The first winter is the critical period with these trees, and they need care.	23. Start now to collect all the old leaves, burning them to one point. Do not ever burn them, because, when rotted, they are one of the best of all fertilizing material. Store them in some obscure, sheltered corner.	24. Don't forget to plant a few of the more hardy types of narcissus in some secluded corner where they may go on naturalizing and spreading by themselves. In a few years enormous masses are possible from small plantings.	25. Shut off and drain all irrigating systems and other exposed plumbing pipes, and empty concrete pools, etc. All faucets should be left open to assure proper drainage of the piping. If they freeze they will burst.
26. Potatoes and other root crops stored in the cellar should be looked over occasionally to prevent damage by decay. Remove all decayed or soft, spongy tubers, because they are sure to infect other sound ones.	27. Hydrangeas, bay trees and other decorative plants in tubs and boxes should be stored away for the winter. A good cellar which is not too warm and is fairly light makes a good storage place for this class of material.	28. When husking corn, any exceptionally fine ears should be set aside and saved for seed next year. The ears should be hung up in some dry place where the mice will not be able to reach them. Suspending by wire is good.	29. After the foliage falls all fruit trees and other deciduous trees subject to the attacks of scale should be sprayed with any of the soluble oil mixtures. Lilacs are especially susceptible to attacks of the scale pest.	30. This is an excellent time to destroy any aphids which may be on the white pines and other evergreens. A thorough spraying with a strong tobacco and soap mixture will free the trees from this pest.	31. Arrangements should be made to protect the roses, the best method being to do them up in straw overcoats. In addition to these, earth should be banked around the plants so as to throw the water away from them.	*I love to see a bough across the moon* *When, like a scarlet lantern of Japan,* *Low in the east it hangs* *Pendant, obscured, and dim.* *William Douglas*

IT makes me smile sometimes to hear city folks talkin' 'bout how they'd like to go to farmin'—"it's such a easy, restful life!" Durn few of 'em seems to realize that a real farmer gits up at four-thirty or five A. M. the year 'round, an' works till dark. Sure, I'll 'low they's breaks durin' the day—restin' the team when ye're plowin', settin' by the spring under the big maple an' wipin' off the sweat when hayin' time comes, talkin' crops an' politics 'side the road when the R. F. D. feller comes with the mail. If 'twarn't for them interruptions I don't b'lieve us farmers could git along; we got to have some change from hoein' potatoes an' hollerin' "WHOA!" An' daggone it, a man needs a chanct once in a while to chaw on a straw an' calc'late. They's lots o' things to stop an' figger on—how much of a cut to make in the woodlot next winter, when the drought's a-goin' to break, whether them two Holstein heifers o' Jake Hopper's is really worth a hundred apiece, or who's to be the next postmaster now that old Bill's dead an' gone. Reckon mebbe it's because they sees us a-chawin' an' calc'latin' an' a-gossipin' round the sand box in the store at the Corners that city folks think we ain't got much work to do, or else are just plumb lazy. But just let 'em try farmin' ovet, themselves!

—Old Doc Lemman.

Dig up and store all the tender bulbous plants such as cannas, dahlias, etc.

Bulb planting should be started now, and continued until frost comes

The root crops can be stored in boxes and covered with dry sand

Label the gladioli bulbs before storing them away for the winter

Greenhouse work gets under way this month, in preparation for the winter blooming season. The sweet peas should be kept cultivated

The collecting and saving of autumn leaves should not be overlooked. When rotted, they make excellent mulching and fertilizing material

Dahlias, too, ought to be clearly labeled when taken from the ground

A night covering of loose straw will save the spinach from frost

In the October Vegetable Garden

WILLIAM C. McCOLLOM

THE first question which is apt to be asked when anyone is advised to sow some of the hardy vegetables in the fall is, "What would be the gain—why sow now when spring plantings yield the same returns?"

Plenty of gardens are never started until the first of May, but if their results could be compared with those from gardens started some time previous, they would be far outclassed. One of the biggest advantages in fall sowing of those vegetables which are hardy enough to withstand the winter is the fact that a large root system is established which becomes active just as soon as growing conditions are resumed in the spring, resulting in more vigorous and productive growth.

Onions, spinach, turnips, smooth peas and leek may all be sown in the fall if slight winter protection is given them. The best protecting material is loose hay, which can be shaken up occasionally to prevent its matting down and damaging the plants. It is well to bear in mind, however, that a spell of damp weather is more likely to damage the young seedlings than cold weather, so during wet periods it is advisable to rake the protecting material aside, leaving the plants exposed.

It is not an infrequent occurrence to have a killing frost in what might be termed late summer. It often happens that gardens are destroyed as early as the middle of September in the latitude of New York, whereas continued freezing weather does not prevail until after the middle of November. This means that a little foresight in the matter of protection would prolong the life of the garden some two months.

It is not an infrequent occurrence to start now to accumulate quantities of covering materials for this purpose. Old rolls of building paper, burlap, boxes or any cast-off material of this nature which will prevent penetration of the frost will give the desired results. A wire should be placed along the row of such plants as string beans to hold up the covering material. This covering should be applied only when frost appears imminent. When the thermometer approaches 40° on a still night and the smoke rises perpendicularly, it

(*Continued on page 64*)

When the pumpkins are gathered they should be stored in a warm, dry place

A burlap cover will keep early frost from damaging the egg-plant and peppers

Furniture befitting the Chamber and Boudoir

A PREDILECTION for harmonious surroundings quite often finds its truest expression in the appointments chosen for the most informal of rooms.

¶ Thus, a charming Sleeping Room or a Boudoir, drawing its inspiration from Marie Antoinette's days, may reflect the owner's personality in such appointments as the graceful *chaise longue*, the companion "slipper chair" and bedside table — each detail imparting to this daintily arranged apartment a pleasing touch of individuality.

¶ There is a wealth of such suggestion for the formal as well as informal rooms in the Furniture and kindred objects on view in the twelve Galleries of this establishment — where the scheme in view may be realized without prohibitive cost.

EARLY ENGLISH, FRENCH AND ITALIAN FURNITURE AND DECORATIVE OBJECTS. REPRODUCTIONS AND HAND-WROUGHT FACSIMILES OF RARE OLD EXAMPLES, RETAILED EXCLUSIVELY AT THESE GALLERIES

De luxe prints of well-appointed interiors gratis upon request

New York Galleries

Grand Rapids Furniture Company
INCORPORATED

34-36 West 32nd St., New York

In the October Vegetable Garden

(*Continued from page 62*)

is fair to assume that freezing weather will result before morning. The boxes or barrels may be used to cover individual specimens such as egg-plant or peppers. A few plants of these in full bearing, if properly protected, are quite an item in adding to garden returns.

There is a chance of saving a plant even after it has been frozen if it is taken in hand immediately. The actual freezing does less harm than the thawing, which can be relieved to some extent if the latter is very gradual. Spray the plants with cold water and keep them moistened with it until the frost is gone, or keep them shaded so that they will thaw out gradually.

Celery, endive and crops of this character, although somewhat hardy, will not stand severe freezing, and are sometimes nipped severely by an unduly early frost. The covering method of protecting against frost is helpful in minimizing losses with them, but when frozen they should be well sprayed and covered.

Rutabagas, turnips, salsify, parsnips, carrots, etc. are now ready for harvesting any time after their tops begin to turn yellow, which is an indication that growth is over. There is no advantage in leaving them in the ground.

There are, of course, many different methods of storing these crops for winter use. While a trifle inconvenient to get at when needed, there is no denying the fact that vegetables stored in the open ground retain their natural flavor and keep in much better condition than when stored in any other way. Vegetables so stored must, of course, be protected from the frost, not only because of the damage to the crops themselves, but because, if the ground is allowed to freeze, it practically prevents getting at them. Keep the trench that the vegetables are stored in thoroughly covered with some loose material which can be readily removed when desired, and which will prevent the penetration of frost. Water is another factor that must be considered, because if it is allowed to enter the trenches and is not immediately drained off, the vegetables will decay. Bury a box of sufficient size in the garden, making a tight covering slanted on top to shed the water. This box can be covered with earth after the vegetables have been placed in it. For results, this method is no doubt the best, although it involves considerable effort.

Storing vegetables in a cool cellar in boxes of sand is also a very good method, convenient so far as getting at the vegetables is concerned. Toward late winter the roots become stringy due to lack of natural moisture in the material with which they are in contact.

Pumpkins and squash should be gathered now, and, contrary to most vegetables, stored in a warm place. Do not put them in the cellar. Sweet potatoes are similar in their requirements. They must be kept in a warm place where no moisture comes in contact with them, else they will become unfit for table use. Place sweet potatoes in barrels close to the furnace or stove. Tomatoes, peppers and egg-plant can be kept for many weeks if stored in boxes after being carefully wrapped in paper. Care must be taken to have them perfectly dry when put away.

There is but one way to plan your garden, and that is to lay it out to scale, devoting some careful thought to it. The small fruits can be properly placed at one end without interfering with the other crops. Asparagus, horseradish and crops of this nature can be located near the fruits and the garden proportioned to your particular needs.

The first point to consider when locating the garden is soil conditions. Ground with a southerly or southeasterly exposure and a fairly good top soil that shows a fair percentage of humus, and a subsoil that will not retain too much water, is the ideal. Ground which is poorly drained can be made to produce by putting in tile drains.

New ground that is intended for cultivation next year and which shows any surface growth at present should be plowed so as to give this growth an opportunity to dry out. It is advisable when plowing to use a chain on the plow so that the work will be done thoroughly; and it would also be well to run a disc harrow over the ground afterward to break up the sod.

Another factor worth considering is the amount of humus which the soil contains, and which is deficient in practically all our soils. It is best built up by application of well rotted manure or some other form of decayed vegetation. It would be advisable to apply a light covering of manure and turn it under in order to start the work of those little live organisms which build up our soil and which become active in early spring. This should in no way interfere with the application of manure in the spring.

Burlap or other cloth can also be used to protect the low growing crops

Sifted ashes are good for lightening soils which are too heavy to produce well

CHICAGO WORKS OF CRANE CO.

Unusual Service—Quickly

Service implies not only practical co-operation—but also the organized ability to give that co-operation quickly. This is the actuating idea behind the fifty-three branches maintained in leading cities by

CRANE

Buyers anywhere in the country who need high-quality bathroom equipment, kitchen fixtures, heating, ventilating or refrigerating appliances, or any of the myriad allied products, will find a thoroughly equipped Crane branch in their vicinity, ready to serve them fully and promptly.

Crane standards of service, thus carried to the national markets through fifty-three broad channels, make it as easy to buy Crane quality as to enjoy it afterward.

For convenience call upon the Crane branch nearest you

Boston	Buffalo	St. Louis	Omaha	Seattle
Springfield	Savannah	Kansas City	Sioux City	Tacoma
Bridgeport	Atlanta	Terre Haute	St. Paul	Portland
New York	Knoxville	Cincinnati	Minneapolis	Pocatello
Brooklyn	Birmingham	Indianapolis	Duluth	Salt Lake City
Philadelphia	Memphis	Detroit	Fargo	Ogden
Newark	Little Rock	Chicago	Watertown	Sacramento
Camden	Muskogee	Rockford	Aberdeen	Oakland
Baltimore	Tulsa	Grand Rapids	Great Falls	San Francisco
Washington	Oklahoma City	Davenport	Spokane	Los Angeles
Syracuse	Wichita	Des Moines		

CRANE CO.

836 S. MICHIGAN AVE. CHICAGO

VALVES-PIPE FITTINGS-SANITARY FIXTURES

CRANE EXHIBIT ROOMS

23 WEST 44TH ST. NEW YORK CITY TO WHICH THE PUBLIC IS CORDIALLY INVITED

BRANCHES FIFTY-THREE LEADING CITIES WORKS CHICAGO, BRIDGEPORT

Autumn is the time to plant the hardy bulbs

Better Effects With Bulbs

(*Continued from page 33*)

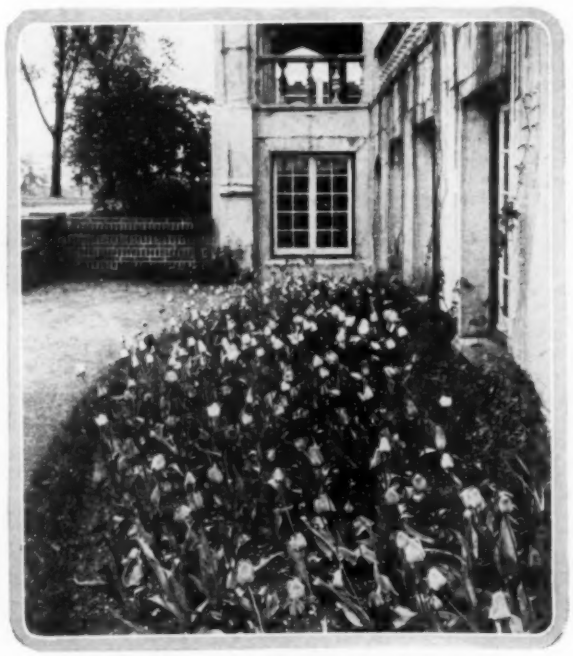
ornamentals and perennials is planned to give the best effect. As you look the place over with the eye of constructive imagination, you cannot fail to see where you can add touches to the garden picture, with the pigments available in the spring flowering bulbs, which will heighten the effect of charm and beauty you wish to attain. White or flaming red against a bank of evergreens; a sheet of sweeping narcissi there where the lawn merges into the shadow and shade of large trees; a filigree of brilliant colored, cheerful crocuses along the frontage of the perennial border or in some corner where color is lacking in the early spring—these are the effects you can add to the picture which already exists. And viewing the grounds from the street or front entrance, you will see probably half a dozen other places where spring flowering bulbs, in scattered groups or masses, would add greatly to the attractiveness of your grounds.

Mark these things down on the map. If you are not thoroughly familiar with the different bulbs and their varieties, the best way to get what you want is merely to indicate the color, design and the approximate height wanted, on your map. Then, with this information before you, go to your bulb catalogs and select the things which will best fit. Keep in mind that you can have results from flowering bulbs from April until well into June.

Crocuses are the earliest to bloom and the most dwarf in growth. Even the new giant flowering crocuses, which for general purposes are the most satisfactory, attain only a few inches in height. Crocuses are valuable for planting in the lawn because they bloom early and are out of the way when it is necessary to cut the lawn fairly close. Also they are excellent for using in rose beds and other places to cover the ground where it is likely to look bare in early spring. While they are frequently planted in mixed colors, still the most striking effects are attained by using the named varieties in one or two contrasting colors.

Tulips properly selected will give a very long season of bloom. The single early tulips flower the latter part of April. The double flowered class, especially effective in masses and lasting a long time, come into bloom just as the single earlies go by. The giant Darwins, Breeders and Rembrandt tulips form a distinct class with immense flowers borne on tall, stiff stems, and come into bloom, according to varieties, during May and early June. Many of them attain a height of 2′, and a good many considerably more than that. The cottage tulips also

(*Continued on page 68*)



The spring-flowering bulbs will never lose popularity as long as we have houses with sheltered corners to catch the early sun

PIES baked in **"Wear-Ever"** aluminum pie pans taste as good as they look. Thick, delicious fillings of apples, peaches, pineapple, cherries or other fruits or berries in season! Crisp, tender, flaky, golden-brown crusts!

"Wear-Ever"

Aluminum Cooking Utensils

are preferred by women who are as particular about the utensils in which they cook food as they are about the dishes from which they serve it. **"Wear-Ever"** utensils are clean, bright and silver-like in their shining beauty.

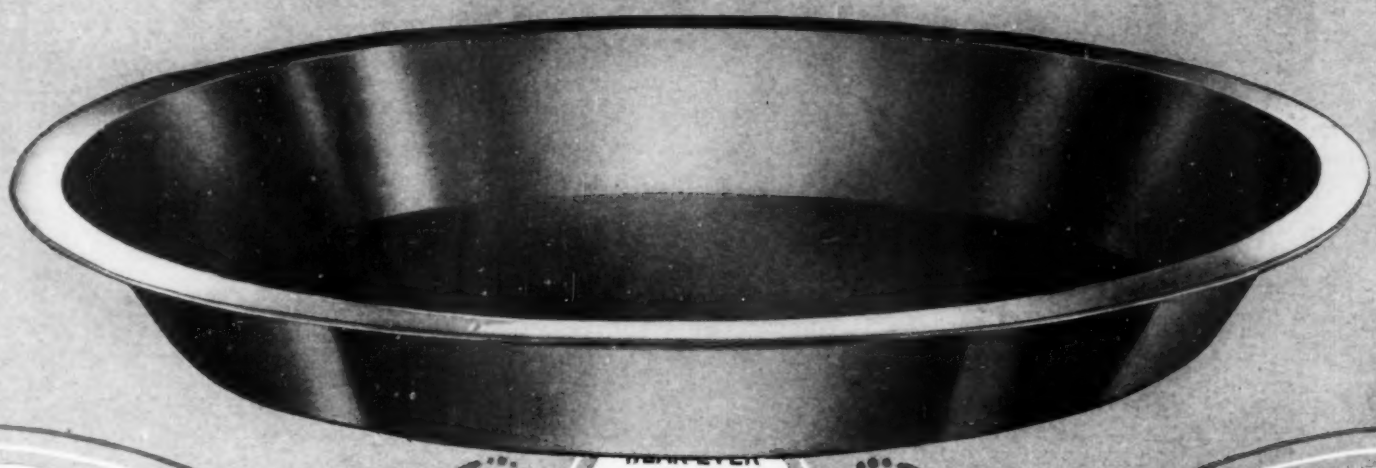
"Wear-Ever" utensils are made in one piece from thick, hard sheet aluminum. No joints in which food can lodge. Cannot chip, rust or scale.

Replace utensils that wear out with utensils that "Wear-Ever"

Look for the "Wear-Ever" trade mark on the bottom of each utensil

The Aluminum Cooking Utensil Company, Dept. 36, New Kensington, Pa.

In Canada "Wear-Ever" utensils are made by Northern Aluminum Company, Limited, Toronto, Ont.



Better Effects With Bulbs

(*Continued from page 66*)

flower late. They are not as tall growing as the preceding class and do well to plant in front of the Darwins and Breeders, offering a pleasing contrast.

Narciss., daffodils and jonquils are more informal in their habit of growth than the tulips, and for this reason offer particular advantages for effect in the informal landscape. With these two a considerable length of bloom may be had by selecting the proper varieties. Trumpet Major, Golden Spur, Henry Irving, Beethoven, Schiller and Princess all bloom early. Emperor, Empress, Glory of Leiden and the *Poeticus grandiflorus* and *Leedsii* sorts follow these, and the *Poeticus*, with *Poeticus* King Edward VII, *Conspicuus Barii* and single jonquils, close the flowering season.

Hyacinths are more formal than any of the other spring flowering bulbs and not as useful for general purposes as the others. Where they are to be used in beds, of course it is desirable to get varieties which will come into bloom at the same time. A selection can be made, however, of early, medium and late flowering sorts which will give a good succession of bloom.

It is always desirable to order your bulbs rather early, but this year it is doubly necessary. Reports from the bulb producing sections indicate that the crop will be extremely short. This, coupled with increased expenses and with delayed transportation and other factors, means that the person who waits until the last minute for ordering bulbs this year is likely to be disappointed in not being able to get a good many items on the list. The prices of bulbs, as in the case of almost everything else, have gone up. Bulb buyers estimate that stock of this year will cost them at least three times, and in many cases four times, what they have had to pay before. This increase in cost is bound to be reflected in the retail prices.

There is another reason for early ordering. While bulbs may be planted until freezing weather, the best results are secured from fairly early planting—late October or early November. Bulbs that are received very late may be provided for, where necessary, by mulching the soil to keep it from freezing.

In the majority of cases the purchaser will have to depend upon the reputation of the firm with whom he or she is dealing, as a personal inspection may not be possible. While the size of the individual bulbs is important, it is not the only essential. They should be heavy, sound and firm, indicating maturity and good flowering qualities. Some, like hyacinths and the hardy bulbs, are sold according to size. Usually the large sizes are well worth the difference in price.

If bulbs have been delayed in transit and are not plump when received, place them in moist sand or moss for several days before setting, especially if the ground is at all dry. If, on the other hand, they appear too moist, or show any signs of mold, let them dry off thoroughly, and dust with flowers of sulphur before planting.

When planting, it is always desirable to use a handful of sand in the bottom of each hole made for a bulb. This not only prevents water settling around the bulb and encouraging decay, but fills up any empty space there may be around the bulb, so that the roots, when growth begins, find congenial environment.

The early types should be planted about 5″ apart each way, and 4″ deep; and the later types, such as Darwins and Breeders, about 6″ apart and 5″ deep—this for solid beds. Distances may be varied at will for landscape planting, but thin planting is generally undesirable. Tulips, as a rule, need a certain self support.

Narcissi should be planted in late September or October, the bulbs being covered 3″ to 4″ deep. Hyacinths go 4″ to 10″ apart and 3″ to 4″ deep. Crocuses should be covered 3″ or 4″ deep.

Floors or Flaws in Your Kitchen

(*Continued from page 57*)

poured down over suspended sheets of scrim and by coming in contact with the oxygen of the air, becomes oxidized and solidified. Then these oil-impregnated skins are ground up and mixed with gums to give the fabric elasticity and it is then mixed with ground cork or cork flour, the coloring matter, and the rosin (to harden it). This mixture is fed into a machine which distributes it evenly over the burlap. It later passes through a series of finely adjusted rollers weighing about 27 tons each and adjustable to space of 1/1000 of an inch between rolls which, of course, give any required thickness to the linoleum. This is plain linoleum and it is many weeks in the making.

"The printed linoleum is made by passing the plain over print drums.

"The straight line or inlay is done by a still more involved process, but the patterns never wear out as they are an integral part of the linoleum, going through from back to front of the material.

"Highly paid designers are engaged in this work and many craftsmen of great skill are employed for stencil work, etc.

"We don't always realize the time, work, and expense of the ordinary things that we see about us.

"When the linoleum is being laid, look out for these things. (They apply pretty generally to the laying of any flooring of this kind.) If over wood—the nails must be hammered in below the surface, the wood seasoned well, to avoid dampness and cracking. If over concrete—it must have dried a month or two and be filled in with plaster of paris if it has any cracks. It should be laid over felt in both cases to insure long life to the linoleum and the comfortable resiliency to the foot and consequent ease to the back. The felt acts as a cushion, makes the linoleum fit better, and obviates later refitting and trimmings. See too, that the workmen are careful to force the strips close together and cement closely. These things I say if it is absolutely impossible to get the linoleum people themselves to lay the floor. It would be wise then, to get their booklet.

"It is easily kept in condition if you

Use only mild soaps, never caustic powders, with warm water. Rinse immediately with clear water and dry immediately. Wash and dry about a square yard at a time; do not flood the whole room at once. Strong soaps will eat the pattern in the printed linoleum and wear the inlay.

Use elbow grease!

Use glass casters on heavy furniture as the linoleum will show marks.

Store linoleum, when necessary, away from excessive heat and moisture.

Waxing occasionally is good. But an oil mop does very well.

"The numberless designs and coloring to be had in this fabric add to its value

(*Continued on page 70*)

Kirsch Flat Rods readily slip through the seams of the curtains with the aid of the Kirsch Pilot or thimble. See the above picture.

I owe my pretty windows to

Kirsch FLAT CURTAIN RODS

I found my ideas in the Kirsch Style Book

KIRSCH Flat Curtain Rods are wonderfully superior to round rods. The FLAT shape means *sagless strength,* without needless weight. It also means smooth, neat hems and headings held gracefully erect (not stiffly) by the support of the rod itself, on account of the flat shape.

Kirsch Flat Rods are so sturdy and durable that they are a permanent fixture. They don't twist or dent. They won't turn black or tarnish. They have no fussy knobs or brackets to gather dust or become lost.

The small Kirsch brackets are invisible in use. If desired, they can be attached inside the casing to avoid defacing beautiful woodwork. Kirsch Flat Rods curve gracefully to these brackets at the ends, producing a very pleasing effect, and providing ample room for the curtains.

They are sold in extension style—adjustable to fit all windows—or cut to fit your windows. Both styles can be had single, double or triple. The finish is white, velvet brass or oxidized copper.

Write for Your Copy of the Kirsch Style Book

It pictures attractive, up-to-date windows for every room. Tells just what materials and rods are used—suggests color schemes for the different rooms. Worth reading and keeping. Write for your copy NOW, mentioning your dealer's name.

Kirsch-Kraft Novelty Curtains

are ready-to-hang curtains of excellent quality—cut by the thread and painstakingly made. Look for the Kirsch label.

Ask Your Dealer to Show You Kirsch Rods

They are sold by leading dealers in practically every city in the country. If your dealer hasn't them, he should be very glad to get them for you. You will do him a favor by asking him to order them for you—for Kirsch Flat Rods have built up the rod business of hundreds of dealers to many times the sale on rods of the old kind. Kirsch Rods are more durable than solid brass rods—give far superior effects—yet cost less.

KIRSCH MANUFACTURING COMPANY, 19 Prospect Ave., Sturgis, Mich.

Kirsch FLAT CURTAIN RODS

Floors or Flaws in Your Kitchen

(*Continued from page* 68)

and pleasure, and the kitchen can be in lovely accord with the decorations of the house.

"The ordinary dripping will not affect linoleum, nor the ordinary moisture. It requires no extra mats as foot resters, is not a substitute but a flooring, and in every way deserves its great popularity.

The Cork Family

"Another attractive, useful and popular flooring is what I call the corks. It is made of clean cork shavings compressed in closed steel moulds about an inch thick for five hours under high pressure and high temperature. All the moisture is thus driven out and it is pressed together into a waterproof mass. No foreign substance is introduced to bind it together as this is done by its own gums. Inferior cork tile is mixed with foreign substances and this often makes it break down and detracts from the resiliency and wearing power. After this process is completed it is cut into the desired sizes.

"Cork tile comes in shades of brown and there is an excellent cork compound tile that comes in many designs and colors.

"It is not absolutely fireproof but is what is called a fire retardent in that it takes a flame of 1500 degrees F. one hour to burn a hole in a tile 6″ x 6″ x ½″.

"The cork tile floor of the best make will last as long as the building. It is of the loveliest coloring, delightful in tone, noiseless and soothing to the feet and back, warm to the touch and altogether psychologically comforting to the nerves.

"It requires but soap and water and elbow grease to keep it in condition forever. It is never slippery, is non-absorbent of dust and moisture and when laid correctly needs no effort nor money for its upkeep. This is why the initial investment though larger than for some other flooring is a wise one, as it is positively the ultimate expenditure.

"There is muth inferior cork tile on the market and it is very hard to tell it from the best quality. It looks attractive until it has been used a little while, then it will begin to 'pit' and 'sap' (become dark, and emit a pungent odor), due to inferior manufacture.

"Heavy tracking does not affect cork tile as it is so elastic that it springs back into place. This is proven by the restaurants, banks, libraries and hospitals that use it so generously.

"In laying this, the same general things should be observed as in the case of linoleum. It is laid over felt, the base must be free from moisture, cracks and nails. If the cork is put over nailable material, small headless sunken brads are used. If not, it is pasted on the base. All joints are pressed together by a special compressing machine, and are sealed with a preparation virtually making the cork tile into one large seamless covering under which no dust, moisture, germs or vermin can collect.

"The velvety quiet of these floors imparts a tranquillity to the kitchen, contagious to mistress and to maid.

"I need not say much for the tile as you know its beauties. It may be cold to the feet, non-resistant and tiring to the back and slippery when wet, but this is overcome by mats of matting, cork or linoleum. Tile is made in every design and color to fit any desire or design. All corners and joints at the base of walls can be curved. It makes a unit of the whole room in design and intention as no other thing does. It can be cleaned out with a small hose. Of course, poor tile cracks.

"Needless to say, it takes real skill to lay these floors as the under bed of cement has to be very perfect to protect the tile upon it. However, it looks royal, it wears, and is a favorite with great kitchen builders.

Compositions

"The floorings of composition, cements and mineral mixtures are innumerable. Some are excellent, embodying nearly all the good points enumerated in this letter. They are a little warmer than tile and not quite so expensive. They have probably a little more foot comfort but not much more. They are fire proof, do not weigh too much for a lightly constructed house, and are kept clean with the usual elbow grease and water.

"These floors for the most part are made in various colors and designs.

"In tile and composition the joint at the base of walls can be made practically one with the wall in a curving connection. In the case of linoleum and cork, this joint is either accomplished by a curving connection or more generally by a highly compressed and sealed joint, allowing for absolutely no trapping of foreign matter and rendering the floor easily swept and washed.

"Many great institutions and some private homes have found these to be practical, so if you observe the Buy the Best from the Best rule you cannot go wrong.

"Now, Miss Wentworth, as long as you haven't stopped me I imagine it was comprehensible throughout?"

"I understood it all, if this *is* all?"

"Yes, thank goodness, except I hope that this will answer your queries and that no floor problem can floor you now."

An Evening Garden of Fragrance

(*Continued from page* 29)

of the entire summer, and more especially in the evenings.

In the partial shade next the house is a long row of sweet rockets. These old-fashioned flowers look their best in large quantities.

For accents, in the center beds are the tall pale pink heads of valerian, or garden heliotrope, and the erect spikes, likewise pale pink, of physostegia. These bloom in midsummer.

In July, shortly after the madonna lilies, come large balanced clumps of white Japanese iris. This is an extremely effective flower and comes at a time when the distinctive features of the garden are at a minimum. But for the fact that they lack fragrance, they are every whit as desirable as lilies.

About this time the warm midsummer nights are upon us. The garden is filled with phlox which, next to the lilies, makes the chief effect of the flowering year. The colors are white, pale lavender and light pink. They command our interest in the daytime, and at night, by the aid of Japanese lanterns suspended from the pergola or swaying from poles in the garden beds, become enchanting.

The varieties listed are not definitely arranged on the plan, but the early dwarf Tapis Blanc should be placed here and there at the front, and the tall Pink Beauty and Stella's Choice in the center of the spaces designated. The medium sized varieties may fill out the remainder of the vacant spaces. At least eight or ten of each variety should

(*Continued on page* 72)

The charm of ATLAS-WHITE

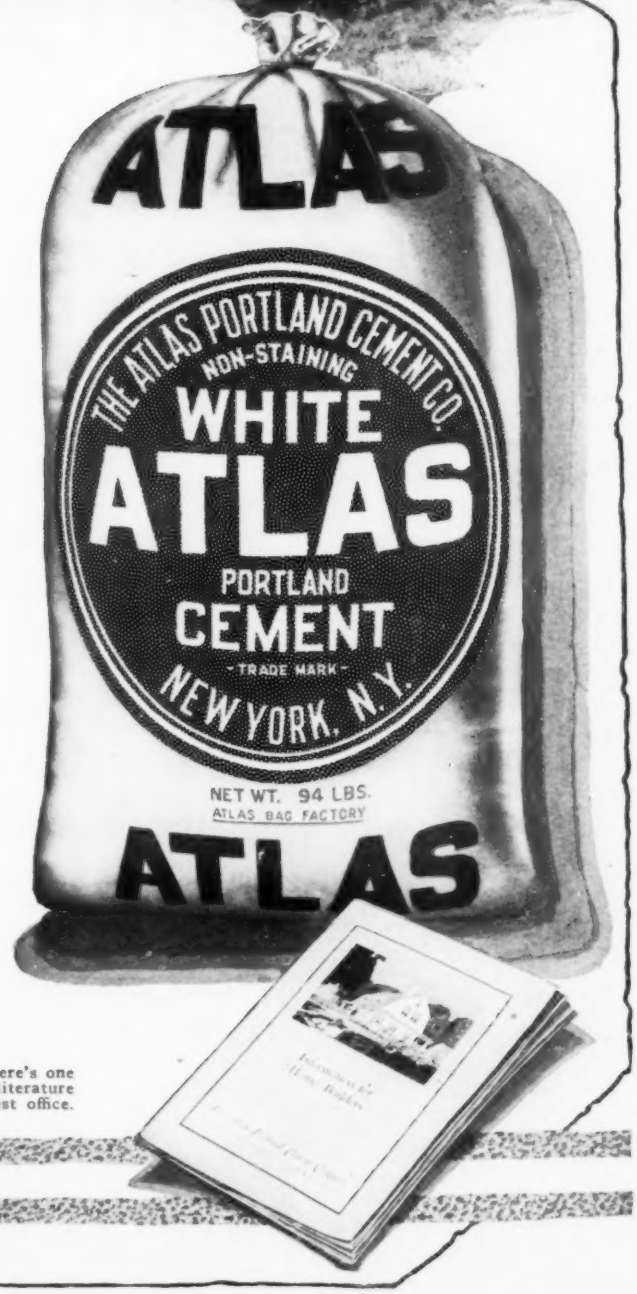
CHARM and economy combine in the well-built stucco home.

For the finishing coat, ATLAS-WHITE Cement is used with white sand for all-white effects. When used with color aggregates ATLAS-WHITE pleasingly accentuates the various color tones.

Our book, "Information For Home Builders," may picture the new home of your dreams—a home built of stucco, finished with ATLAS-WHITE Cement. Read it before deciding on definite plans.

The Atlas Portland Cement Company

New York Boston Philadelphia Savannah
Chicago Dayton Minneapolis Des Moines St. Louis



A Book of Many Homes—One for You

This book costs nothing to get; it's worth something to have. There's one for you. Send for it. We also send, on request, information and literature covering every kind of concrete construction. Address our nearest office.

An Evening Garden of Fragrance

(*Continued from page* 70)

be placed in each group, and white should be the predominating color. Like peonies, phlox has a peculiarly clean, fresh smell.

While the latter are still in bloom the speciosum lilies make the air heavy with their fragrance. They are clustered thickly around the circle and along the outer edge of the garden, in order that their scent may not be too pronounced in the vicinity of the pergola. They remain in bloom for a long period, well into September, by which time two or three clumps of the aster-like white boltonia will make striking accents.

Also about this time there are in bloom some Japanese anemones. Since they resent crowding they are placed in a line in front of the rockets—so as not to be smothered by the box—and to some extent are protected from frosts by the house. As is the case with the flowers of early spring, in deference to the summer effects, the fall flowers are in the minority.

To replace the early bulbs some annuals are introduced. Nicotiana is near the pergola where its fragrance, which is strongest at night, may be appreciated to the full, and its white flowers gleam effectively in the twilight. Bordering the circle and the central walk are heliotrope in the lighter tints, and stocks in pastel colors.

A very few clumps of tuberoses planted between the madonna lilies will succeed their bloom—few, because their scent is almost overpowering. Here and there where spaces appear may be tucked other aromatic plants: compact, spreading geranium, the erect lemon verbena and the gray-green lavender, all of which, though tender, may be grown successfully in the open, or if desired, potted in the autumn for the house.

The tiny rosemary forms a carpet between the stepping stones and, with slight protection, survives the winters of the North. Sweet woodruff will form a close mat of foliage under the little trees, and a few clumps of sweet Cicely and the pungent southernwood add variety and interest. A few ferns among the lilies form an appropriate combination.

In this garden four things have been accomplished: A succession of bloom has been provided for from earliest spring until late fall; a series of charming pictures has been drawn; within its boundaries have been gathered a multiplicity of sweet odors; and last, we have framed a little piece of earth distinctively and placed therein flowers that shall nod their heads wisely at our approach, and in the twilight hold sweet converse with the stars.

Methods of Heating the House

(*Continued from page* 35)

northern and exposed chambers, to which the hot air itself cannot be as well or certainly circulated.

Other types of furnaces help to counteract this latter tendency by dividing the hot air chamber in the top of the heater into separate sections and connecting each section with a room register, so that each room is the more certain to receive its intended supply of hot air, regardless of the direction of the wind or momentary periods of unbalance—such as are occasioned when the housewife prepares to "air out" a room by opening a window. At such a time, not only is the hot air circulation to that room effectively stopped, but the whole system is likely to be reversed by starting a current of cold air down the heating pipe, thus sucking any bad air out of the room and down into the furnace, there to be promptly heated and distributed impartially over the entire house.

Steam Heating

Next to the hot air furnace, the steam system—especially the "low pressure steam" system—is most economical to install and even, in some cases, most economical to run as well. The steam heating system is similar in its general principles to the hot water system. In both, the heat is distributed through iron pipes and cast iron radiators located in the different rooms, the unused or chilled material being returned to the heater through a smaller iron pipe, thus maintaining a continuous circulation. The steam system has one advantage in that the pipes and radiators are smaller than are required in the hot water system. In the steam system a portion of the boiler is filled with water, which is heated until vapor or steam rises from it into the dome above, from which the pipes supplying the different radiators rise to different portions of the house. In the hot water system, the boiler is filled with hot water, the hotter water rising to the top, and itself circulating through the pipes and radiators, coming back again to the boiler through the return pipes.

In theory, the hot water system is supposed to be more economical because a certain amount of heat is obtained from even the tepid water, once it begins to circulate in the pipes at a higher degree of temperature than the air in the rooms. As a matter of fact, however, the warmth thus produced is so slight that it is of value only in the mildest weather—when, indeed, a certain amount of warmth can be obtained, sufficient to take the chill out of the house, with a comparatively small amount of fuel. In colder winter the slight value of this heat is immediately lost by contact with the cold air surrounding the radiation, so that only a very sluggish circulation results, until the fire is hot enough to bring the water up to a higher temperature.

Both these systems are ugly and unsightly. Even if the upright pipes—the circulating risers and returns—are placed inside the partitions, in which case any leak or freezing of the system is more difficult to locate before damage results, the radiators themselves, especially in the case of hot water, are so large and unsightly that they do much to take away from the good looks of any room.

Radiator Paints

It is, of course, possible to paint or stain the radiator near to the color of the wall decoration or woodwork of the room. Ordinary paint, however, deteriorates rapidly under the extremes of heat and cold to which it is thus subjected. It cracks, and chips or flakes off, shows iron rust spots, or, at the least, it is yellowed and does not look as fresh and clean as the remainder of the room finish, while the three or four coats of paint that are necessary have some effect in losing heat radiation. The best coloring is restricted to the several shades of gold, bronze, and silver powdered paints, that are ordinarily applied to heating pipes and radiators. This material seems to cover the iron with so thin a skin as not to reduce its radiating values, while the various shades of metal tints available allow of matching the color of paint or wall, to a certain extent at least, even when restricted to the use of these

(*Continued on page* 74)

Fruited Wheat and Fruited Oats

—the Scientific Health Cereals!

To enjoy one's House and Garden, good health is most essential.

To enjoy good health it is only necessary to obey Nature's simple dietary laws.

Fruited Wheat and Fruited Oats are helping thousands of housewives solve the "what-shall-I-serve-for-breakfast" problem. Their very composition—the whole grains scientifically combined with FIGS, DATES and RAISINS—is assurance that they are *real foods.* At good grocers everywhere.

TRY BOTH!

UNITED CEREAL MILLS, LTD.
QUINCY, ILLINOIS

Methods *of* Heating *the* House

(*Continued from page 72*)

Another method of concealing radiators, especially if they are located so as to come under the windows, is to enclose them with cases of wood designed to conform with the style of the room, providing a seat or plant shelf under the window, at the same time that the radiator itself is enclosed and at least partially concealed or hidden. Care must be taken to provide ample area of openings in the grilles to allow the air in the room to circulate freely through the case and around the radiator, especially a space at the bottom for the air to draw in over the floor and carry up and out at the top, front or sides of the enclosing case. With this arrangement, a certain excess of radiating value always must be provided to counteract enclosing the radiator; this excess should vary from ten to twenty per cent, depending upon the design and arrangement of the grille and case.

There is supposed to be a certain amount of advantage from the moisture added to the air by the hot water system, in distinction to the "dryness" supposed to be imparted to the air by the steam system. As both the water and steam are enclosed within iron pipes, however, there can be actually little difference between the two in this particular. Both systems can be helped by keeping pans of water—especially the flat bowls carrying a few sprays of flowers—in the room, either on a table or on the radiator case, to provide an opportunity for humidifying the air naturally by the process of local evaporation.

Both these systems cost considerably more to install than the hot air furnace. If a house could be equally well heated—so far as its arrangement and physical conditions were concerned—by all three, the steam heating system would cost from eighty to ninety per cent more than the hot air, and the hot water system from a hundred to a hundred and twenty-five per cent more. These ratios are at the present moment rather more than less than has been stated, because of the increases caused by world conditions in the cost of iron and other metals. The economy of running the two systems is supposed to be slightly greater in the case of hot water, largely because of those spring and fall periods when only a mild form of heat is desired. But both systems are materially cheaper to run than hot air in a house of any size or extent, and especially if it is in an exposed position. Under the latter circumstances, steam is probably the system most to be preferred.

Vapor Vacuum Heating

There is also an improvement of the steam system generally called a "vapor" or "vacuum" system. This, briefly, consists in creating a vacuum at the end or ends of the system farthest from the boiler, which tends to draw the heat—even the first vapor arising from the water, before steam actually begins to be formed—through the system more rapidly and certainly, making possible certain economies in the sizes of pipes and radiators. Especial appliances are manufactured for these systems, most of which are specialties covered by patents which tend to more than offset the savings possible from these economies, so that these systems often actually cost rather more than either steam or hot water.

It is also possible to install a "single pipe" system, by which one larger pipe serves for both supply and return. This method, however, while a favorite in office buildings, is somewhat less highly regarded by the house owner, because of its inherent tendency to "hammer" or pound vigorously at the time—generally between four and six in the morning!—when the fire begins to start up and the new heat, pushing out through the pipes, meets the colder currents flowing back toward the boiler.

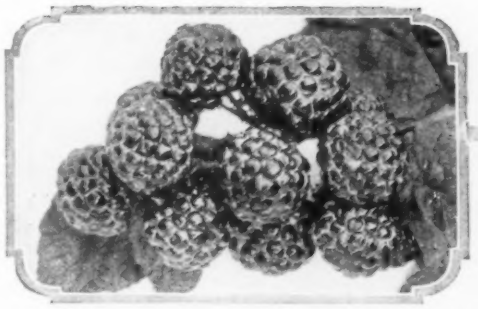
With both steam and hot water, there are also "indirect" systems, which means merely that, instead of exposing the steam or hot water radiator in the room, it is placed beneath the floor, encased in a metal box, which has a separate cold air connection from outside the house. This outside air is then heated and circulated in much the same way as from the hot air furnace. This system is considerably more expensive, however, than either of the "direct" heating systems, because of the additional labor, tinwork, and enlarged radiator sizes required to make it successful. It is therefore undertaken only under conditions where expenses of installation and of later fuel supply are not considered as worthy of particular consideration.

Both hot water and steam systems are more likely to occasion possible trouble from freezing where exposed in rooms near windows, or sometimes when concealed in walls. In the latter case, it may be difficult to repair; in either case the damage to ceilings or finish may be considerable. These dangers are entirely avoided in the hot air system.

Selecting the Heater

In very large houses, it becomes necessary to get a size of heater so large that the circular firepot is no longer available. In that case a heater built up of different sections is employed, which can be extended to any length and capacity required. The round firepot is, however, more economical of fuel and easier to run, and therefore is employed wherever practicable. Heaters are rated by their manufacturers according to a system so arbitrary and theoretical that it is advisable always to install a heater of a size from seventy-five to one hundred per cent more than the manufacturers' stated capacity. The enlarged size helps in running the system more economically at all times, and is especially advantageous in pushing the heater in very cold winter weather.

There are, finally, a number of different methods of automatically controlling heating systems, generally based on a regulator installed in some central portion of the house. This means, however, that the temperature of all the rest of the dwelling is adjusted to the same uniform degree of heat, whereas, as a matter of fact, in most dwellings the living rooms are desired to be kept warmer during the day than the bedrooms. This can be effected only by shutting off the bedroom radiators which, with a hot water system as generally arranged, is impossible to do entirely without drawing off the water, as otherwise there is always some danger of freezing the hot water radiator.



Plant This Fall

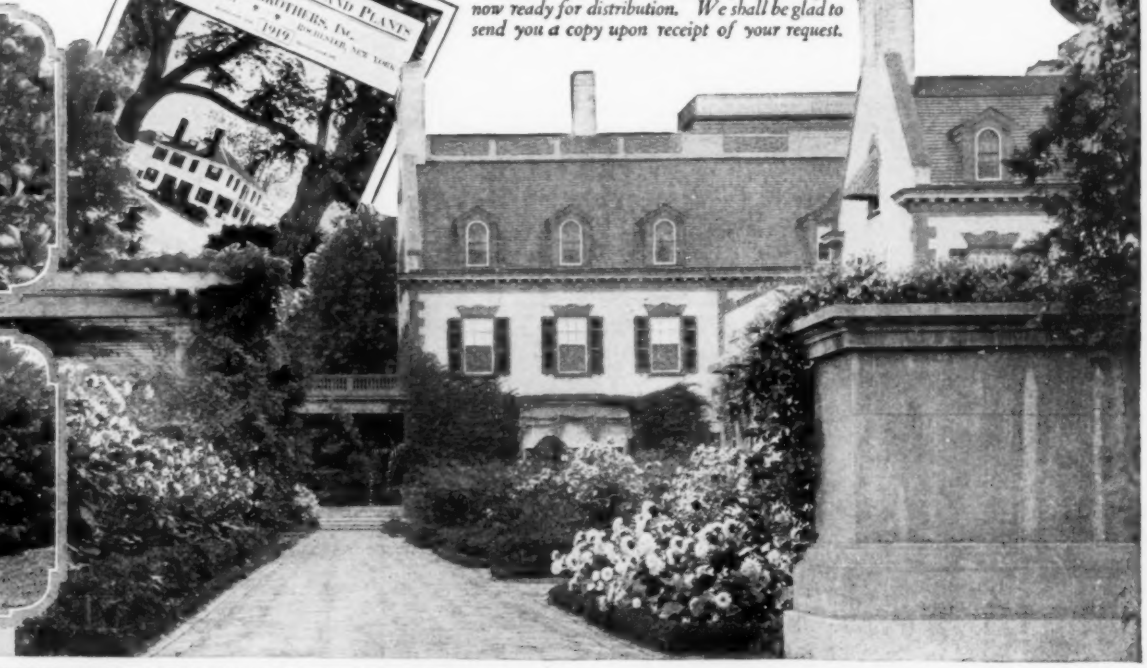
Whatever you are planning to plant, PLANT THIS FALL. Don't wait until Spring—when nursery stock will be scarce, perhaps impossible to obtain at all, and certainly higher in price.

Trees and plants placed in the ground this Fall will have made greater progress by next Summer than those planted next Spring. You gain about six months growth by planting in the Fall.

GLENWOOD NURSERY Trees and Plants are *dependable, healthy, hardy, vigorous* and *productive.* We take extraordinary precautions to keep our stock absolutely free from disease. It is grown in a temperature that makes it sufficiently hardy to thrive in most any climate. No attention is spared to make our stock vigorous and of persistent growth. Whether planted for nuts, fruit, flowers or ornamental foliage, our stock attains a most luxuriant growth, and frequently surpasses our estimation of the limit of its possibilities. And GLENWOOD NURSERY trees and plants always prove to be true to their careful markings.

NUT TREES FRUIT TREES, DWARFS & STANDARDS BERRY PLANTS
ORNAMENTAL TREES, SHRUBS & VINES EVERGREENS HEDGE PLANTS

Our Catalogue of "DEPENDABLE TREES AND PLANTS," fully illustrated in color, giving description of GLENWOOD NURSERY Trees and Plants, with directions for planting, is now ready for distribution. We shall be glad to send you a copy upon receipt of your request.



GLEN BROS., Inc.

GLENWOOD NURSERY
Established 1866
1870 Main Street
ROCHESTER, N. Y., U. S. A.

Quite a mannish side table, inviting for books, magazines, or a cigar stand. Lee Porter, decorator

Using the Couch End Table

(*Continued from page* 42)

best creations of these different periods are being reproduced with a marvelous exactness. While many of these works were exquisite and distinctive, there was gradually a degeneration into a veritable "frenzy of curves" which made the designers turn to the classic beauties of Pompeii and Herculaneum, which were being resurrected, after nearly seventeen centuries. These pieces show a refreshing simplicity and refinement, that make them adaptable to any room. Their chief characteristics were straight lines, slender tapering legs, with decorations of classic form, such as wreaths, beading, fluting, Greek bands, and garlands of laurel and oak.

Small Tables

There is literally no end of possibilities that lie in these attractive little table ends. Some of them show a drop leaf, while occasionally a curiously carved top is made effective by standing it flat against the wall, proving a decorative feature against tinted plaster or paper.

The small table possesses so many merits that it is rapidly being appreciated at the present time. It fits into limited space and can be used advantageously in the apartment house or in more pretentious homes.

There is beauty and a grace of line worked out by the furniture makers of today that never fail to give added interest to these decorative bits. They also serve an infinite number of purposes, being used occasionally for the gold fish bowl at the end of a table.

Antiques are popular today and are being widely sought after, both on account of their historic value, and decorative features. There is a mellowness in the old time wood that lends a distinct charm to the room. Unfortunately they are limited in number, and often beyond the means of the would-be purchaser. This causes us to fall back on reproductions. These may lack romantic history but are generally accurate representations of the genuine antique.

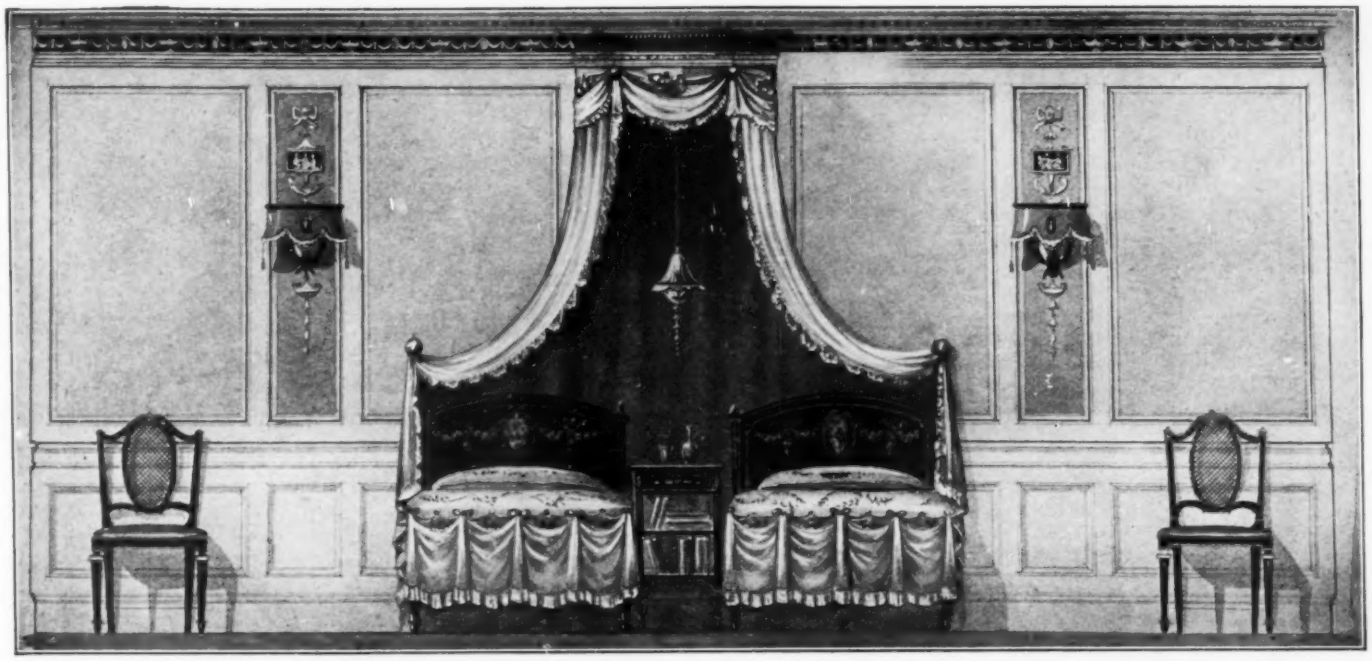
Placing the Table

Rightly placed, the end table lends itself well to interior decoration, and often is a note of individuality in the room. These American tables range from the small simple ones, to elaborate carved examples. The tiny mahogany console, with dainty flowered top, is especially adaptable for this purpose, adding a bit of color to what would otherwise be a dull commonplace room. The Queen Anne drop table, with its graceful standard, and finely molded ends, is decorative as well as convenient. The chief advantage of these pieces is that they require little space when closed and can be used as a semi-circular table against the wall, when not needed for an end.

Great care must be taken in the placing of these elbow tables. They should balance the furniture and where space will permit, it is better to use two. This makes a delightful grouping, particularly

(*Continued on page* 78)

This shows balanced grouping, the space admitting of two tables, one on either end. They are early English in type. Lee Porter, decorator



ORIGINAL design for an Adam Bedroom, the color scheme being two shades of gray and black. The furniture done in black and gold, decorated in colors. The draperies, rose and sea green, embroidered in colors. The rug two shades of gray.

Paine Furniture Company of Boston

What's on the bottom of the legs?

Old fashioned casters? Or nothing at all?

That accounts for your scratched floors, your torn rugs, the squeaks and creaks that get on your nerves.

Put on Domes of Silence.

They are rounded, polished steel slides—they go on with a few taps of the hammer—they wear everlastingly—and they mean a quiet home—and protected floors.

A size for every style of furniture from the lightest chair to the heaviest davenport—at hardware, furniture, drug, grocery and department stores.

Remember—Domes of Silence are the modern way.

Good furniture dealers are glad to equip the furniture you buy with Domes of Silence. Ask for them.

DOMES *of* SILENCE

"Better Than Casters"

ART OBJECTS *in* ART STONE

For Garden, Conservatory and Sun Room

Appearing in the favored Art Stone in antique and modern designs of dignity and beauty—featuring distinctive, wholly unusual tile effects and rare touches of Oriental color, the latter adding to already exquisite designs, the beauty of many ages. The pieces illustrated:

5500—FLOWER BOX in exquisite Persian design, wonderfully effective. In Art Stone—standard width $35.00

5516—OIL JAR. Also Persian Inlay in Art Stone, 10" x 27". Most unusual coloring and design 50.00

5517—OIL JAR. Larger size, with handles—decorated with hand made mosaic design. Exceptional 65.00

5531—SUN DIAL. 36 x 36 x 36½ in. high. A beautiful conception; also in the Inlaid Tile 87.50

5209—BIRD BATH. 24" x 34" high. A simple design, base ornamented with tile. Exceptional value 18.00

5186—BIRD BATH. In Art Stone. Leaf and Lily design. 18" x 45". An exquisite piece.... 25.00

Prices f. o. b. Cleveland. Send 20c in stamps for illustrated book: "Decorative Fitments in Art Stone," presenting hundreds of designs.

THE FISCHER & JIROUCH CO., 4821 Superior St. Cleveland, Ohio

In this group is used a table with a metal stretcher of iron and gilt. Earle Campbell, decorator

Using the Couch End Table

(*Continued from page 76*)

when pieces corresponding with the period are chosen, such as one illustrated at the bottom of page 76. These English companion ends, placed against the sofa, bring out the value of the dark candlesticks, which have been made into lamps. The tapestry which softens the plaster walls is a Flemish fragment, and is flanked on either side by a Louis XIV carved girandole. The sofa is of beige colored velvet and the pillows, of corresponding tones, carry out the general color scheme.

There are delightful mannish end tables for books, magazines, and cigar stands, which can be placed close by a chair or table. The illustration at the top of page 76 shows a Jacobean piece with its small rounded corners, unusual in shape, and the old painted screen used as an excellent foil for the dull blue satin upholstered chair.

A very distinctive table has a metal stretcher made of iron and gilt and the lamp should be made of iron and gilt as well. The shade can be made out of gay bits of old chintz. This table, above, shows a substantial quality and a canvas screen has been placed to cut off the draught from the rest of the room.

Italy lends us a suggestion in interior decoration by the use of this little table, as seen in the corner group on page 42. It has weight and dignity which balances the rich luxurious red Italian damask chair. In a case like this, a light piece would be inadequate. The painting on the linen tinted walls is an architectural fantasy, after the manner of Paninni, and the Queen Anne chair and wrought iron lamp, with parchment shade of burnt orange, all help to make a most charming decorative scheme.

An interesting three-legged end table, terminating in Dutch feet, is seemingly fixed into the end of the lounge at the bottom of page 42. The couch is covered with dull blue taffeta. The painted screen in the background brings out the color scheme and also the beauty of the Chippendale chair of blue brocatelle.

End tables are especially decorative when used in a hallway, the richness of the wood being unusually effective against cream painted walls and made more so if placed against an old Italian rose damask sofa, which blends with the mellowness of the old wood.

There are so many advantages in the revival of these end tables that one wonders how we ever did without them. They are convenient, space saving, and give a decorative and homelike atmosphere, and their graceful outlines blend harmoniously with the setting of practically any room.

The Kitchen Exalted

(*Continued from page 55*)

the maids sit and read or sew (and there are places to keep the sewing too) or arrange the flowers and fruits for the rest of the house, or prepare the dry, clean vegetables or have tea, or just rest.

They have their illustrative silhouettes here also. On one wall a lady with wind-blown scarf fluttering towards a rose tree filled with roses gathers the precious blooms and arranges them in a bowl she so lightly holds on her hand, and one she has pinned in her hair—anything for decorative effect.

And again, on the other wall, is a picture lady sitting most absorbedly placing the oranges and bananas and grapes in flat bowls that she has standing on the floor all around her. In the corner oblong hangs a bit of the very grape vine where she found her grapes. And oh! yes, peeping from the folds of her draperies is the daintiest foot in a slipper (all the wall-ladies wear dancing slippers).

The silhouettes are painted in the colors of the kitchen, terra-cotta, and black and creamy white and just a little green, like lettuce leaves, to give a reaction from the too much pink-orange.

The lighting is perfect. The windows are so placed that there are no dark corners in the daytime and the electric lights are so arranged that by night even one can see to make and keep all things clean and bright. What a relief from the ordinary single gas jet hanging precariously from the center of the ceiling and illuminating nothing at all!

As to the servants—they do like the pretty kitchen and take a pride in keeping it so. It gives them a greater dignity and they are inspired to cook better and serve more gracefully as they arrange more artistically all salads, fruits and whatever foods they are preparing for the table. It is they now, who without direction select such dishes and flowers as will harmonize best with the food to be served and they make every meal an exhibition repast. Yes, they are intelligent. Who will not be with the proper surroundings and ideals and training?

Which, of course, proves us right in believing that the fairer the surroundings the better the work and doubting that the ascetic barrenness of a hermit-like cell uplifts, while the visible beauties distract the mind and Soul. So perhaps a kitchen adorned and exalted is as important as any other room in the house.

Do You Know All *the* Hedges?

(*Continued from page* 46)

There has recently been introduced a distinct dwarf "sport" of Japanese barberry, under the name of box-barberry—so called because in habit of growth and in the way it lends itself to dwarf, formal hedging, it resembles a dwarf box. For the smallest of hedges, in formal garden work, for parterres and the like, there has never been anything equal to real box, but box requires a very moderate climate, both as to temperature and moisture. Even with much expense and care in the way of winter protection, it has usually proved unsuccessful north of New York, and altogether unsuited to the central western states. While privet and Japanese barberry have been tried for this purpose by close and frequent clipping, the results have not been satisfactory. This new miniature barberry, however, seems admirably adapted to serve as a substitute for dwarf box. Very little pruning is required to keep it in dwarf, compact form, as its natural habit of growth is symmetrical, even and dense. Box-barberry has also received the certificate of merit of the American Nurserymen's Association.

Japanese holly (*Ilex crenata*) is another fine small hedge shrub that should be more widely known. It may be used in place of box, where the climate is unsuited to the latter. It may be clipped to form, and under such treatment has much the character of box.

The search for a substitute for privet to use in the north-central and northwestern states has been responsible for the discovery of another new hedge plant that is giving splendid satisfaction in those regions. It has not yet been used much in the east, but it offers a change from the ever-present privet. It is one of the cotoneasters (*Cotoneaster acutifolia*). It hails from northern China, being one of the extremely valuable things brought to us by the late Mr. Meyers. It is absolutely hardy, strong, similar to privet in general form, and not unlike it in foliage. It is well suited for pruning into formal shapes, or it may be left to grow naturally.

Another good hedge plant which is not only extremely hardy, but offers variety in that it is silver gray in color tone, is the Russian olive. The yellow berries add to its attractiveness. Being a shrub native to the northwest, it has been used in that region more generally than elsewhere. It is particularly resistant to heat and drought, and especially good as a farm or large estate hedge, where it may not be practical to give the attention usually given to privet and the other more usual hedges.

All of the plants thus far described may be defined as hedge plants. In addition to them there are two other important groups which, while generally used for other purposes, should be considered, because it is frequently necessary to go to them to get the best material for the purpose in hand.

The first group constitutes the flowering shrubs which are good for hedge making. The most suitable of them for a tall, protective hedge, where something capable of taking care of itself is wanted, is althea, or Rose of Sharon. For use between small lots, or different parts of the same place, several of the spireas and deutzias, and forsythia, are charming. Also the bush honeysuckle, and polyantha roses.

For taller hedges, either beautifully graceful or strictly formal, where an absolutely impervious screen or an effective windbreak is desired, the evergreens are unmatched. Both hemlock and spruce may be sheared as desired. Arborvitae, of course, makes a perfect hedge; Booth's dwarf is a very dwarf form. White pine is good for light, sandy soils; it grows most rapidly and makes a graceful, picturesque background for other parts of the general planting which may stand out against it. Japanese yew is the best hardy, low, spreading evergreen hedge plant. Quite a range of color values, of course, is possible with the various evergreens which are available for this work.

The Airedale *and* Irish Terriers

(*Continued from page* 59)

class hunting dog. He has proved a success against bears, wildcats, quail and mice. He has been used to guard sheep and pull a sledge in Alaska.

The four photographs accompanying this brief sketch were selected because they indicate the general appearance as well as much of the nature of the two breeds. Neither the Airedale nor the Irish is pretty in a mere boudoir sense—but then, real beauty is more than skin-deep.

Feeding the Dog

Were more thought given to the dog's diet there would be far fewer cases of eczema, distemper, general debility and the other ills to which canine flesh is heir. A dog's digestive system is delicately organized—fully as delicately as a human being's—and it calls for sane consideration plus a little specialized knowledge.

In the first place, never feed your dog potatoes in any form; they are about as indigestible as anything you can give him, short of tin cans and rubber bands. Nor should he receive any chicken, turkey or duck bones, because they are apt to splinter and be swallowed in more or less long slivers which may do a lot of damage. Beef and other animal bones are all right, since they are devoid of unduly sharp points even when broken, and are more susceptible to the softening and disintegrating action of the gastric juices.

Wholesome, nourishing food only should be given. The standard brands of dog biscuit are good; boiled rice, thoroughly boiled green vegetables, lean red meat—either raw or cooked in with other foods—and dry bread are all excellent. A good sized, durable bone to gnaw on should be given to the dog a couple of times a week, as it will keep his teeth in good condition and stimulate digestive activity. Plenty of clean, fresh, cold water should be available to him at all times of the day and night. For young puppies, sweet milk, bread, vegetable and meat broths are good.

Rapidly growing puppies should be fed from three to six times a day, depending upon their age and general condition. At ten months, three times a day is usually enough, and at maturity this may be decreased to twice—morning and evening. Regularity in the hours of feeding is extremely important.

It is well to remember that individual dogs often have marked likes and dislikes in the matter of food, precisely as people do. Make allowances for this in so far as it does not get beyond the bounds of reasonable common-sense.

House & Garden *is prepared to answer by personal letter questions pertaining to the selection, training and care of dogs. All inquiries should be accompanied by full return postage and addressed to The Dog Mart.*—Editor.

Color Schemes for Curtains

IN designing the five curtains on page 48 I tried to show how the woman with needle skill can approximate the best tailored work if she will only provide herself with the proper equipment.

The curtain in the upper right hand page could be used for either living rooms or, according to the material, bedrooms. It has a French valance which gives a good finish to the window. This valance is made by sewing the gathers onto a narrow tape. Across the top the fullness is taken in a tuck between each tape. This allows the rest to droop naturally. The curtains themselves should be plain and hemmed. In sea green silk gauze the effect is light and shimmery, and an old-fashioned gilt cornice would look well above the French valance. Voile or mercerized crepe might be substituted for the silk gauze.

Across from this is shown a valance with a double ruffle used with a curtain that has a triple ruffle. These ruffles are each 12″ deep with two or three 3″ ruffles applied and edged with rickrack. For this curtain I would suggest dotted white grenadine curtains with light blue rickrack braid on the ruffles of the valance and the lower edge of the curtains. The shade should be decorated in blue and green, with a long blue tassel.

The curtain in the middle of the page is very interesting. It calls for a painted valance board on the bottom of which is tacked a 3½″ band with three full taffeta ruffles, pinked on the edge. The tie-back has the same ruffles. The knob for the tie-back is a little porcelain placque set into wood that matches the valance board. The curtains have large dots, but the ruffle is plain muslin of old-fashioned quilling. The valance board for this curtain might be painted green with a cream center and old-fashioned flowers. The panel would be outlined in black. The valance ruffle and tie-back are strong colored blue taffeta, very crisp. The curtains are Swiss with large dots and the ruffle is plain. The porcelain flowers of the tie-back knot are brilliant and match the valance board decorations.

A very simple curtain is shown at the lower right hand corner of the page. The valance consists of two 3/8″ bandings applied 2½″ apart. The valance and curtains are picoted. For color schemes I would suggest a rose dimity with deep red taffeta bindings and red picoting. This, of course, suggested a delightful little bedroom or even a breakfast room.

The valance for the fifth curtain is built up on buckram or rather on a semi-circular wire frame. Striped material is used, running vertical on the valance, with ruffles top and bottom of stripes running horizontally. The tie-back is the same. The ruffles on the curtains match those on the valance, that is, a strip of gathering between two horizontal stripes. I would suggest coffee color thin sunfast for the curtains. Trim them with sateen or red and coffee color in a 3/8″ stripe. Valance and tie-backs use the vertical stripe with a horizontal striped ruffle, thus showing a line of plain red. The window sash could be painted red to match.

—*Agnes Foster Wright.*

Rock Gardens and Their Allies

(*Continued from page 52*)

Care should be taken in the time of planting the Alpines, or failure will result. Late spring is the best season. If they are propagated from seeds sown in the spring and summer of the first year, they will flower the second year. July is not a good month to sow the seeds, as it too dry. Plant in May, June or the first week in August, and transplant when the first character leaf appears. The young plants are put into their permanent positions in the rockery the following May.

The arrangement of the flower plants should be in groups of one variety, massed for effect, and also for the purpose of keeping the strongest growing kinds from overrunning the weaker varieties. Under conditions of mixed planting many of the weaker varieties perish. The small shrubs give the rockery an appearance of stability and furnish a suitable background and windbreak for the flowers. The heathers, andromedas, azaleas, cotoneasters and dwarf rhododendrons are especially suitable for rock gardens and should be planted in clumps rather than as individual plants. The tall, upright varieties of evergreens should not be used, as they are not in keeping with the rock garden. All evergreens with golden or silvery foliage should also be omitted. A few of the dwarf evergreens, however, such as *Juniperus sabina tamariscifolia*, a distinct trailing variety of juniper; *Picea excelsa Maxwelli; Picea remonti;* and *Retinospora obtusa nana* may safely be used.

The Alpines, bulbous plants, shrubs and evergreens do not all lend themselves equally well to the same type of rock garden development. The best plant material for certain situations, such as the rocky bank and open, sunny valley, the dry wall, the stony steps and walks, and the bog and water gardens, is listed in the accompanying tables.

Colonial Portraits as Decorations in Modern Homes

(*Continued from page 41*)

So-and-So, at the sign of the Swan" (or the lion, or the stag or the crow or some other easily distinguished object), was the favorite way of directing customers, as can be seen from a perusal of the advertisements appearing in the periodicals of the day. Some of these signs were real works of art, and plenty of them were executed by painters who at the same time were making a part of their living by turning out portraits to order.

So it will be seen that many of these early American artists were self-taught. This is nothing to be scorned, but rather something to engender pride. Two of our later artists, whose work is immortal because of its individuality, R. A. Blakelock and Albert P. Ryder, were self-taught, and an even greater example in the realm of literature is the incomparable rhetoric of Abraham Lincoln, acquired by solitary study.

The first American artists came to the New World as immigrants, along with the other Colonists. The first to arrive was Gustavus Hesselius, Swedish painter, who came in 1713. Peter Pelham, portrait painter and mezzotint engraver, reached America four years later, and in 1720 there arrived John Smibert, who painted the first portraits in this country which have survived.

Smibert, who was a native of Edinburgh, was himself a graduate of car-

(*Continued on page 84*)

Colonial Portraits as Decorations in Modern Homes

(*Continued from page 82*)

riage painting. Early in his life he became the protégé of Bishop Berkeley. He accompanied the Bishop, then Dean Berkeley, to Italy, where he studied the Italian masters, then came with him to Rhode Island, where he painted the portrait of the famous preacher and philosopher surrounded by his family. This portrait is now the property of Yale. When his patron returned to England, the artist went to Boston, where, until his death in 1751, he passed a busy career. His subjects in nearly all instances were the preachers and magistrates who were the real leaders and moulders of society in the early New England days. Nearly forty of his portraits survive—a priceless heritage because they preserve the physical appearance of the men who were responsible for nurturing the early New England character.

Many other painters were at work soon after Smibert began his career, but their portraits were exceedingly mediocre, being poor imitations of the art of such English painters as Kneller and Lely, because this was before English portraiture reached its flower in the times of Reynolds and his contemporaries.

The next man to do work worthy of preservation for artistic reasons was Jonathan Blackburn, who opened a studio in Boston in 1750 and who in the next fifteen years painted many scores of portraits of Colonists of note and wealthy traders and their families, about fifty of which now survive. Blackburn is reputed to have been the teacher of Copley. His work has much intrinsic merit. He was fond of soft gray tones, and the faces of his subjects were most faithfully, though stiffly, drawn, and his draperies were arranged in harmonious and decorative compositions.

John Singleton Copley

John Singleton Copley, who was born in Boston in 1737, was the greatest of the Colonial portraitists until the coming of Stuart. Of Yorkshire parentage, the father died about the time the son was born, and the widow opened a tobacco shop in Boston as a means of livelihood. When the lad was nine or ten years old she married Peter Pelham, painter and engraver, who has already been mentioned. Young Copley was taught drawing by his step-father and began his career as a portraitist when quite youthful. As early as 1755 he executed a miniature of Washington, who had come to Boston and who was then known as a great Indian fighter. At seventeen he was established as a portrait painter, and never thereafter lacked for commissions. In 1767, when thirty years old, he wrote: "I make as much money as if I were a Raphael or a Correggio, and three hundred guineas a year, my present income, is equal to nine hundred a year in London." Just before the Revolution he went to London, where he had considerable success. His most interesting period to Americans, however, is that comprehended by his work in Boston.

Copley's art was not lit by imagination, but it had great verity. His portraits are cold and clear, and, as we would have them, they adroitly reveal the character of his sitters. His painstaking methods are indicated by the fact that he sometimes took sixteen sittings of a day each to paint a head alone.

In contrast to the austerity of the New England portraitists was the suavity of some of the painters who worked in the South, where art and romance were more at home. There was John Woolaston, for instance, whose sitters comprised many of the aristocratic families of the South, and James Sharples, who, though English by birth, exhibited more of the qualities of the French in his painting.

Benjamin West and Others

After Copley, the list of early American painters whose work is worthy of survival grows rapidly larger. There is Benjamin West, who went to London, became the friend of Reynolds and succeeded him as president of the Royal Academy; Charles Willson Peale, Joseph Wright, Robert Edge Pine and Matthew Pratt. Then follows Gilbert Stuart, whose fame chiefly rests on his portrait of Washington, which became America's favorite presentment of the hero, but who was a painter of such excellence that his achievements were unrivalled in the United States for half a century. He has been termed the "American Reynolds," and, indeed, there are certain of his compositions that rank with the best of the great English School.

After Stuart in fame and talent comes John Trumbull, who was both portraitist and historical painter, Washington Allston, John Vanderlyn and the first American colorist and romanticist, Thomas Sully. The work of these men, though not wholly Colonial, belongs to the dawn of American art and so ranks, for decorative purposes, with that of the men who painted wholly before the Revolution.

And so, following the vogue of "Old Masters," which our collectors have been bringing from Europe at so tremendous a rate, Americans have at last found some "Old Masters" of their own, which they can be proud of and cherish and enjoy.

What to Know About Furniture

(*Continued from page 39*)

turally a better wood than mahogany.

Red gum, since lumbermen have learned to season it, is in itself an excellent wood, its misfortune being its versatility as an imitator. Red gum makes very convincing "mahogany," or an equally seemly "walnut," according to the way it is stained, and, in selected figure veneers, is the only cabinet wood that succeeds in imitating Circassian walnut. But in all this matter of imitation the fault lies not in the wood, but in its masquerade, for which the public at large is partly responsible. Many people would cheerfully buy a piece of birch furniture, tagged "mahogany" knowing that, for the price, it couldn't be mahogany, while they would absolutely refuse the same piece if it were labelled "birch, mahogany finish." There are instances in which manufacturers and dealers use the term "birch mahogany" and it is to be hoped that there will be a sensible reaction on this point upon which now, perhaps, there is more thoughtlessness and foolishness than dishonesty, and that people will have pride of ownership in birch and red gum furniture.

In the matter of grades, even the humblest cabinet wood should be selected for freedom from defects.

Imitation carving is found on a good deal of meritorious furniture. Like anything else, it may be well done or poorly done. Good design and careful application go far toward legitimatizing

(*Continued on page 86*)

An Auxiliary Heating System
For Early Spring and Fall
It Cuts Down Coal Costs

IT is used in connection with existing warm air, steam or hot water systems.

It takes their place for the fall and spring heating. It has proved so efficient that it is nothing unusual for an owner to tell us he "doesn't run his other more than two or three months." The Monroe Tubular Pipeless Heater does the heating the other months.

Does it at a decided saving in coal.

Does it more acceptably because of its flexibility and ease in handling.

Its installation is exceedingly simple.

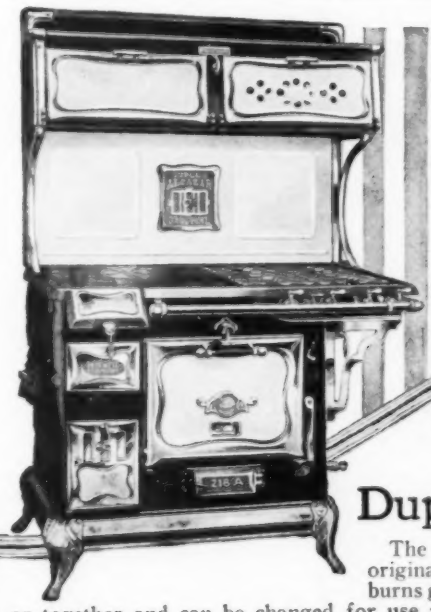
Its cost is surprisingly reasonable.

Send for further facts and booklet on Monroe Tubular Pipeless Heater.

KELSEY HEATING COMPANY

237 JAMES STREET, SYRACUSE, N. Y.

New York 103-K Park Ave. Boston 405-K P.O. Sq. Bldg.



Quicker, Better Cooking With the Duplex-Alcazar

The Duplex-Alcazar is the original two ranges in one. It burns gas and coal or wood singly or together and can be changed for use with either fuel instantly.

It makes your cooking quicker and more efficient because it gives perfect heat control. If you want an exceptionally hot oven, don't put on more coal, just turn on the gas and let it help.

This very feature spells fuel economy. It avoids waste and that's what runs up coal and gas bills. And with all its advantages the Duplex-Alcazar takes up no more kitchen space than one old-style stove.

By its use the kitchen is kept as comfortable as the rest of the house. In summer, to keep cool, cook with gas. In winter when you want warmth, use coal or wood. It makes a difference in health and temper too, to work in a Duplex-Alcazar kitchen.

Enough types and styles to fit every need. The pioneer of its kind and still holding the quality lead. See it at your dealers.

For sections where gas is not to be had, there is a Duplex-Alcazar now for OIL and COAL or WOOD. Write for our literature.

ALCAZAR RANGE & HEATER COMPANY

410 Cleveland Avenue Milwaukee, Wisconsin

THE DUPLEX ALCAZAR
TWO RANGES IN ONE

F. B. Strunz, Cincinnati. J. C. Burroughs, Architect

Homes Like These Have Banished Garbage Cans

This added refinement makes homes more artistic, promotes sanitation, saves kitchen steps. Kitchen and household waste—paper boxes, waste paper, faded flowers, garbage, etc.—is burned without the use of any fuel other than the combustible waste itself. Bottles and cans are dried, sterilized and dumped into the ash pit. The

KERNERATOR
Built-in-the-Chimney

is used in 85% of new apartment buildings and fine residences in cities where we are established. Built in the base of the chimney when the house is erected, all that shows on the living floors is the door of the kitchen hopper.

The Kernerator means little extra cost but much additional convenience. Installed under money-back guarantee.

Sanitary—Economical—Convenient—Odorless

Ask your architect or send postal for illustrated booklet.

THE KERNER INCINERATOR CO.,

104 Clinton St., Milwaukee, Wis.

What to Know About Furniture

(*Continued from page* 84)

composition ornament, and its use by the most reputable of medium grade and good furniture makers gives it general sanction. Emersonianally speaking, perhaps we should prefer no carving at all to imitation carving, but composition ornament is so well done that it may be safe to leave it to individual personal taste.

The same is true of lacquered and painted decorations. They should be well-done or not attempted, on a basis of strict, abstract esthetic ethics,—but all furniture is not made and bought on such a basis. If it were, a great many people would have to sit on boxes and sleep on straw ticks.

Poor finish manifests itself in uneven application, insufficient rubbing down, and in a tendency to fill up the finer angles of molding. As finishing is one of the more expensive operations of manufacture, poor finish is an obvious manufacturing economy. If you buy it, it is well to do so open-eyed.

Of course, poor construction is one of the greatest faults of cheap furniture, even if due allowance be made for the exigencies of cost-cutting.

Cheap furniture usually connotes drawers that stick and doors which are not hung or fitted properly.

In better furniture, and, of course, in the best, drawers are dovetailed at the back, which helps to prevent them from spreading, and slide on tracks, instead of bearing all their weight on their bottoms. In better grades of furniture, too, all the interior and unseen parts are likely to be oiled and varnished, partly that they may keep clean, and partly to render them impervious to changing weather conditions.

Because of the cellular absorption of moisture by wood, a physical and botanical fact, even the best made drawers may stick a little under pronounced climatic changes. For which reason, those who dwell near the sea do well to keep a little paraffin in the house—the simplest first aid to refractory drawers.

Poor hardware is an affliction—especially poor locks—but good hardware and good locks can seldom be figured in a piece of cheap furniture.

In the matter of design, most cheap furniture might almost as well be produced in good, unpretentious patterns, for it is as easy to make a graceful cutting as an ugly one. Be it said, however, that both historic period, accuracy, and modern adaptive ingenuity are yearly becoming more usual attributes of astonishingly inexpensive furniture.

The fourth item of the list, being made up for the most part of points the reverse of those in the third item, may not require such lengthy elucidation.

Inlay and Antique Finishes

Inlay and marqueteries were not mentioned at all in connection with cheap furniture. They cannot be cheaply imitated. Not only are rare woods required, but highly skilled cabinet-makers to execute the work. Lacquer is imitated, but real lacquer possesses so much greater depth and richness that the imitation is not deceptive. At most, imitation lacquer or poorly executed decorative work succeed only in approximating the decorative effect of the whole—they do not come dangerously near the real thing. In the matter of decoration (also listed item No. 10), it will be remembered that the Brothers Adam employed Angelica Kauffman, R. A., and Pergolesi to paint medallions, and the greatest painters of the Italian Renaissance lent their talents to the painting of panels for cassoni and cabinets.

Fine finishes are the result of much experience on the part of the manufacturer, of the employment of skilled labor, and the expenditure of much time in rubbing and setting. The question of finish again comes up under item No. 9, and might as well be settled here.

For many years mahogany furniture was popularly worked up with what the trade calls a "piano" finish, which showed the slightest scratch or dent, and was a task to keep clean. Today a "piano" finished piece is rare, almost the whole demand veering to the "antique" finish, a lustrous and very pleasing and serviceable surface brought up with oil and wax, little or no varnish being used and no shellac. A furniture finish should be as pleasing to the touch as well as the eye. The same treatment is equally popular on walnut and oak, a special device being that called "highlighting." In this treatment, the finisher rubs off portions of the basic stain, on moldings, corners and the highest projections of carving, thus simulating the "used" and "timed-with" appearance of the antique. For on the decorative point of view, the device is perfectly legitimate, for the same reason that one can only commend the present tendency artificially to soften sharp, machine-cut edges, corners and moldings. The intent is not to "fake" an antique, but to secure as much as possible of the decorative qualities of the antique.

Veneering Versus Solid

The sixth item alludes to veneering, a practice recognized as legitimate by the best cabinet-makers of the Georgian period, as well as those of the William and Mary and Queen Anne periods. Because it is often used in general parlance as synonymous with "sham," or "deceit," veneer has unjustly fallen under a cloud. Properly executed, veneering may be a fine job, and by the use of a non-warping care, may produce a piece of furniture which is thoroughly excellent.

Another popular misconception is the worship of the word "solid" in connection with cabinet woods. As a matter of physics, the "built-up" panel, with veneered surface, is a far better piece of work than a solid panel, which will inevitably shrink, swell and warp, even splitting, if not properly fastened. The early cabinet-makers would have used built-up panels, if they had the machinery necessary to cut thin layers of wood readily. A four-ply panel, for instance, is built up of four thin sheets of wood with the grain running in four different directions, and glued and pressed together. No amount of moisture can warp this kind of a panel.

The seventh item affords material for a book on cabinet-making, and cannot be greatly amplified here. The construction of drawers was touched upon under the third item. Blocking should be both glued and screwed. It is the preventative of opening joints, or the loosening of joints through hard usage of a piece of furniture. It is always well to notice how hardware is applied, especially locks, making sure that they are carefully and nicely mortised into the wood.

The eighth item affords considerable material for observation. Hardware cannot be too good for a fine piece of furniture. The best furniture hardware obtainable is not too good, and its fineness should be not only a technical matter, but a matter of historic accuracy.

The answer to the eleventh—the upholstered piece—is: "Very little, probably." In no other type of furniture have we so much need to turn for protection to the integrity of the maker's name. The most important parts of upholstered, or "overstuffed" pieces are hidden beneath the cover—the laying of the webbing, the tying of many layers, the anchoring of the springs, and so

(*Continued on page* 88)

What To Know About Furniture

(*Continued from page* 86)

forth. It is upon these things that the comfort as well as the wearing qualities of the piece depend. Yet very often one is apt to be thoughtlessly captivated by an attractive cover fabric, and forget the essential "insides," of the piece. "Inside information," or the implied guarantee of a well-known maker is a very necessary aspect of buying overstuffed furniture.

Bargains and Sales

A word, now, about "Bargains," leading the topics, in item No. 9.

There are perfectly legitimate "furniture" sales, offering real opportunities to the house furnisher. There are, of course, plenty of bogus "sales," in which the furniture, even purporting to be "sacrificed" at a 50% reduction, is still selling at 50% (or over) more than it is worth.

Furniture occupies considerable floor-space, and at certain seasons has to be cleared out. The same is true of manufacturers' samples, as it is equally true that there are a great many bogus "sample sales." If you can be sure that the furniture shown is actually made up of discarded manufacturers' samples or of discontinued patterns, you may be reasonably certain of getting good values at low cost.

The purchase of furniture demands no mysterious gift. From another angle, of course, there are all the questions involved in style and substyle, historic accuracy and the like, and the gift of good taste governs everything.

From our present angle, however, we need mostly to be increasingly observant of good furniture seen around us; we need to cultivate insistence on the points brought out in this article, to learn to be exacting without being captious, or requiring more than we are paying for.

Collecting the Outsides of a Book

(*Continued from page* 27)

more common—devised for the utilitarian purpose of protection. Of course manuscripts had been bound for at least a thousand years preceding the invention of printing, and from these the bindings of the printed book took hint. What beauty they possessed was that derived, for the main part, from the inherent taste of those of that day who were responsible for them. They were honestly contrived and free from the machine-madeness of the later era's book-casings. It remained for succeeding centuries to set about to make the book externally attractive and to the 19th Century and to our own to make it, through commercial purpose, when in the form of the modern book-casing, attract those who otherwise might leave it severely alone!

Much modern book-casing is atrocious. Some of it is excellent. There are few authors, I fancy, who would, if put to oath, profess approval of the covers their books have been given by their publishers. I do not see why an ugly good book should not be made a beautiful good book. I feel about books of this sort somewhat as Jean Grolier must, I think, have felt about the books that came his way and led him to send them to be bound in immortality.

Perhaps when I tell you this, you will wonder what sacrilege Poe's precious Tamerlane might meet with, were it to come my astonished way! But hold, dear reader; I would reverently leave it in all its early external plainness (I use the word plainness for generosity's sake!), although I would undoubtedly peep into my purse to see if it would not be possible for Master Maroc, the bookbinder, to devise me a proper finely made leather slip-case for it, suitably lined with silk of quality that no scratch should be added to the abuse of decades. Leather and silk should harmonize, and the case be suitably lettered, that my treasure might rest in a manner befitting its excessive rarity.

Just why, it may not be possible for me to make those who are not book-lovers understand, unless they can feel in common with me the thrill one experiences when, for instance, he beholds the single soldier who has survived out of the regiment that plunged into the fatal thick of battle against all odds. That soldier may have few other attributes to command attention. It is enough that he is a hero. And so I should feel about my Tamerlane—were another to appear, meteor-like in the

(*Continued on page* 90)

A binding of a Pliny, printed at Basle in 1545 *and showing an interesting interwoven decoration*

Embroidered binding of the Prayers of Queen Katherine Parr, in the handwriting of Princess Elisabeth. 1545

Collecting the Outsides of a Book

(*Continued from page* 88)

bibliophilic firmament to fall into my welcoming lap!

On the other hand, with editions of books that are friends, books for which I care for their own dear sakes, and do not, as might a professional charity visitor find most tractable when in their poor dress, with such editions I reserve the right, the pleasure and the privilege of clothing them in more fitting garb. And so you will find them, if the time ever comes that I can do any of the things I would like to do.

Is a Binding a Luxury?

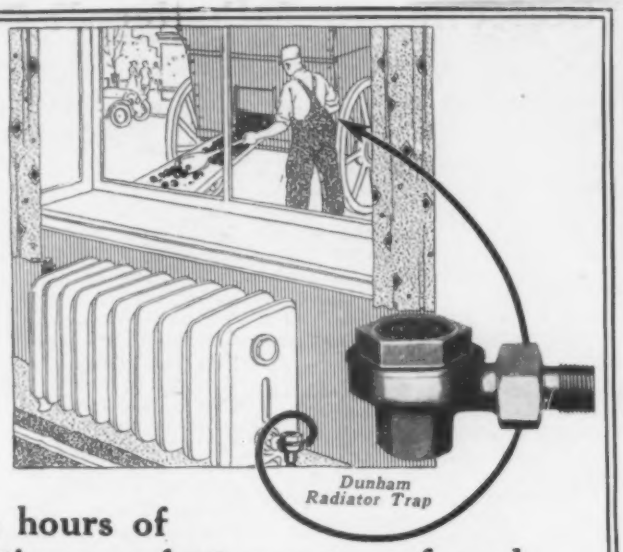
There is some solace in the thought that the binding of a book is not the excessive luxury many suppose it to be unless the book is bound with excessive luxuriousness. For my own part, I would find little if any joy in the over-elaboration that seems to indicate ornament travelling in one direction while the text is travelling in the other. Print and binding should go hand in hand, pleasant companions to the thought they help perpetuate, each in its way. Some books there are which invite simplicity of treatment on the part of the binder; others can make merry with the cover's contents, and still other bindings may be permitted to give hint of what is to be found within, as with a volume on the history of miniatures whose binding might chance to have an actual miniature inset on the front cover. Beyond that I would not go. I think the true book-lover knows where to draw the line. He will not, you may be sure, tempt some modern wit to imitate Robert Burns who wrote on the fly-leaf of an elaborately bound book the following shaft:

Two bindings from the library of Jean Grolier

"Through and through the inspired leaves,
Ye maggots, make your windings;

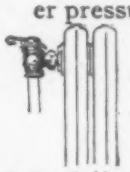
(*Continued on page* 92)

The marks of the book-binder's tools



More hours of heating comfort per ton of coal

THE usual cause of steam heating troubles is poor circulation of the steam. This trouble and others were solved sixteen years ago by the invention of the Dunham Radiator Trap. Since then low pressure steam heating has been revolutionized. The one-pipe system which used to be so common is being supplanted by the two-pipe system. In this modern system, the air and water which would otherwise clog up the rediators are automatically removed by the Dunham Radiator Trap and returned to the boiler room or cellar. The steam can then flow freely, at lower pressure, through the supply piping to the radiator.


Dunham Packless Radiator Valve

The DUNHAM HEATING SERVICE

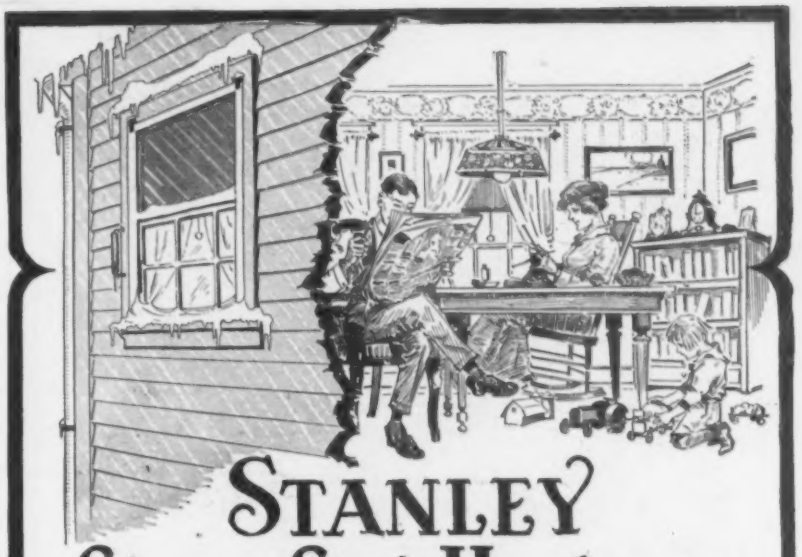
Another element of Dunham Heating Service is the attractive Radiator Valve; it has no packing to wear out; cannot leak; is conveniently placed at the top of the radiator; can be fully opened or closed in seven-eighths of a turn.

In close cooperation with your architect and heating contractor, Dunham Heating Service will plan and supervise the installation of a steam heating system that will give you all the heat you want *when* you want it. Quite unusual is that part of Dunham Heating Service which inspects the finished installation on request, to see that it continues to give full satisfaction.

Dunham Heating Service costs you nothing extra. Read all about it in the booklet, "The Story of Dunham Heating"—sent free on request.

C. A. DUNHAM CO., Fisher Building, CHICAGO

Factories: Marshalltown, Iowa, Toronto, Canada — Branches in 36 cities in United States and Canada



STANLEY Storm Sash Hardware

Storm Sashes help to keep out the cold and to reduce your coal bills. Equipped with Stanley Storm Sash Hangers and Fasteners your sashes close snugly, open easily and can be conveniently put up and taken down.

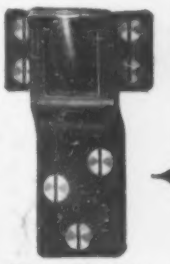
Stanley hangers are strong and easily applied. The angle on the hook and eye guides the eye up and over the hook. They can be hung quickly by anyone standing inside your house. And when summer comes full length screens may be fitted on the same hooks you use for the storm sashes.

Meet Mr. Stanley Worker in your hardware store. You will find him in the window or on the counter.

Stanley fasteners hold your sashes open firmly for cleaning and ventilating, locks them securely and are strong and easy to operate.

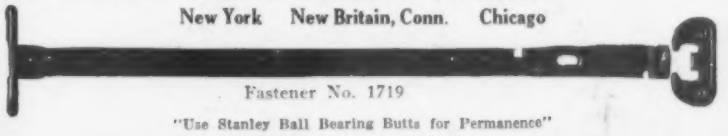
Ask your architect or contractor. Their experience proves the superior qualities of Stanley Storm Sash Hardware. Sold by the leading hardware stores everywhere.

Write for our booklet H-10. It tells you all about Stanley Storm Sash Hardware.


Hanger No. 1715

THE STANLEY WORKS

New York New Britain, Conn. Chicago


Fastener No. 1719

"Use Stanley Ball Bearing Butts for Permanence"

TOGAN BUNGALOWS

The Home you will like

¶ Designed by registered architects—can be erected in eight to ten days; 85% carpenter work done—even *painted* at the factory.

¶ Exclusive designs—studied plan arrangement—selected materials—careful workmanship; an all-year-round home—shipped to you *immediately*.

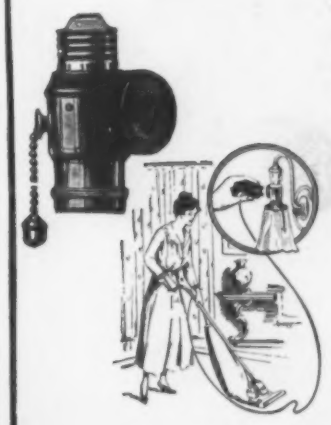
TOGAN READY MADE BUILDINGS

Send 15c in stamps for attractive Plan Book showing many designs

THE TOGAN-STILES CO.

Eastern Avenue, Grand Rapids, Mich.

Houses Bungalows — *Cottages Shore Houses* — *Garages Play Houses*



HUBBELL

No. 3190 Current Tap

ALLOWS use of lamp while operating electric Fan, Vacuum Cleaner or other appliance. Pull Chain affords independent control of the lamp. No wiring necessary. Screws into any socket and takes any standard Cap.

HARVEY HUBBELL, Inc.

BRIDGEPORT CONNECTICUT

Collecting the Outsides of a Book

(*Continued from page* 90)

But oh, respect his lordship's taste
And spare the golden bindings!"

De Witt Miller, genial book-lover of revered memory, had inscribed on his bookplate these lines: "Let me love the insides of books with Dr. Johnson and have respect unto their outsides with David Garrick." Charles Lamb wrote: "To be strong-bound and neat-backed is the desideratum of a volume. Magnificence comes after." Sometimes it comes as it came to the books whereof Eugene Field declared

"My good friend Cox, the sly old fox!
Has books beyond all number;
They quite abash the vulgar trash
Which my poor shelves encumber!
So clean and fair, so old and rare—
I wonder where he found 'em?
And, having got the precious lot,
How splendidly he's bound 'em!"

I think writers of books who find themselves in the company of collectors who care only for editions or bindings feel as did Pope, when, in his fourth of the *Moral Epistles* he wrote:

"In books, not authors, curious is my Lord;
To all their dated backs he turns you round;
These Aldus printed, those Du Sueil has bound."

I would take a book I loved, dear reader, and if it were precariously cased, or so displeasing to the eye as to be out of tune with the thought of the writer, I would give myself the treat of having it suitably bound by skilful, competent hand. I will grant you that a hundred years from now some Biblio would prefer to find it just as it had come to you in the first place from your bookseller, and with pages uncut. Well, I fear I take glory in making rarities for to-morrow's Biblios! And I am not insensible, either, to the keen competition when finely bound books come up at Sotheby's London, at Anderson's, at Libbie's or at the American Art Association sales in this country. I would make rarities either way for the delectation of the future!

Books and Their Binders

What rich pleasures await the book-lover who starts forth on the venture of having some of his best beloved books put in bindings worthy their adornment! Perhaps he will be led to turn to some such volume as Herbert P. Horne's "Book Binding," now inexpensively reprinted and within reach of everyone, to the interesting little The Printed Book with its chapter on Bookbinding and Bookbinders in the Cambridge Manuals series, a little handbook costing less than a dollar, and to other volumes of binding lore. These will give him the history of the craft. Therein he will learn how the art of gold tooling was brought to Venice from the East and how it led to the great distinction achieved by the binders of the late 15th and the early 16th Century, how Morocco leather was then introduced, how Jean Grolier, a Frenchman, and Tommaso Maioli, an Italian, became famous as patrons paramount of the Italian binders, each adopting a distinctive style, how Grolier's return to his native land in 1529 gave impetus to fine binding in France, how Italian binding deteriorated towards the end of the 16th Century, how Francis I, Catherine de Medici and a long line of royal personages following them encouraged the art, how Nicolas and Clovis Eve bound for Henry III, who died in 1589, and Padeloupe le jeune bound for Madame de Pompadour, how Thomas Berthelet, printer and stationer to Henry VIII, was the first English binder to employ gold tooling, how Queen Elizabeth had an especial liking for embroidered bindings, how James I preferred velvet ones, how Samuel Mearne, binder to Charles II, became the most celebrated English binder of his century and all the other fascinating "hows" of the subject.

How rich, too, is the work of the binders of the 19th and of this 20th Century—Zaehnsdorf, Riviere, Cobden-Sanderson, Prideaux, Cockerell and Bedford in England, Ruban, Meunier, Gruel, Michel, Cuzin, Canope, Lortic and Wiener in France and the master-binders of America, Blackwell, Cox, Stikeman, Mathews, to name but a few of the names of those famous for this craft in Europe and America—would that one might have a book from the hand of each! What a pleasure it would be if we, too, now and then, might echo the words of good old Samuel Pepys, written August 28, 1666,—"Comes the bookbinder to gild the backs of my books."

Plants Useful for Attracting Fruit-Eating Birds

A LARGE variety of shrubs and trees are cultivated for ornament in the United States, but in most cases it is evident that they have been planted with no thought for the needs of birds. Our native shrubs should be utilized as far as possible, especially as many of them are not exceeded in beauty or interest by foreign plants. Furthermore, as a rule they are more attractive to birds than exotics. It should be borne in mind also that smoothly trimmed hedges and the stiff trees of a formal garden are not nearly so attractive to birds as untrained bushes and tangled thickets. Shrubs of sterile varieties or those closely pruned after blooming are not sought by birds, while those allowed to ripen fruit are often crowded with feathered visitors. Moreover, plants clustered with fruit of varying color are more beautiful and interesting than those which exhaust their energy in one burst of bloom and are of monotonous appearance thereafter.

The best shrubs and trees for attracting birds are those most resorted to for food, and the extensive records of bird food in the Biological Survey make their selection an easy task. The berries of elders (*Sambucus*) are eaten by the largest number of species of birds, namely, 67. Raspberries and blackberries (*Rubus*) are known to be eaten by 60 species, mulberries (*Morus*) by 48, dogwood fruits (*Cornus*) by 47, those of the nonpoisonous sumacs (*Rhus*) by 44, the various wild cherries (*Prunus*) by 39, and blueberries (*Vaccinium*) by 37. This completes the list of fruits known to be chosen by more than 30 species of birds. Following these in order are wild grapes (*Vitis*), eaten by 29 species; pokeberries (*Phytolacca*), by 26; Virginia creeper berries (*Psedera*), bayberries (*Myrica*), and juniper berries (*Juniperus*), by 25 species each; service or June berries (*Amelanchier*), by 20; Hollyberries (*Ilex*) by 19; strawberries

(*Continued on page* 94)

Put your own key in your own front door

Harmony in Hardware

Now that you have wisely planned to build, choose your locks and hardware with the same good judgment. You want the highest degree of security, of course. You get this, combined with attractiveness in full harmony with the architecture, when you choose Sargent Locks and Hardware.

To start right, send at once for the Sargent Book of Designs. It illustrates many designs—all true to the Sargent standards of attractiveness and solid, substantial worth. Then consult your architect.

SARGENT & CO., Hardware Mfrs.
31 Water Street, New Haven, Conn.

For Extra Security

If you rent a home or apartment or own a store, reinforce that doubtful lock by a Sargent Cylinder Day and Night Latch. It costs but little—may save much. Various styles and finishes; three keys to each latch.

SARGENT
LOCKS AND HARDWARE

—and your house will step forth

Instead of one of many, your home will be the bright, cheery spot around which other homes seem to be clustered in admiration.

This is what Bay State Coating will do for your house. And the transformation is lasting. "Bay State" is a waterproofing and once on walls of concrete, brick or stucco, it stays.

Don't let the exterior of your home go unprotected. A Coating of "Bay State" will virtually bring it in out of the rain. And while it protects it beautifies permanently.

Every bead and bevel will reach its full artistic value as your house steps forth in pure white or one of many delightful tints, which ever is your preference.

Our Book No. 2 shows you many houses which have stepped forth. A sample will show you the means to the end.

Bay State Cement Crack Filler is tonic for walls that crack. It is easily applied and not detectable.

WADSWORTH, HOWLAND & CO., Inc.
Paint and Varnish Makers

New York Office Architects' Bldg. — **Boston, Mass.** — **Philadelphia Office** Weightman Bldg.

BAY STATE
Brick and Cement Coating

It Is Getting Late, Are Your Greenhouses Ready?

From the smallest unit for the back yard, to the largest plant of the commercial grower, shipped complete in every detail, with instructions so plain any carpenter can erect the house, and at a cost lower than you thought.

CALLAHAN
Cut-to-Fit Sectional GREENHOUSES

The Cut-to-Fit Greenhouse for the professional, with its practical, up-to-date construction, made of the best Red Gulf Cypress and capable of expansion to any size—at real economy figures.

For the home owner, who wants flowers and vegetables the year around, the CALLAHAN SECTIONAL Greenhouse offers the advantages of simplicity of construction, beauty of design, ease of erection—in short a real investment.

Callahan Duo-Glazed Sash for your hotbeds. The Sash that means added safety for your plants. Tell us your wants. We supply everything needed for forced cultivation.

CALLAHAN DUO-GLAZED SASH CO.
1425 Fourth St. Dayton, Ohio

Roof stained with Cabot's Creosote Stain. Walls finished with Old Virginia White. Bebb & Gould, Architects, Seattle

Cabot's
Creosote Stains
Preserve and Beautify
Shingles, Siding, Clapboards, and other Outside Woodwork

They can be applied twice as fast, halving the labor cost. They are made of Creosote, "the best wood preservative known." The coloring effects are transparent and bring out the grain of the wood in deep, velvety tones that harmonize perfectly with nature—there is no shiny, painty effect. They wear as long as the best paint, and "grow old gracefully" because they sink into the wood and therefore cannot crack or peel like an old paint coating.

50% CHEAPER THAN PAINT

You can get Cabot's Stains all over the country. Send for stained wood samples and name of nearest agent.

SAMUEL CABOT, Inc., Manfg. Chemists — 24 W. Kinzie St., Chicago — 11 Oliver St., Boston, Mass. — 525 Market St., San Francisco

Plants Useful for Attracting Fruit-Eating Birds

(*Continued from page 92*)

(*Fragaria*) and fruits of viburnums, by 16 each; hackberries (*Celtis*) and huckleberries (*Gaylussacia*), by 15 each; haws (*Crataegus*), by 12; spicebush berries (*Benzoin*) and rose hips (*Rosa*) by 11 each; and the fruits of sarsaparilla (*Aralia*), sour gum (*Nyssa*), gooseberries and currants (*Ribes*), and snowberry (*Symphoricarpos*), each eaten by 10 species of birds.

In addition to the plants recommended on the basis of proved preference by birds, as indicated by stomach examination, there are several other genera known to furnish much bird food, or which are important in certain regions where none of the plants just mentioned are abundant. Separation of this list from the above by no means indicates inferiority for the purpose of attracting birds, but is done only to emphasize the different criteria for selecting them. These plants are: Manzanita (*Arctostaphylos*); barberry (*Berberis*); buffalo berry (*Shepherdia*); silverberry (*Elæagnus*); buckthorn (*Rhamnus*); mountain ash (*Pyrus*); china berry (*Melia*); the California Christmas berry (*Heteromeles arbutifolia*); the pepper tree (*Schinus molle*), the fruit of which is a splendid bird food in southern California; magnolia, the pulp-coated seeds of which furnish one of the most nutritious and eagerly sought foods of birds wintering in the Southeastern States; and nockaway (*Ehretia*), lote bush (*Zizyphus*), and bluewood (*Condalia*), three favorite genera of the Southwest, where most of the plants previously mentioned are wanting.

Winter Food Supply

Species of the genera listed can be selected that furnish adequate bird shelter and also a continuous supply of fruit throughout the year in any part of the United States where cultivation of trees and shrubs is practicable. It is most important to have a sure supply of bird food for late winter and early spring. The quantity of natural food is then smallest, and frequently the few remaining sources are rendered inaccessible by snow and sleet. It is advisable, therefore, for bird lovers to make liberal use of plants which retain their fruit through the winter. They will be well repaid, for a dependable food supply is never a more potent bait than at this bleak season. Among the plants much patronized by birds, those which hold their fruit longest are juniper, bayberry, hackberry, barberry, magnolia, mountain ash, rose, Christmas berry, china berry, pepper tree, sumac, holly (*Ilex opaca*), black alder (*Ilex verticillata*), certain wild grapes (notably the frost grape, *Vitis cordifolia*), manzanita, snowberry, and some evergreen species in other genera, such as the evergreen blueberry (*Vaccinium ovatum*) of the Pacific coast region, farkleberry (*Vaccinium arboreum*), and evergreen cherry (*Prunus caroliniana*) of the Southeastern States. In some localities the Virginia creeper holds its fruit, in others dropping it readily.

The plants with persistent fruit bridge the gap between the overwhelming abundance of autumn and the scarcity of early spring. Before the last of the wintered-over fruit disappears, a few plants have blossomed and begin to mature the first fruits of another season. Among the earliest of all and greatly relished by birds, are mulberries. They ripen in April—even in late March in southern localities—and in May and June farther north. Redberried elder and service berries are but little later; often the latter are not left on the trees by the hungry birds long enough to ripen. Wild strawberries, raspberries, and dewberries are early and may be used to protect cultivated species. Certain kinds of cherries, as the European bird cherry (*Prunus padus*) and the mahaleb or stock cherry (*Prunus mahaleb*), ripen their fruit at about the same time as domestic cherries and will serve to divert the attention of birds. From the time summer is well started there is a constant abundance of wild fruits. Blueberries, huckleberries, certain dogwoods, viburnums, and grapes are among the first to ripen and fall, while sarsaparilla, elder, gooseberries, currants, spicebush, and sassafras are somewhat more persistent. Other dogwoods, silverberry, sour gum, and black cherry hold their fruit a little later, and pokeberry, hawthorn, buffalo berry, some wild grapes, and viburnums retain their fruit well into the winter.

Evidently there need be no season without its fruit if judicious selection of shrubs and trees is made by those desiring to attract birds. Thus a thicket of raspberry or dewberry, elder, and dogwood, grouped about some taller sumac, Juneberry, and juniper, would supply fruit throughout the year. Moreover, in almost any part of the United States, this combination can be made by the use of native species alone.

Besides native shrubs and trees, a number of cultivated species have proved so attractive to birds that they are as important as any of the indigenous fruits. An excellent example is the pepper tree (*Schinus molle*), which flourishes in southern California, and which will probably thrive in many other parts of the Lower Sonoran faunal area. Others suited to the same climate are the china berry (*Melia azedarach*), the Russian mulberry (*Morus alba tatarica*), and the Russian oleaster (*Elæagnus angustifolia*). The china berry is just as successful in the eastern part of this zone, namely, in the Austroriparian faunal area; it retains its fruit through the winter and is eagerly sought by robins, cedar birds, and catbirds. The Russian oleaster and another species (*Elæagnus umbellata*) also do well here and furnish an abundance of fruit relished by birds. *Elæagnus angustifolia* and *Melia* are hardy at Washington, D. C., also, which is in the Upper Austral zone. The fire thorn (*Cotoneaster pyracantha*), a beautiful shrub with scarlet berries much liked by birds, will grow almost anywhere in the eastern United States, and the Parkman apple (*Pyrus halliana*), one of the handsomest flowering apples, is quite hardy, and is a valuable bird food, with fruit persistent in winter. But foremost in attractiveness to birds among cultivated fruit-bearing plants are mulberries. These will grow almost anywhere in the United States, and their combined early ripening and long fruiting season make them especially valuable. Varieties of mulberries suited to the various faunal areas will be treated at greater length in the section devoted to plants useful for protecting cultivated crops.

Food Plants for Sparrows

A hundred species of sparrows inhabit the United States, and in the number of individuals they outrank any other family. Many of them are characteristic winter birds, and as they are great destroyers of weed seeds and are sprightly and cheery withal, it pays to take considerable trouble to attract them.

As just remarked, they love weed seeds and do great good by destroying them; but as it is not desirable to cultivate weeds, the next best thing is to plant harmless species of their favorite genera. Fortunately many common or-

(*Continued on page 96*)

Have You Ever Thought of Building?

There are a million people homeless, this very minute. In Armenia? Oh no. In America. People with money to rent houses, if the houses were there to be rented. But the real estate man smiles pityingly when they ask for his list.

Are you one of them—these transient home-makers who think in terms of somebody else's house—when you can get it?

And yet—there's plenty of land, and brick and stone, and timber, and all the other constituents of a real home—not a ready-to-wear house with the fulness in the wrong place, made to fit Mrs. Anybody's rearranged furniture. Why don't you go adventuring with

The House Planning Number

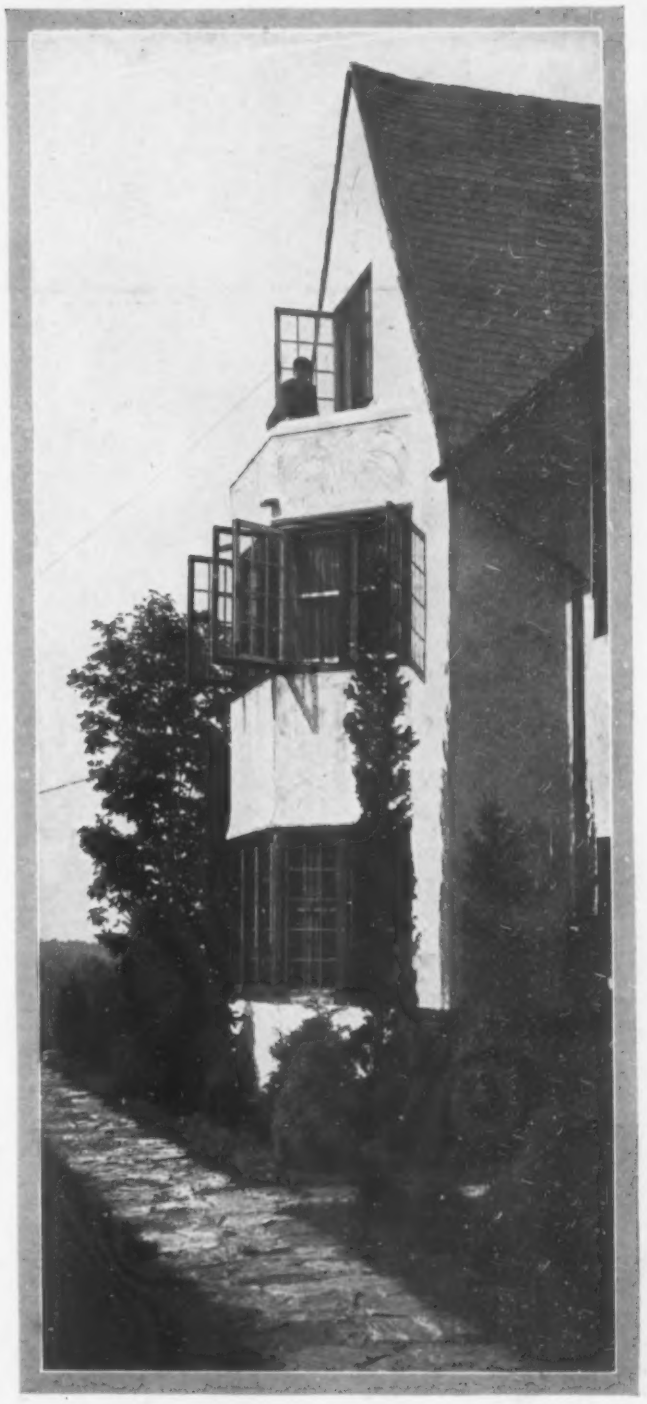
November

HOUSE & GARDEN

It shows interesting sidelights on this question of the hour—an English house—an Italian house—a South American home, patio and all—an article on Georgian and colonial architecture—a chat on windows.

Wouldn't you like to know how to make the kitchen sanitary? How to instal the latest electrical equipment? Couldn't you be beguiled by Venetian blinds, or the decoration of the bachelor's room? Don't you think there's something fascinating about French wall furniture—old Jersey glass—Japanese flower and bird pictures?

House & Garden has thought all these into photographs and text for you. Some of the things are priced. More of them could be bought for you by the Shopping Service if you wanted them. And as to building, the Information Service knows all the architects in the country by their achievements and their telephone numbers. . . . Doesn't the House Planning Number sound as if you wanted it?



It isn't money that makes the house beautiful—it's knowing how. Read November House & Garden and you'll see why on every page.

If you're going to build, rebuild, or only dream about building, be sure to reserve a copy of this House Planning Number at your usual newsstand. When? Why — Now!

35 Cents a Copy *$3.00 a year*

Plants Useful for Attracting Fruit-Eating Birds

(*Continued from page* 94)

namental garden plants which are entirely dependent on cultivation fulfill all requirements and produce in abundance seeds which are highly relished by sparrows. To these may be added a few native species which are not bad weeds, and the various millets, which are excelled by no other plants in attractiveness to seed-eating birds. The following are recommended for sparrows and other birds liking small seeds:

Love-lies-bleeding (*Amaranthus candatus*), princes feather (both *Amaranthus hypochondriacus* and *Polygonum orientale*), yellow chamomile (*Anthemis tinctoria*), chamomile (*Anthemis nobilis*), *Calandrinia umbellata,* bachelors button (*Centaurea cyanus*), African millet (*Eleusine coracana*), California poppy (*Eschscholtzia californica*), tarweed (*Madia elegans*), miners lettuce (*Montia perfoliata*), millet (*Panicum miliaceum*), Japan barnyard millet (*Panicum crus-galli* var.), German millet or Hungarian grass (*Setaria italica*), and sunflower. Several of the species of sunflower will serve, the common sunflower (*Helianthus annuus*) being one of the best, having named varieties especially prized for the abundance and large size of the seed. No seeds are more relished by graminivorous birds than the millets; in fact, they are so much preferred that they have been used with good effect for drawing the attention of birds from more valuable grain crops.

Food Plants for Upland Game Birds

The distinction between the dietaries of the so-called frugivorous and graminivorous birds is not so marked as would be inferred from a strict interpretation of these terms. Particularly in the case of the grouse and quail does a limited characterization of the food habits fail to express the truth. Consequently in recommending plants attractive to these birds many must be mentioned that are included in the lists for fruit-eating birds. Grouse are fond of both buds and leaves; hence some plants which have neither nutritious fruit nor seeds are for them important food plants.

While the establishment of preserves for land game birds is yet a new movement in this country, it is certain to become of great importance. Hence it is desirable to disseminate information as to the food and covert plants that are favored by the grouse and quail. Bobwhites frequently use covers of rose, alder, and blackberry bushes, and thickly set barberry, bayberry, and dense banks of honeysuckle are suitable. These plants also furnish food for the birds, but they should be supplemented by others more exclusively adapted for this purpose. Sumac, Japanese clover, buckwheat, sorghum, millet, vetches, cowpeas, and any plants of the pea family producing small seeds are valuable, and should be sown in large quantities. The seeds of milk pea (*Galactia*), partridge pea (*Chamæchrista*), hog peanut (*Falcata*), wild bean (*Strophostyles*), and smartweeds (*Polygonum*) are important natural foods of the eastern quail, but should be encouraged only where they cannot become weed pests. The western quail are fond of the seeds of sumac, bur clover, alfilaria, lupines, napa thistle, and turkey mullein plants; but where these plants are liable to become nuisances the food plants recommended for the eastern quail will serve.

Coverts for grouse, as the sharptail, should abound in such plants as rose, sumach, blueberry, bearberry, buffalo berry, dwarf birch, and alder. The ruffed grouse thrives among scrub oak, bayberry, rose, sumac, dwarf birch, alder, poplar, willow, and such fruit-bearing plants as partridge berry, hawthorn, viburnum, wild grapes, mountain ash, blueberry, blackberry, and cranberry. Cover of this nature is suited to the heath hen also, and to the imported pheasants and the Hungarian partridge, but in all cases it is well to supplement the food supply furnished by these shrubs and trees by planting small grains and legumes as recommended for quail.

Plants Useful for Protecting Cultivated Fruit

The practice of planting wild or inferior fruits for the purpose of tolling birds away from valuable cultivated varieties is very old, but it has never been tried as widely and systematically as seems desirable. the chief essential to the success of this plan is that the decoy trees shall be early bearing species, for almost all of the damage to fruit by birds is inflicted on the earliest varieties, evidently because of the scarcity of early wild fruit. Probably cherries, raspberries, and strawberries suffer more in the aggregate than all of the later fruits. Fortunately we have a fruit which fills this need, one which ripens with the earliest cherries and is a favorite with all frugivorous birds, namely, the mulberry, both native and cultivated.

Three varieties of the native mulberry (*Morus rubra*), namely, the Hicks, Stubbs, and Townsend, are especially successful in the Southern States, though the Hicks is known to thrive in the Carolinian faunal areas and Stubbs in the Alleghenian. The Townsend is a comparatively new variety and its hardiness is unknown, but it ripens fruit remarkably early and should be given a thorough trial. According to Prof. L. H. Bailey, the New American (often sold under the name Downing) is the best mulberry known for the Northern States. The Russian mulberry is the hardiest variety and is a favorite in the plains region and other places where great extremes of temperature prevail. It succeeds in as diverse climates as those of North Dakota and New Mexico. The New American, Russian, and Black Persian mulberries are known to do well in California, and the indications are that the latter is suited to conditions in the Lower Sonoran faunal area. When planting mulberries for the purpose of protecting cultivated fruits, the earliest fruiting varieties obtainable should be used.

Among fruits suitable for the same purpose, but not now known to be as valuable as mulberries, are the mahaleb or stock cherry (*Prunus mahaleb*) and the European bird cherry (*Prunus padus*). Among native fruits the only ones that can be recommended at present are the service berry or Juneberry (*Amelanchier*), redberried elder (*Sambucus pubens*), and wild strawberries and raspberries. Patches of the earliest varieties of these small berries are very attractive to birds.

Injury to later fruits, except in localities where there are no wild fruits, is more difficult to prevent, as in such cases it probably arises from preference by the birds for a particular cultivated fruit. Thus grapes suffer seriously in some places. The always reliable mulberries are useful even at this season, as some varieties continue in bearing from two to six months. Elderberries are probably the most valuable native fruit for attracting birds in the summer and fall, particularly in the West, where they have a long fruiting season. In the North and East no summer fruits are more attractive to birds than the black cherry (*Prunus serotina*) and choke cherry (*Prunus virginiana*).

(*Continued on page* 102)

Last Chance to get VOGUE at $5

Beginning with the September 1st issue, Vogue's yearly subscription price has been raised from $5 a year to $6.

For a limited time only, however, you may have a year of Vogue—24 issues—at the old $5 price.

This offer is good only until October 1st. If you wish to take advantage of it, you must have your order in the mail by the evening of that day. If you wait until later, you cannot subscribe at the $5 rate, but you must pay $6.

© Vogue

For evening wear, Vogue suggests a gay little pannier frock in nile green changeable satin with pink embroidered roses on the skirt, a belt of silver ribbon and a ruffle of yellow lace around the waist, and a corsage of hand-made flowers.

$5 Invested in Vogue

A tiny fraction of your loss on one ill-chosen gown

Will Save You $500

You think nothing of spending $5 on stockings, or a bit of neckwear. Yet for that same $5 you may have what is infinitely more valuable to your appearance—the fashion guidance of Vogue for an entire year.

The gown you buy and never wear is the really expensive gown. Gloves, boots, hats, that miss being exactly what you want are the ones that cost more than you can afford.

Even at the $6 price, Vogue will continue to be the least costly per copy of all the American magazines appealing to people of taste. Vogue is published twice a month, giving you 24 issues a year instead of 12.

Thus you spend $5 a year for twelve issues of Country Life; $4 for twelve issues of Harper's, Century, the Atlantic; but you spend at the rate of only $3 for every 12 issues of Vogue—$2.50 if you mail the coupon now.

CONSIDER, then, that for $5—surely a tiny fraction of your loss on a single ill-chosen hat or gown—you may have at hand, for an entire year (24 issues), Vogue's fashion information, Vogue's acknowledged taste—all the judgment, experience, and skill of a highly paid staff of experts in everything connected with dress, entertaining, interior decoration, and the social and intellectual life of a cultivated woman.

Orders must be in by October 1. **Save $1 by mailing this coupon now**

Special Offer—Don't Send Money Now!

If you mail the coupon at once, we will enter your subscription for 24 issues (one year) of Vogue, beginning with the New York Fashions Number, ready now, at the $5 rate.

This offer will be held open only for a limited time; then the subscription price will go to $6.

Sign, tear off and mail the coupon

VOGUE, 19 W. 44th Street, New York City

Send me 24 numbers (one year) of Vogue, beginning with the New York Fashions Number, dated October 1, at your special $5 rate. I will remit $5 on receipt of your bill. (Canadian $6.25.)

Name .....
(Please write name very plainly)

Street .....

City .....

State .....

H. & G. 10-19

The Postal Zone Law makes necessary an additional postage charge of 50c a year, west of the Mississippi.

Roll-top bureau or secretaire with marqueterie and ormolu mounts. Louis XVI

French Tables and Seating Furniture

(*Continued from page* 31)

suitable styles of dining rooms.

Table Types

The tables of the 17th Century may be divided into six principal types:

(1) There were oblong or nearly square tables with four straight quadrangular tapered legs set at the corners and connected by stretchers either of the saltire type or arranged in various other possible ways.

(2) Tables with four straight legs and straight stretchers.

(3) A third family with four straight legs and no stretchers.

(4) Console tables of sundry patterns.

(5) Writing tables of divers allied types.

(6) A general classification of small tables or *guéridons*.

(1) The tables of the first type appeared in considerable numbers about the beginning of the 17th Century and continued in vogue till after 1650. The straight saltire or X stretchers were often shaped at the edges and the type was closely allied to the sort of table that became common in England during the reign of William and Mary. A variation to this type, but similar in methods of structure, had scroll legs instead of straight, and the legs were canted so as to throw the scroll projections diagonally outward.

(2) The tables with four straight legs and straight stretchers were generally oblong in shape and had either four stretchers connecting the legs in succession, or else three stretchers. Two of these were short and connected the pairs of end legs, and the third long, connecting the two short stretchers. Both legs and stretchers in this type were generally either spiral-turned or spool-turned. Both fashions of turning were of Portugese inspiration. The analogies to this type were plentiful in England at the end of the century and a very simple rendering of the same pattern was not uncommon in the American Colonies.

(3) The third family having four legs set at the corners and no stretchers, might have either straight quadrangular tapered legs or canted cabriole legs. In both cases a shaped apron form of framing was generally made the vehicle of considerable ornamentation. These forms developed towards the middle of the century.

Consoles

(4) Console tables, which became highly popular in the second quarter of the century and continued thereafter in great favor, displayed legs and underframing of much variety and were made both with and without stretchers.

(*Continued on page* 100)

An Empire dressing stand of mahogany with gilt brass mounts. Courtesy of the Rosenbach Galleries

Seven Good Reasons for FALL PLANTING

are discussed in our Booklet, and the copious rains of the past three months have strengthened these reasons for the soil is now in prime condition.

Many plants must necessarily be set in the Spring and other heavy demands on labor greatly crowd the work of the short spring season, while two full months, October and November, give ample time for the planting of such trees and shrubs as are better planted in Autumn, viz.:

Elms, Lindens, Maples, Dogwoods, Lilacs, Syringas, Spireas, Forsythias, Fruit Trees, etc., etc.

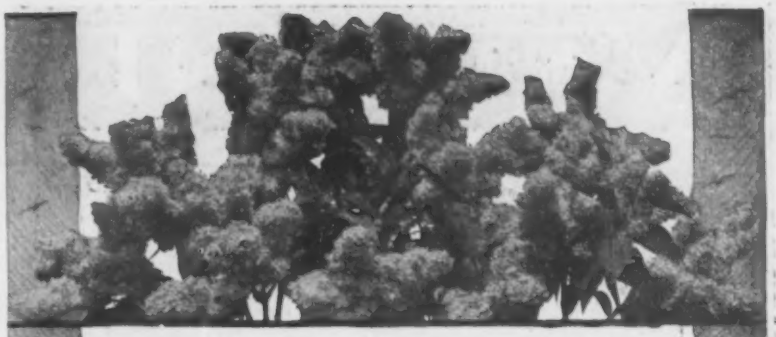
Large Sizes for Immediate Effect

are offered in addition to ordinary sizes. Place your order for everything you need, and you can safely trust to our expert advice as to the best time for planting.

Our Lists are ready. Send for your copy.

"Prices as Low as Consistent with Highest Quality"

Rosedale Nurseries, Box H, Tarrytown, N. Y.



Farr's Superb Lilacs
For Fall Planting

Lilac-time is spring-time at its best, and one can scarcely conceive of a garden without the plants "loved by Washington and set by him in the garden at Mt. Vernon." For more than a century the Lilacs planted on Bussey Hill (at the Arnold Arboretum) have bloomed every year, filling the air with fragrance, and proving their worth as permanent features of the gardens.

Among the beautiful Lilacs growing at Wyomissing Nurseries are **Ellen Willmott**, snowy white, with a truss nearly a foot long; **Leon Gambette**, a giant-flowering variety, with blooms almost as large as tuberoses; **Belle de Nancy**, soft lilac-pink. These are only a few of the Lilacs I grow at Wyomissing; there are varieties early and varieties late, new colors and glorified forms, with individual flowers and trusses more than doubled in size. All my Lilacs are grown on **their own roots**, the only safe way to produce good plants.

Farr's Hardy Plant Specialties

(Sixth edition, 1918) describes all of these new Lilacs, and other gems for fall planting, including Deutzias, Philadelphus, Evergreens, Rock-plants, Japanese and German Irises, and over 500 varieties of Peonies. If you do not have a copy of this sixth edition send for it today.

BERTRAND H. FARR, Wyomissing Nurseries Co.
106 Garfield Avenue, Wyomissing, Penna.

Country Homes

The dignified estate, the delightful place near town, the cozy bungalow, all are advertised in the Real Estate Mart of House & Garden.

Now Is the Time to Buy

More real estate bargains are being offered now than ever before. We are in constant touch with brokers who specialize in selected localities throughout the country. They can find you what you want if it is obtainable.

Call upon us if we can serve you—there is no charge—the service is for the benefit of our readers.

Manager Real Estate Mart

House & Garden

Improved Filbert (Hazel) Nut Trees

For Fall Planting

Photo Actual Size

Europe until now has alone enjoyed a great nut delicacy—large, tasty Filberts. The American wild Filbert has lacked size, taste and food value.

Seven years ago, however, we imported plants that bore abundantly, as far North as Riga, Russia, and obtained a European nut expert to begin experiments here. Success has crowned his efforts. We now offer you

Hardy Well Developed Trees

Famous nut experts C. A. Reed, of the U. S. Dept. of Agriculture, and Dr. R. T. Morris have pronounced our plants wonderful. On the shore of Lake Ontario, with temperatures of 10 to 15 degrees below zero, they thrive and bear abundantly.

Beauty and Profit

Bushes make a very ornamental shrub with deep green leathery foliage in summer and loaded with husks of delicious nuts, which ripen in September here. Plants bear second or third year after planting, and when 10 years old stand 5 to 7 feet high, and should yield 20 to 25 pounds of nuts each.

All plants offered grown on their own roots, are 2 to 4 feet high, and will thrive in any moderately rich, well drained soil with very little cultivation. Can be planted just as successfully in the fall as spring. Be the first to grow large Filberts—the European kind—on your grounds for real pleasure or in orchard for good profit. Satisfaction comes either way.

Send for catalog with full details.

L. W. HALL COMPANY, Inc., Est. 1879
586 Cutler Bldg. Rochester, N. Y.

Complete stock of Fruit and Ornamental Trees, shrubs, vines, berry plants, etc.

Lacquer and mahogany cabinet on stand, with gilt brass mounts. Directoire style merging into Empire

French Tables and Seating Furniture

(*Continued from page* 98)

The legs might be straight, quadrangular and tapered, cabriole, or scrolled. When there were stretchers, they were generally either recessed and shaped, or else arranged in saltire fashion, and they might be either rising or straight. These console tables, often of considerable length, were intended to stand against the wall. They were oblong in shape, bore more or less ornamentation on the framing and frequently had marble tops. In not a few instances they served as sideboards.

(5) Writing tables, which became increasingly numerous from the middle of the century onward, were oblong in shape, usually had drawers in the framing and might have straight, cabriole, or scroll legs. The most fully developed form of writing table—a form belonging to the Louis XIV era—had "knee-hole" space in the middle to accommodate the sitter, or the sitters at either side, and several tiers of drawers at each end. Beneath the drawers were legs, four at each end, set in the manner shown in the illustration. For a library writing table this design, which can be varied in size, has never been improved upon.

(6) The small tables or stands, which increased in number and diversity of uses towards the end of the century, in general design followed the types already noted.

Seating Furniture

Seating furniture of the 16th Century consisted of nine principal types:

(1) Bancs.
(2) Chayéres.
(3) Wainscot or panelled-back.
(4) Cacqueteuse seats.
(5) Upholstered high-backed.
(6) X seats.
(7) Escabeaux.
(8) Banquettes.
(9) Stools.

(1) The banc or high-backed bench with arms was a survival from medieval times. The space between seat and floor was closed, paneled and carved; the back was paneled and carved; and the seat was ordinarily hinged to lift up so that the space beneath could be used as a chest. It corresponded with the Italian cassa banca and was the 16th Century substitute for a sofa.

(2) The chayére was a high-backed, paneled and carved seigneurial seat, and was virtually the same thing as the banc except that it was intended for one sitter whereas the banc would accommodate three or four.

(3) The wainscot or paneled-back chair was substantially identical with the wainscot chair of England. Even the motifs of carved decoration were virtually the same. This type occurred both with and without arms. The space beneath the seat was sometimes filled in with paneling and used as a small chest.

(4) The cacqueteuse seat was a high-backed armchair whose peculiarities will best be understood from the illustration.

(5) The armchairs with high, upholstered backs and upholstered seats closely resembled the Italian armchairs of the same period. The legs were straight and joined by stretchers, the seats were rectangular and covered with velvet or some similar rich material, the arms were straight, and the backposts were surmounted by carved finials rising several inches above the rectangular padded back.

(6) X seats corresponded to the Italian so-called "Savonarola" chairs and ordinarily had a back, although in some cases the back was wanting.

(7) Under the heading of escabeaux are included the upholstered armless chairs, either with straight turned legs, backposts and spindles, or with paneled and moderately carved backs.

(8) Banquettes were long backless benches or forms with turned or carved legs and stretchers.

(9) The ninth classification of seating furniture comprehends a great variety of stools which, however, closely corresponded with the chief types of contemporary chairs.

Seating furniture of the 17th Century showed a marked development in comfort and elegance of design, while two of the earlier forms—bancs and cacqueteuse chairs—became practically obsolete.

17th Century Type

(1) One characteristic type of armchair, especially associated with the era of Louis XIII, had a high rectangular upholstered back, upholstered seat, straight scroll-curved arms, scroll-curved legs back and front, and scrolled recessed stretcher.

(2) A second characteristic upholstered type had an arched or shaped back, showing Portuguese influence, and cabriole or straight legs with stretchers.

(3) A third common type had a high rectangular upholstered back, upholstered seat, straight upholstered arms, quadrangular straight legs and saltire stretchers.

(4) Less ponderous was a Louis XIV upholstered type with high rectangular back, straight scroll-curved arms, canted cabriole legs with hinds' feet, and shaped saltire stretchers.

(*Continued on page* 102)

French Tables and Seating Furniture

(*Continued from page* 100)

(5) There was also an armchair with caned seat and back, the frame of the back, the scrolled legs and stretchers carved, or carved and turned, and the whole composition closely resembling the "Restoration" chair type in England.

(6) Likewise there was an armless caned chair with Flemish scroll legs and caned back with carved, oval-shaped frame.

(7) Another type of caned armchair had a shaped back, slightly cabriole legs, and stretchers.

(8) Long sofas with high rectangular or shaped backs corresponded in design with the most important of the foregoing types of upholstered chairs.

(9) Stools and banquettes likewise followed the same types of design.

The Materials Used

The materials used for seating furniture in the 16th and 17th Centuries were chiefly oak and walnut. In addition to these staples, chestnut was employed to some extent and also several of the less durable woods, especially if the surface was to be covered with painting or gliding. The rarer woods that were largely brought in during the 17th Century were confined, for the most part, to cabinet work and did not appreciably affect seating furniture. Towards the end of the 16th Century and in the early years of the 17th Century, the use of upholstery fabrics increased to a hitherto unprecedented extent—so much so, in fact, that in many cases the legs, stretchers and arms, or parts of the arms, were the only wooden parts visible. For tables in the 16th Century the woods already mentioned were chiefly used; in the 17th Century marble for table tops must be added to the list of materials, and the Louis XIV period was par excellence the age of carved and gesso-coated gilt wood. In addition to the resplendent 17th Century gilding, we find some of the more unusual woods used for tables, especially in the matter of inlay and marqueterie. Boule work of tortoise shell with brass and tin inlay was likewise employed for tables as well as for cabinet work.

Characteristics of Contour

The general characteristics of contour, so far as tables and seating furniture are concerned, show the prevailing rectilinear influence of the 16th Century with the curvilinear trend prevalent about 1600. Legs and stretchers, and chair arms and back-shapings as well, were the sensitive features that recorded the sequence of variations. We find many legs, especially from about the beginning of the 17th Century, consisting either of continuous scrolls or of scrolls containing a series of interrupted curves. For both tables and seating furniture stretchers were almost invariably used till near the very end of the 17th Century.

Of the decorative processes commonly employed, carving was the most important throughout the entire epoch. From the latter part of the 16th Century onward, turning also fulfilled an important decorative rôle. During the 16th Century inlay came into vogue and continued throughout the 17th. For this purpose contrasting and vari-colored woods were used; in the 17th Century Boule tables with their veneer of tortoise shell displayed elaborate inlay of brass or tin enriched by engraving. Marqueterie also was used for tables. Painting or pointing and parcel gilding constantly appeared. Full gilding on elaborately carved and gesso-coated grounds adorned both tables and seating furniture, but especially the former, in the Louis XIV period. Towards the end of the 17th Century lacquer also came into high favor.

Decorative Motifs

During the 16th and 17th Centuries, at one time or another, we find the following decorative motifs much in evidence—acanthus leaves, foliage, fruit, flowers, foliated scrolls, strapwork, Romayne work or heads in medallions, amorini and other human figures, animal forms and mythological creatures, grotesques, masques, cartouches, gadrooning, Vitruvian scrolls, swags and drops, and arabesques. During the Louis XIV period sun rays, masques, reticulated diaperings and heavy foliations were especially conspicuous and likewise the arabesques and semi-Chinese motifs employed so much in the designs of Berain.

During the 16th Century and the beginning of the 17th, the mounts on table drawers were good and consistent but not conspicuous; during the height of the Louis XIV period purely ornamental metal mounts, oftentimes of highly elaborate design, were applied to the legs of the more imposing tables.

Plants Useful for Attracting Fruit-Eating Birds

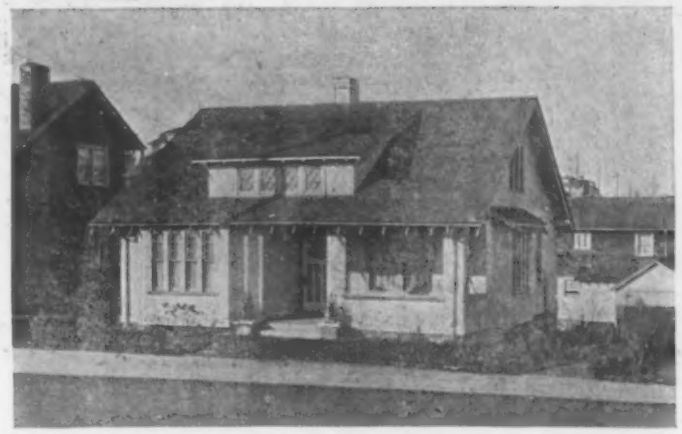
(*Continued from page* 96)

Nothing surpasses mulberries for alluring birds away from the early orchard fruits. Early bearing varieties should be planted in numbers and some should be selected for the length of the fruiting season. The Hicks and the Black Persian are notable in the latter respect, while the Townsend is earliest for the South and the Russian will take its place in the North.

Where it is desired to attract birds and afford them a sanctuary at all seasons, a large variety of plants must be used. For this purpose thickets of shrubs and other low growths are better than trees, since tangles of bushes and vines afford a more secure retreat from bird enemies and are the favorite cover of many species.

Where birds occur in large numbers their enemies are sure to congregate. Hence grounds especially designed to attract birds should also be furnished with devices to insure security from cats and other predatory animals. Fences made proof against climbing invaders by overhanging wire netting are essential, and inverted funnel-shaped metal guards or loose spirals of barbed wire should be placed around the trunks of nest trees to protect the occupants. Bird houses of various types add to the possibilities of bird gardens, and a never-failing supply of water is an essential. The basin should be shallow, so as to serve both for bathing and drinking, and should be placed in an open lawn or elevated so that birds resorting to it will not be at the mercy of enemies. Assured safety and a plentiful supply of food and drink will work wonders in attracting birds.

Do You Plan to Build?



A cozy bungalow in our August issue

·BUILDING AGE·

THE prominent national publication devoted to the interests of the moderate-cost home, in 40 years of service has made its reputation chiefly among architects, builders and contractors.

Yet the cozy bungalow pictured above and illustrated in our August issue with accompanying description, floor plans, etc., represents one of the particular features of Building Age which appeals to the homeseeker who is looking for ideas on building.

Two or more such plans are provided in every issue of Building Age,—besides suggestions for garages, harmonious selections of hardware for the modern house; handsome views of interior details of beautiful homes showing fireplaces, china closets, stairways, windows, etc.; effective design with wall board; valuable hints for making the kitchen a boon to the housewife, all mentioned here specially because they are treated in the August number.

Several Hundred House & Garden Readers

have already responded with alacrity to our previous offers in this publication, and perhaps you have thought of doing so, too.

For $1.00

we will send you this attractive issue for August while the copies last, together with another current number, and enter your name for the following six months—eight in all, if you will tear out and mail the attached coupon. This is a strictly limited offer to House & Garden readers only. Regular price of Building Age is—single copies 25c, 12 months $2.00 (Canadian postage 25c, foreign postage 50c—Additional).

Building Age, 241 West 39th Street, New York City

For the $1.00 per offer in October House & Garden, please send me eight issues of Building Age; this entitles me to two current numbers free of charge including copies of August while they last; and a regular order for the following six months. (Canadian postage 25c, Foreign postage 50c—additional.)

Name .....

Street .....

City ..... State .....

Hewitt

After the design has been made on the tracing paper, the first process is to transfer it to the water color paper which is to make the final shade, by using graphite paper between the two. All the paper should be firmly tacked to the drawing board, and the work done with a hard pencil

MAKING PAPER SHADES

Photographs of the processes were taken by courtesy of Mrs. Emott Buel

PAINTED paper lamp shades are used so much these days, and there have been so many requests as to particulars in regard to their making, that we have consulted an expert and evolved the following interesting, though somewhat difficult method, which must be pursued in order to create these lovely objects.

Size, Design and Painting

To begin with, the first thing to do is to decide on the size and type of lamp shade desired, have a wire frame made and then carefully fit a paper pattern of heavy wrapping paper on the frame, in order to insure accuracy. This when cut out and satisfactory should be placed on water color paper, which may be bought by the sheet. The top, bottom and side are then marked in pencil so that the pattern is indicated on the water color paper.

The next step is to make the design on a tracing paper, that is to say if you desire more than one shade. In that case, it may be transferred to the water color paper with graphite paper, by means of following the design with a sharp, hard pencil. When the design is completed on the shade, it should be carefully inked with waterproof drawing ink, and for this purpose, a very thin, pointed drawing pen is used.

Then comes the painting of the design. Water color paints are used and in case a light background is desired, a wash may be put on first, covering the whole design. If a dark background is used, however, one should paint around the design only. Then the design may be painted, and the line of color to edge the shade. After this, two coats of thin shellac are applied with time allowed in between for drying, and when dry, the shade is ready to cut out.

Mounting the Shade

It should be carefully cut out, following the line of the original pattern, and then mounted and fitted on the wire rings or frame. For this purpose very tiny wire shanks are used to hold the shade together at the back, or glue may be used if preferred. Before mounting, the wire frame or rings should be covered with a narrow white silk tape.

(*Continued on page* 106)

After the tracing has been made, the design is carefully inked on the water color paper. For this purpose, a waterproof drawing ink is used and a very fine and pointed pen

Bring Out Your Problems— That's Why We're Here!

" . . . Please furnish me with plans, proper dimensions, and any other data you may have at hand for the building of a garden swimming pool . . ."

THAT wasn't a woman's letter, you can be sure—it was quite too short! It came from a man, and though he lived in Mexico City and didn't know who the next Dictator might be, he did know what the climate was. And he needed that pool.

The House & Garden Information Service rolled up its sleeves and went right to work. The excavation should be so long, and lined with brick in such and such a way. Tile was needed—and here were the names of five firms that made the right sort, each of which would send its literature. The gutter, the drain should be made after such a manner. Then there should be a hedge—and pots of gay-coloured flowers—and here, presto, a brilliant striped awning flung across the whole bright rippling bit of coolness. . . . The only thing we made no suggestions about was the Mexico man's bathing suit.

If you're planning to build—whether it's a house, or a pool, or a garage; if you're planning to furnish anything from the entrance hall to the kitchen cabinet; if you're planning to decorate, or plant, to make new or make over—

Why, there are always problems. But—there is always US. That mayn't be grammar. But it's very soothing!

HOUSE & GARDEN INFORMATION SERVICE

19 West 44th Street : : : New York City

Free Information Coupon

I would like to know more about the subjects checked below or those outlined in the letter attached. Please send me names of dealers in these articles and arrange for me to receive their illustrated matter.

..Arbors
..Benches
..Berries (black-, goose-, rasp-, straw-, dew-, mul-, currants)
..Birdhouses
..Books (horticulture, farming)
..Bulbs
..Cement Furniture
..Door Knockers
..Fertilizers
..Flower Boxes
..Fences (wire, lattice, rustic, iron)
..Fountains
..Garden Pottery
..Garden Tools
..Gazing Globes
..Gladioli
..Grapes
..Greenhouses
..Insecticides
..Iron Seats
..Lattices
..Lawn Rollers
..Painted Furniture
..Peonies
..Pergolas
..Playhouses
..Portable Garages
..Reed Furniture
..Rhododendrons
..Roses
..Rustic Furniture
..Shrubbery (specify) (evergreen, flowering)
..Sparrow Traps
..Spraying Machines
..Statuary
..Summer-houses
..Sundials
..Tea Wagons
..Trees (specify) (evergreen, fruit, nut, shade)
..Tree Surgery
..Trellises
..Vines (climbing)
..Weather Vanes
..Willow Furniture

Name ..... Street .....

City ..... State .....

H.&G. 10-19

The next process is the painting of the shade. Water color paints are used and if a delicate background is required, they may be painted over the entire design first. In the case of a dark background, it should be filled in around the design very carefully

Making Paper Shades

(*Continued from page* 104)

Glue is applied to this and the edges of the shade are attached to it by means of little clips to hold it in place while the glue is drying. Then one or two tacks with needle and thread are made to insure the shade being held firmly.

This is the barest outline of the process which may be as simple or involved as the design chosen.

Color and Black

There are all sorts of interesting points about the fine art of lamp shade making. One in regard to the color is a question of putting a wash of warm color on the inside, which will shed a mellow glow, or the design may be touched up on the wrong side so that it is brought out when the light shines through it.

If a black background is desired, infinite patience is required to go over and over the white paper, using an electric bulb beneath it while working so as to insure the opaque effect of the black paint.

The Necessary Tools

Among the articles needed are the following:

Drawing board
Wrapping paper
Water color paper
Tracing paper
Pencils
Pen
Waterproof ink
Shellac
Water color paints
Wire frames
Wire shanks
Thumb tacks
Wire clips
Silk tape
Compass
Shears

Two coats of shellac are applied and then the shade is mounted on its frame

And here the shades are finished and ready for use on small candlesticks

SHANTUNG!

Shall the "Open Door" of China be kept open?

Yesterday, just one of a million of places in this world! To-day—the focus of the world's attention and the stumbling block for the League of Nations as it stands.

Is it the sudden flare of a day?

Behind Shantung is the great big question of Japan's policy in Asia. You cannot understand Shantung unless you understand what is back of it in Japan's ambition, conviction of her necessity, methods and practices in the rest of Asia. You may read the facts, China's indictment of Japan, Japan's defense and the philosophy back of these things interpreted by experts in

ASIA

The American Magazine on the Orient

This magazine is the authority for information on Eastern questions. It will give you a cogent background for understanding the Eastern problems which will flame into big newspaper headlines apparently without cause.

ASIA, richly illustrated, is the only general magazine published in the United States treating exclusively of Oriental matters.

Popular opinion is for a League of Nations as a step forward in settling international quarrels. ASIA is for the League of Nations as a profound advance in civilization.

But—there is one tremendous new obligation the League of Nations puts upon the American people and that is that we who have been untrammelled by the centuries of outworn tradition that have held Europe back, must see that the League is not made merely a cloak for the same old unscrupulous diplomacy which was the very root of war.

Only can America do this if you, the maker of American public opinion, inform yourself about the great Orient which is the hotbed of international trouble in the future. China's affairs are our affairs—Japan's interests affect our interests—Near Eastern matters have become our responsibility. No longer can we stand aloof.

ASIA brings the Orient to you. Not dry-as-dust discussion, but through vivid articles contributed by authorities telling the story of fundamental international currents, in personal intimate style, illustrated with remarkable photographs and reproductions of paintings. Each issue contains an average of ten articles and is profusely illustrated with from fifty to sixty reproductions.

Special Introductory Offer—Five Months for $1

A FIVE MONTHS' TOUR OF THE ORIENT

ASIA is an expensive magazine to produce. Therefore, we do not permit news companies to return copies. Consequently, ASIA is not easily obtained. To show you the richness and wonder of the Orient as disclosed in the pages of ASIA, we make this special offer. ASIA sells for 35 cents per copy. Through Associate Membership in The American Asiatic Association, the cost is $3.00 per year, a saving of $1.20. Through this special offer you will receive five current issues commencing with the September number.

Maker of a Nation at Twenty-six!

NOW RUNNING IN ASIA. Remarkable Story of Colonel Thomas Lawrence as a Ruler of Arabia told by Mr. Lowell Thomas, War Correspondent, Traveler, Explorer and Associate Editor of ASIA.

Wholly unused to warfare, this youthful archaeologist—a mere boy of twenty-six—by a combination of daring, tact, wisdom and almost supernatural influence over the Arabs, led them to the Allied cause. He was one of the chief factors in the defeat of the Turks, and became the uncrowned King of the Hedjaz.

LAWRENCE'S STORY NOW RUNNING IN ASIA

Temporary Offer. Send Coupon Now

H & G-10-19

JOHN FOORD, Secretary,
American Asiatic Association,
627 Lexington Avenue, N. Y. C.

Send me the next five issues of ASIA beginning with September. I enclose $1.00. (OR) You may bill me for $1.00 in due course. (Canadian $1.25. Foreign $1.40.)

Name.....

Address.....

I wish ASIA for one year..... The price is $3.00 in the United States, $3.50 Canadian, $4.00 Foreign. You may enclose the full amount, or we will bill you in due course.

THE FORMATION *of* LEAFMOLD

From an Address Delivered Before the Washington Academy of Sciences

By FREDERICK V. COVILLE

WHEN the leaves of a tree fall to the ground they begin to decay and ultimately they are disintegrated and their substances becomes incorporated with the other elements of the soil. The same thing happens with the leaves, stems, and roots of herbaceous plants. Such organic matter is one of the chief sources of food for plants, and its presence in the soil is therefore of fundamental importance in the maintenance of the vegetative mantle of the earth.

In a series of experiments from 1906 to 1910 the speaker showed that a condition of acidity is a primary requirement of the blueberry (*Vaccinium*), laurel (*Kalmia latifolia*), trailing arbutus (*Epigaea repens*), and other plants associated with them in natural distribution. Other kinds of plants and plant associations require, on the contrary, a neutral or alkaline soil.

It is the purpose of the present address to show how the leaves of trees in the process of the formation of leafmold produce at one time or under one set of circumstances a condition of soil acidity, at another time or under other circumstances a condition of alkalinity, and after calling attention to the acidity of the soil as a fundamental factor in plant ecology, to point out that a knowledge of certain phenomena in the decay of leaves is essential to a correct understanding of the distribution of vegetation over the earth.

The Acidity of Oak Leaves

In the early experiments with blueberries it had been found that these plants grew successfully in certain acid soils composed chiefly of partially rotted oak leaves. On the rather natural assumption that the more thorough the decomposition of this material the more luxuriant would be the growth of the blueberry plants, some old oak leafmold was secured for further experiments. It had been rotting for about five years and all evidences of leaf structure had disappeared. It had become a black mellow vegetal mold.

When blueberry plants were placed in mixtures containing this mold they did not respond with luxuriant growth. On the contrary their leaves turned purple and afterward yellowish, their growth dwindled to almost nothing, and at the end of the season when compared with other blueberry plants grown in a soil mixture in which the oak leafmold was replaced by only partially decomposed oak leaves the plants in the oak leafmold were found to weigh only one-fifth as much as the others. This astonishing result is exactly contrary to the ordinary conception. We have been accustomed to believe that the more thoroughly decomposed the organic matter of a soil the more luxuriant its vegetation. In this case, however, thorough decomposition of the soil was exceedingly injurious to the plants.

This remarkable difference in effect between partially decomposed and thoroughly decomposed oak leaves was found to be correlated with a difference in the chemical reaction of the two materials, the partially decomposed oak leaves being acid, when tested with phenolphthalein, and the oak leafmold alkaline.

With rose cuttings and alfalfa seedlings in the same two soils exactly opposite results followed, those in the oak leafmold making a luxuriant growth, those in the partially decomposed oak leaves showing every sign of starvation.

Every botanist is familiar with the rich woods where trillium, spring beauty (*Claytonia*), mertensia, and bloodroot (*Sanguinaria canadensis*) delight to grow, in a black mellow mold made up chiefly of rotted leaves. He is familiar, too, with the sandy pine and oak woods where grow huckleberries (*Gaylussacia*), laurel (*Kalmia latifolia*), princess pine (*Chimaphila*), the pink lady's slipper (*Cypripedium accule*), and trailing arbutus (*Epigaea repens*). The soil here also is made up chiefly of rotting leaves and roots. Yet one does not look for trilliums in laurel thickets, or for arbutus among the bloodroots. Either habitat is utterly repugnant to the plants of the other.

Tests of the two habitats show that the trillium soil is alkaline, the other acid, reactions corresponding exactly to those observed in the cultural experiments already described, rose cuttings and alfalfa requiring an alkaline soil, blueberries an acid soil. The difference is as conspicuous in nature as in the laboratory and the greenhouse.

What are the conditions under which rotting leaves develop these opposite chemical reactions?

In a ravine in the Arlington National Cemetery, near Washington, where the autumn leaf fall from an oak grove has been dumped year after year for many years, every stage in the decomposition of oak leaves may be observed, from the first softening of the dry brown leaf by rain to the black mellow leafmold in which all traces of leaf structure have disappeared. When freshly fallen the leaves show 0.4 normal acidity. Those not familiar with the chemical expression "normal acidity" may perhaps most readily understand the term by reference to ordinary lemon juice, which has very nearly normal acidity in the chemical sense. Fresh oak leaves may be conceived therefore as having about one-third the acidity of lemon juice, gram to cubic centimeter. From a soil standpoint such a degree of acidity is exceedingly high. Probably no tree or flowering plant could live if its roots were imbedded in a soil as acid as this. A correct appreciation of the excessive acidity of freshly fallen leaves enables one to understand why it is that the leaves of our lawn trees, if allowed to lie and leach upon the grass, either injure or destroy it. On such neglected lawns the turf grows thin and mossy.

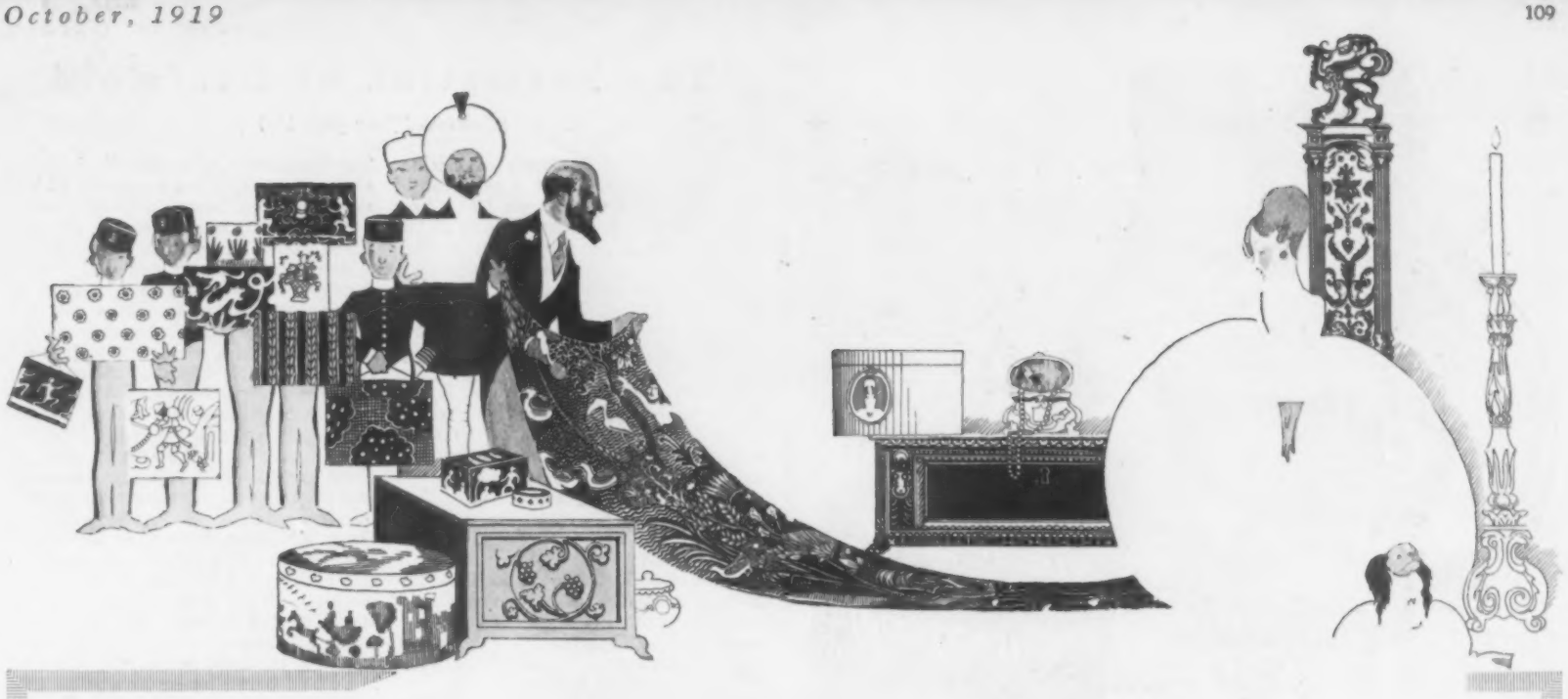
From the height of their initial acidity it is a long descending course through the various stages of leaf decomposition to the point of chemical neutrality, and then upward a lesser distance on the hill of alkalinity, to the black leafmold.

Rates of Decomposition

In order to ascertain the rate of decomposition in leaves of various kinds, observations were begun in the autumn of 1909 on leaves of silver maple (*Acer saccharinum*), sugar maple (*Acer saccharum*), red oak (*Quercus rubra*), and scrub pine (*Pinus virginiana*), exposed to the weather in barrels and in concrete pits. In one experiment a mass of trodden silver maple leaves 2′ in depth, with an initial acidity of 0.92 normal, was reduced in a single year to a 3″ layer of black mold containing only a few fragments of leaf skeletons and giving an alkaline reaction. In these experiments sugar maple leaves have shown a slower rate of decomposition than those of silver maple, while red oak leaves still show an acidity of 0.010 normal after three years of exposure, and leaves of Virginia pine an acidity of 0.055 normal under the same conditions.

The alkalinity of leafmold is due chiefly to the lime it contains, the lime

(*Continued on page* 110)



Do you make the shops all come to you?

". . . I don't suppose I'd ever have learned it if I'd lived in a middle-sized place. But when you're the wife of an engineer on construction, and you're building a dam on the other edge of nowhere, and you can't live in a tree, or let your husband make you concrete curtains or a steel-reinforced tea service—well, you've just got to have the shops all come to you. And House & Garden is the only way. . . . Personally, I've made up my mind that no matter where we move, I'll still call on you, for even if I lived in New York itself, I'd never have the inexhaustible patience that you've displayed on all my commissions from chairs to china. As for what my husband says——"

We modestly blue pencil the rest and credit the lady's ancestors to the neighborhood of Blarney Castle. But—we did work hard over that little bungalow!

You see, it's House & Garden's business to know the shops of New York—the big places and the little tucked-away on-sidestreet shops where clever men and women with small capital make those interesting originations that mean so much to the modern house.

WHERE you would have to search hours—days, perhaps—even if you were in New York, the House & Garden Shoppers can go unerringly to the spot where they specialize on just the thing you want.

IT isn't necessary for you to have seen it in the pages of the magazine. All you have to do is to write and say, "I want a so-and-so, of such-and-such a colour, size, price. I am enclosing an approximate amount to cover the purchase."

THEN—possess your soul in patience. As soon as the mails will allow, you'll get your parcel. House & Garden charges no commission for bringing the shops to you. Try it—and see!

HOUSE & GARDEN
Shopping Service
19 West 44th Street, New York City

Dear House & Garden Shopping Service:

I'm marking the things on the coupon that I'm interested in at present, and am enclosing it in a letter giving you further particulars. I am also sending you an approximate amount to cover the cost of my purchases, it being my understanding that you charge nothing for your services, and return me any money left over.

FOR THE HOUSE

..Electrical appliances
..Cretonnes & chintzes
..Linens
..China & glass
..Silverware
..Unusual lamps and lighting fixtures
..Odd tables & chairs
..Books

FOR THE GARDEN

..Bulbs for fall planting
..Shrubs
..Statuary
..Bird baths
..Bird houses
..Fountains
..Porch furniture

MISCELLANEOUS

Name.....

Street.....

City..... *State*.....

The Formation of Leafmold

(*Continued from page* 108)

content expressed in terms of calcium oxid often reaching 2 to 3 per cent of the dry weight. One sample had a lime content of 3.55 per cent. Many of the soils that result directly and exclusively from the decomposition of limestone have a lower percentage of lime than this. An alkaline leafmold containing 2 to 3 per cent of lime is properly regarded as a highly calcareous soil. Yet such a deposit may be formed in a region where the underlying soil is distinctly non-calcareous, the lime content of the soil being only a small fraction of 1 per cent and the soil reaction being acid.

Whence comes the abundance of lime in an alkaline, richly calcareous leafmold formed over a soil distinguished by an actual poverty of calcareous matter?

If the leafmold is rich in lime the leaves from which it is derived should be rich in lime. A determination of the amount of calcium oxid in the dried freshly fallen leaves of some of our well-known trees shows this to be true.

It should be understood that the lime does not exist in the leaf in the form of actual calcium oxid. It is largely combined with the acids of the leaf and serves in part to neutralize them, but is insufficient in amount to effect a complete neutralization. In all the kinds of leaves and herbage thus far examined the net result is an acid condition, although lime may be present in large amount. Thus in the leaves of silver maple a condition of excessive acidity exists, about 0.9 normal, notwithstanding the presence of nearly 2 per cent of lime.

As the decomposition of such leaves progresses the acid substances are disorganized and largely dissipated in the form of gases and liquids, while the lime, being only slightly soluble, remains with the residue of decomposition, the black leafmold, and renders it alkaline.

In soils poor in lime, trees and other plants constituting the vegetative mantle of the earth may be regarded as machines for concentrating lime at the surface of the ground. This lime is drawn up by the roots in dilute solution from lower depths, is concentrated in the foliage, and the concentrate is transferred to the ground by the fall and decomposition of the leaves. The proverbial agricultural fertility of the virgin timberland of our country was undoubtedly due in large part to the lime accumulated on the forest floor by the trees in preceding centuries, and to the consequent alkalinity of such surface soils when the timber had been removed and the leaf litter was thoroughly decomposed. After a generation or two of reckless removal of crops the surface accumulation of lime was depleted and unless the underlying soil was naturally calcareous a condition of infertility ensued, which, for the purposes of ordinary agriculture, could be remedied only by the artificial application of lime.

Active Agents of Decay

The chief agents in the decay of leaves are undoubtedly fungi and bacteria. There are other agencies, however, that contribute greatly to the rapidity of decay. Important among these are earthworms, larvæ of flies and beetles, and myriapods or thousand-legged worms. Animals of all these groups exist in myriads in the leaf litter. They eat the leaves, grind them, partially decompose them in the process of digestion, and restore them again to the soil, well prepared for the further decomposing action of the microscopic organisms of decay.

The importance of earthworms in hastening the decay of vegetal matter was pointed out long ago by Darwin in his classical studies on that subject. The importance of myriapods, however, as contributing to the formation of leafmold has not been adequately recognized. In the canyon of the Potomac River, above Washington, on the steeper forested talus slopes, especially those facing northward, the formation of alkaline leafmold is in active progress. The purer deposits are found in pockets among the rocks, where the leafmold is not in contact with the mineral soil and does not become mixed with it. The slope directly opposite Plummers Island is a good example of such localities. Here during all the warm months the fallen leaves of the mixed hardwood forest are occupied by an army of myriapods, the largest and most abundant being a species known as *Spirobolus marginatus*. The adults are about 3" in length and a quarter of an inch in diameter. They remain underneath the leaves in the daytime and emerge in great numbers at night. On one occasion a thousand were picked up by Mr. H. S. Barber on an area 10′ x 100′, without disturbing the leaves. On another occasion an area 4′ by 20′ yielded 320 of these myriapods, the leaf litter in this case being carefully searched. Everywhere are evidences of the activity of these animals in the deposits of ground-up leaves and rotten wood. Careful measurements of the work of the animals in captivity show that the excrement of the adults amounts to about half a cubic centimeter each per day. It is estimated on the basis of the moist weight of the material that these animals are contributing each year to the formation of leafmold at the rate of more than 2 tons per acre.

On Oakaline Soils

The decay of leaves is greatly accelerated also when the underlying soil is calcareous and alkaline, it being immaterial whether the lime is derived from a limestone formation or is a concentrate of the vegetation. On the rich bottom-land islands of the upper Potomac the autumn leaf fall barely lasts through the following summer, so rapid is its decay. These bottom lands have an alkaline flora, and they are found to have an alkaline reaction, caused by the lime brought to them in the flood waters.

The acceleration of leaf decay by an alkaline substratum is due to prompt neutralization of the acid leachings of the leaves and also to the fact that such a substratum harbors with great efficiency many of the most active organisms of decay, from bacteria to earthworms.

It must not be understood that in a state of nature the decomposition of leaves is always so simple and uniform a process as has been described, or that it always results in the formation of an alkaline leafmold. The chief factors that contribute to the acceleration of leaf decay have already been enumerated, but there are other conditions of nature that obstruct and retard this process. Under certain conditions the progress of decomposition may be permanently suspended long before the alkaline stage is reached. The soils thus formed, although high in humus like a true leafmold, have an acid reaction and a wholly different flora.

A Correction

Through an error, the caption under the photograph on page 39 *of the September issue of* House & Garden *credited the dining room there shown to the house of Charles Wimpfheimer, Esq., of which Harry Allen Jacobs was architect. The room is actually in a residence at Rye, New York, designed by Hobart B. Upjohn, architect. Other views of this residence will be shown in a future number.*—Editor.