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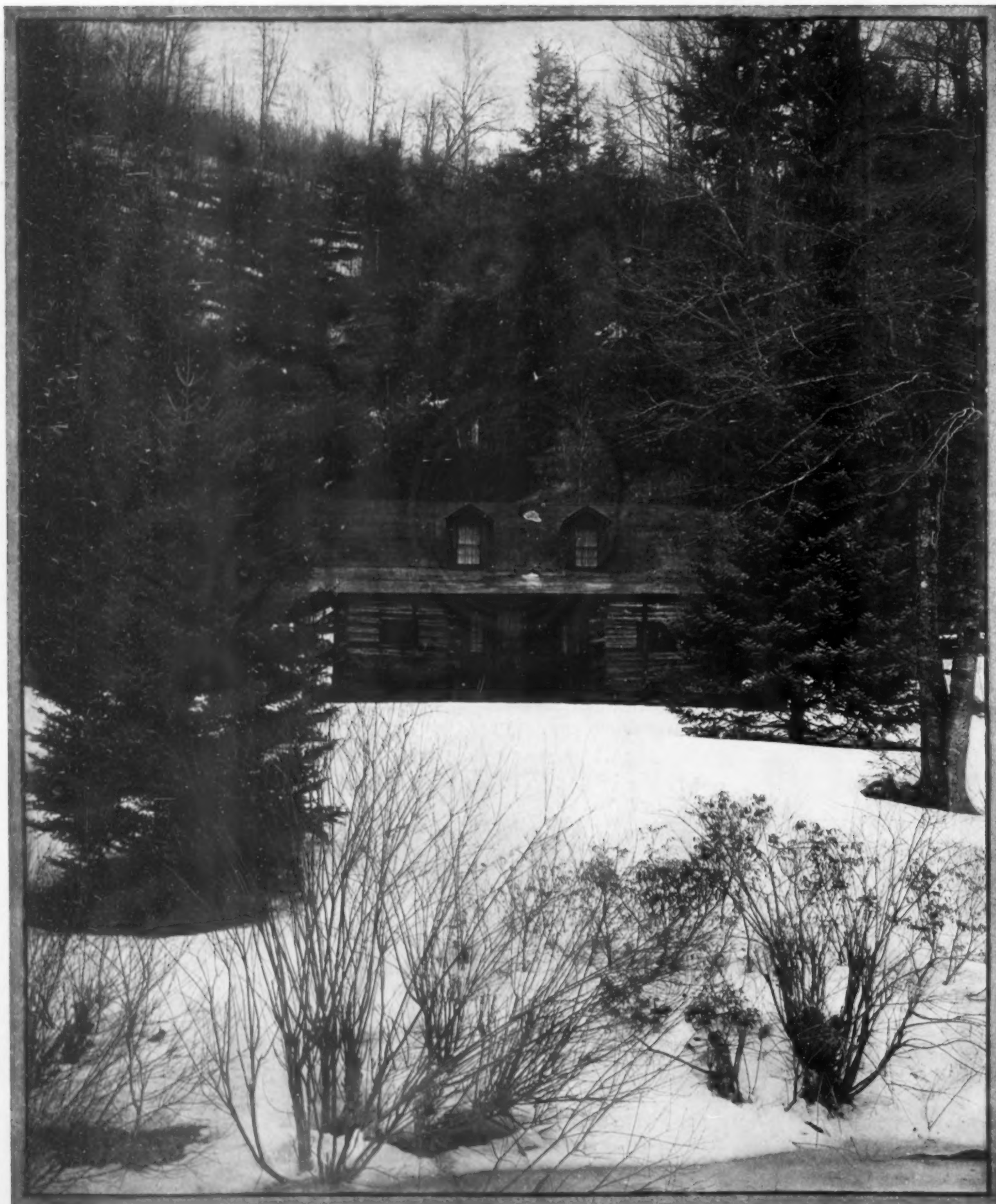
HENRY H. SAYLOR
Editor

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Managing Editor



NUMBER 2



Even a severe winter spent in a cabin perched among the snow-covered mountains is full of attraction. The magnificence of the winter woods, the thrill of tramps on snow shoe and ski, the comfortable evenings beside the broad fireplace, these are pleasures that are as appealing as are those of spring and summer



In the winter wonderland sluggishly cutting its snake-like course through the drifts in the valley the stream made miniature avalanches and icebergs easily suggestive of the Titans of the north

Our Winter in the Happy Valley

BY A. W. DIMOCK

Photographs by Julian A. Dimock

"SUPPOSE we stay here all winter!" I remarked, as I gazed from the cabin window upon a snow-laden spruce.

"What, here in the mountains? We might be snowed in!"

"Yes, that's why," I replied.

"But what if we are sick and want a doctor?"

"That's why, too. If we can't get a doctor we won't be sick."

"What will we do for companions?"

"You will have—I mean *I* will have—the best there is."

"I told you it was time to take in our red apples, and now it is too late," was the irrelevant response.

"This snow is a month ahead of the calendar, but let's have a look at the tree."

We started for our orchard, wading



Winter is chill but alluring

through the unseasonable snow. The face of Nature had changed overnight and the dark sides of the mountain, only half hidden by the bare boughs and trunks of the forest, were now of a dazzling whiteness. The black caverns of the opposite cliff were lighted up by snowy masses clinging to its face. A turn in the path opened out to us the hardy little orchard. Our steps halted and we were silent as we gazed at our favorite tree. Its very branchlet curved downward with the weight of the snow; the larger limbs were piled high. As we stood spellbound, the late-rising sun lit up scores of rosy-cheeked apples resting on their snowy couch, while a robin perched upon a white twig added his song to the anachronism. At sight of us the bird flew away, perchance to prepare for his southern flight, while the girl at my side following him



What automobile trip can compare with the jolted progress through the snow-filled valleys in an ox-drawn sled

with her eyes stood silent for an instant, then quoted:

"—Or the redbreast sit and sing,
Betwixt the tufts of snow on the bare branch
Of mossy apple tree."

Feeling that the psychological moment had come, I quoted in turn,—

"Shall—we leave the town with its hundred noises,
For woodland quiet and silvery voices?"

As no reply was forthcoming to this I continued coaxingly,
"Won't you brave the winter with me?"

I don't know to this hour what the decision would have been had the lady been left to herself, but a bunch of cheery chickadees, scattering the snow from the twigs of a nearby sapling as they hopped about, chipped in with their merry "Chick-a-dee-dee-dee!"

Then my hand was taken as I listened to words that came from laughing lips, though in trembling tones:
"Then come the wild weather, come sleet and come snow,
We'll stand by each other however it blow."

And thus began our winter in the Happy Valley. The first snow melted in forty-eight hours, to the heightened brawling of the mountain brooks and the increased roar of the cascades about us, and the Indian summer days came back, when again we wandered afield with knapsacks on our backs to visit our favorite butternut, hickory and chestnut trees. The gray squirrels knew that we carried no guns and barked at us fearlessly, while the reds chuckled and trilled in their funny fashion from over our heads as they robbed our trees. As the mornings became colder and ice began to show on the borders of the streams, our walks became brisker and we climbed the nearby heights from which we looked upon the tops of snow-crowned mountains, some of them forty miles away. On the warmer days we wandered slowly and silently near the stream, watching for the mink that often appeared, and once we were rewarded by the sight of an otter which displayed himself for a full minute while we held our breath. Sometimes we took after-dark walks, which were never lacking in thrill, for the mountains have voices and there are always sounds in the forest. A heavy step in the thicket on the hillside near you may be any wild creature your imagination fancies.

It was a month after our untimely snow when there came a rain followed by a freezing night which made the face of the forest a mass of sunlight-reflected jewels. All nature was coated with the purest ice, from the rough crag

to the tiniest twig, and as the branches swayed slightly in the gentle breeze the colors of the spectrum flashed from a million points and sparkling tiaras met the eye wherever it turned. As the breeze increased the air was filled with a tinkling sound and from the lighter twigs streams of scintillating particles poured down upon a field of ice. As we looked the girl at my side in a low tone quoted:

"Look! the mossy trunks,
Are cased in the pure crystal; each light spray,
Nodding and tinkling in the breath of heaven,
Is studded with its trembling water drops."

"Wasn't it worth while staying in the mountains just for this?" I asked.

"It is worth everything!" she exclaimed, "and I am going to write to the girls to come right up here."

A few days later I received the following:

"Dear Uncle Archie:

Aunt Lucy is a peach and a darling and so are you. Of course we will be with you for the holidays, Marian and I, and I hope to goodness it will snow so hard that we can't get away until spring. Please see that the snowshoes are properly greased for Marian, if that's what ought to be done, and have the skis sharpened for me, if that's what happens to them. Don't send to the station for us. It's only twelve miles and we will walk in. We did a hike of ten miles last summer and we can do two more, easy. Then we will show you how to eat supper.

"Your loving niece, Madge."



All kinds of gruesome monsters appear among the rocks where snow and shadow form strange profiles and distorted faces

"P. S. For the love of Mike, don't tell Mother that we are going to walk in, or she would put the kibosh on the whole business. Perhaps you had better not show this letter to Aunt Lucy. I can trust you, but there is no telling what she might write to Mother."

"See here," said I to the lady to whom I had just read the foregoing, "something must be done to keep those wild nieces of yours from tramping twelve miles through the snow."

"Don't worry. They'll never try it."

Two days before Christmas a heavy snow-fall made the trip through the mountain pass from Shokan, the nearest station, impracticable, and the only way for the girls to reach us was from the west, by another road and a drive of more than twenty miles.

"I am afraid this snow has spoiled your Christmas," said I to the lady as we sat by the fire on Christmas Eve, near the hour when St. Nick was due to come down the chimney. "I know how anxious you were for the girls to get here and I wanted to see them myself."

"Don't worry, for you'll see them, all right. Those youngsters will be along tomorrow. Of course, they can't get through the Gulf, but they will go around by way of Ellenville and find some one who will get them through the drifts on that side. You will hear their sleigh bells before sunset tomorrow."

"I'll be jiggered if I don't hear something like them now."

"I hear it, too, but it is coming from Shokan way. I wonder who it can be."

We didn't wonder long, for there were voices as well as bells



After long tramps on ski and snow shoe even the slow going ox team is acceptable to carry one home



The face of nature is changed over night and beyond the snow laden spruce the once bare boughs and trunks of the forest show a dazzling whiteness

and a clattering at the door which burst open to give tumultuous entrance to four fur-clad, snow-covered young people. The first girl to get inside greeted me with an enthusiasm that left me snow-covered and near-breathless.

"How your many admirers would envy me now, Marian, if they only knew."

"It wouldn't do them any good, but who told you that I had any?"

"I heard that you rolled up a dozen victims at the seashore last summer."

"Somebody has slandered me, Uncle Archie. I don't think there were more than six," said the child, sadly, but she brightened up as she added, "I don't remember that any got away, though."

When the confusion had partially subsided I thought of my responsibility for the bunch of youngsters in my house, and I began by upbraiding the man who had brought them in.

"What made you take the risk of—"

"Couldn't help it," said he, interrupting. "They was jist bent on comin', and if I hadn't fetched 'em they'd 'a' tried it afoot, and you wouldn't 'a' liked—"

"It wasn't his fault a bit," interposed Madge, "for we told him it was so important for us to get through that we would have to walk if he wouldn't take us. We were afraid that if we didn't get here tonight Aunt Lucy would be worried."

"We didn't think you *could* get through," said that lady. "You must have been eight hours driving in. First you must have some supper and then you must tell us what happened to you in the Gulf."

"We are the hungriest ever, and would all die of starvation before morning, but if you don't cross your heart and promise to stay in this room while we get our own supper, we won't eat a mouthful and our blood will be on your hands, and so say we all of us."

"That's so," added Marian. "We are agreed on that. Madge has taken a course in domestic science and wants to try it on the dog. She can fricassee a meringue, or casserole a truffle, but she can't boil a potato. Then Jack, he's too stuck up to live just because he was camp cook last summer."

So the jolly four, Marian and Madge, Jack and his college chum, Harry Forsyth, an amateur photographer of parts, got the supper. When the long-drawn-out



Winter's magic transformed the grotto into a crystal cave of fairyland, covering its entrance with silver stalactites



The sparkling water pours from the dark cavern forming tier upon tier of flashing icicles as it plunges downward

meal was ended, we sat around the library table with cheese and coffee, butternuts, apples and cider, while Harry recited his epic on the Passage of the Gulf. He pictured Scylla in one of the caves of the precipice on the north side of the narrow passage and likened the projecting tree trunks to the long necks of the snaky monster, while the chasm on the south side proclaimed itself Charybdis. The drifts which they encountered were treated as dragons and the shovels with which they were reduced were accounted spears and javelins. There were interruptions at first by his fellow-voyagers, who fancied the narrator had forgotten something, but later all sat in silent admiration of his imagination. When the story was finished and the applause had subsided, Marian demurely inquired:

"Did you recite the whole of Virgil, Mr. Forsyth?"

"All I could remember, and then some," was the prompt reply.

The hours of a winter's day in the Happy Valley are so few and so precious that it is our custom to breakfast at daylight. Yet when I came down to that meal the next morning I found Marian and Harry in the library studying out the mystery of an Indian snowshoe knot.

"Where are the other infants?" I inquired.

"Madge says she can stand up longer on skis than Jack, and



In a moonlight photograph the lantern made a snaky trail, but, strangely enough, the bearer's form was wholly invisible

they are having a contest to prove it."

When they came in to breakfast a little later their appearance indicated that neither of them had succeeded in standing up at all. More snow had fallen during the night, of the powdery, blowy kind, with which the north wind playing:

"Curves his white bastions with projected roof,
Round every windward stake, or tree or door."

"It snowed a lot, last night, didn't it?" inquired Marian, between bites of her buckwheat cakes.

"Yes, young woman," I replied, "and that Gulf you came through last night is closed for the winter."

"Hurrah!" exclaimed the child, laying down her fork to clap her hands. "Then I can stay here for three months!"

"How do people know when the Gulf is open so that they can get through?" inquired Harry.

"They don't. The first to try it last spring got into trouble. It was the middle

of March when a man came to the cabin to borrow a shovel to dig his horse and sleigh out of drifts. He had started with his wife from Shokan in a sleigh. Half way through the Gulf he abandoned the sleigh. A little farther along the horse stuck in a drift. I don't know where he left his wife. Probably somewhere

(Continued on page 137)



The Vital Functions of Light in the Home

PRACTICAL SUGGESTIONS FOR THE AVOIDANCE OF GLARE—THE IMPORTANT QUESTIONS OF GLASSWARE—HOW IT INFLUENCES DIFFUSION—HINTS FOR MAKING FIXTURES MORE ATTRACTIVE

BY F. LAURENT GODINEZ

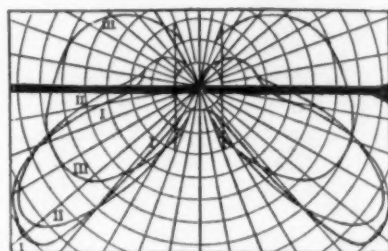


EDITOR'S NOTE.—Science has advanced much during the last decade in eliminating evils and correcting abuses, especially those connected with home living. We have a better architecture, more efficient means of sanitation, but in one department of the home we remain woefully ignorant. The question of illumination is answered to-day with little consideration of the esthetic. We are entirely unaware of the vast possibilities of light as a means of decoration and know nothing of its subtle influence upon our health and even our mental attitude. Mr. Godinez has spent much time and careful research in this field and has astonishing disclosures to make that will awaken our dormant sensibilities. Although his criticism is direct, it is of the highest order in that he offers a remedy for each abuse which he makes apparent. He does not advocate any definite equipment, but he suggests how each individual may make use of his own to best advantage, and what are the desirable requisites of new material. In this article practical advice for correcting unsatisfactory illumination is given. The January issue dealt with the question of eye-strain and its attendant evils.

THE modification of light sources for the attainment of eye-comfort, a atmosphere and repose in the home involves among other considerations an analysis of the glassware used in lighting. Whether in the home or abroad, the over brilliancy of modern illuminants should legally necessitate their concealment within shades for the purpose of eye protection and, where necessary, the redistribution of light over working areas. Since our visual impressions are invariably acquired from surface indications, it is evident that the effects and influence of artificial light are very largely dependent on its shade or covering. Therefore the source of light should invariably be concealed in appropriate glassware, which then becomes a secondary source, and through its own character determines our direct or subconscious impressions of the light.

Never introduce in the environment of the home the shades or globes which suggest the ugly, commonplace, ribbed affairs of the shop interior. Remember the eye cannot refrain from straying toward a source of light and let that source be mellow, subdued, and artistic.

Several years ago, when electric illuminants were less economical than now, the glassware manufacturer did his best to make shades which would reflect, re-direct, and concentrate every ray of light over a working area, sacrificing every consideration of appearance, or beauty, for economic efficiency. To-day, however, owing to the wonderful economy of illuminants and to the increased use of gas and electric light in thousands of homes, the glass maker must shape his product for adornment as well as utility. Artificial light is so cheap in cost that the great problem of the hour is to prevent its becoming cheap in appearance,—and the makers of lighting glassware must come to the rescue. Some of them have done so, but others still continue to unload a product which has become old-fashioned as well as ugly, ignoring all the wonderful possibilities of the chemistry of glassware for the time-worn argument of the illuminating



Roman numerals indicate comparative distribution of illumination above and below the horizontal when various media are used, i. e., I, with no enclosing globe; II, with ground glass; III, increased diffusion with opal glass.

perhaps, in that their product is not always so attractive when illuminated as it is by daylight. This is because certain forms of glassware for lighting are adapted to modern illuminants, and others are not.

While "transparency" is the most common attribute of glass, there are kinds which are but slightly transparent, even opaque.

After the fire-clay pots, in which a mixture of sand, carbonate of soda, carbonate of calcium, and red oxide of lead have been heated and maintained at a melting temperature, the furnace is cooled, and the glass, at various stages of cooling, may be blown, cast, pressed,

rolled, drawn, cut, drilled, ground, and shaped in many forms. Acid etching, sand blasting and grinding, have various effects in bringing out the body color and lending texture or softness of tone, and these various applications modify the appearance of

glassware, and have much to do with its artistic effect, and its transparency, which should be carefully considered.

In many interiors with average ceiling heights, lighting fixtures are hung so that the pendant, or upright shades are continually within the visual field. In such cases glassware must be selected to perform several functions. Ocular comfort demands that these globes shall be restful and uninjurious to the eye, since the brilliancy of the light source within them must be subdued by their diffusive action.

Globes of harmonious contour and with that proportion of line, expressive of period and fixture design, should be selected. It matters not how beautiful a globe may be, when not illuminated, if when lighted an ugly, glaring splotch of light reveals the lo-

cation of the source, and destroys its pictorial value.

Globes and shades may be of totally enclosing, or semi-enclosing form. The former entirely enclose a light source, or else expose but a small portion of the lamp tip. In globes of such form light from the illuminant within is transmitted through the struc-



If the light source here be covered, the pleasing result of eliminated glare is instantly realized

engineer—"for utility."

The more progressive glassmakers who have done things worth while, have erred, per-

ture of the glass, and the pleasing appearance of such globes and their diffusive properties is entirely dependent upon the nature of the glass and its surface treatment.

In a totally enclosing globe of ordinary clear glass, the outer surface of which has been ground or etched with acid, there is apparent a brilliant spot of light in the midst of an illuminated area of less intensity. The microscope and camera combined were utilized by the writer in studying the phenomenon of light transmission in various media and it was noticed that the effect produced was to allow light rays to pass through the glass without changing their direction. It is well to realize that with either an electric bulb or incandescent gas mantle, the greatest candle power is obtained from the side of the lamp, the greatest radiating surface being there. Naturally from the tip or base, where the radiating surface is less and there is much impediment to light rays in the form of metal sockets or burners, the light is

weakened. Gas or electric lights are therefore rated by their horizontal, or side candle power. Hence the electric lamp which gives sixteen candle power on the horizontal, is rated as a sixteen candle power lamp, despite the fact that the candle power from the tip downward (when the lamp is in a pendent position) is but 6.6. The bright spot light, tells us beyond dispute that the greatest candle power is on the horizontal and nowhere else.

In a room of average ceiling height, with the typical fixture drop, such a



Source brightness must be subdued to avoid obliterating the delicate etching of such glassware

globe would allow the greatest amount of light to pass directly toward the side walls, causing an annoying glare or reflected light from picture glasses, and leaving the extreme upper and lower portion of the room in a stratum of darkness. There is positively no excuse for the use of ground glass in any form with modern illuminants. With the older and more subdued types of light sources the spot light effect was, of course, less aggravated.

For example in the Colonial lamp so often seen there is an appropriately formed globe upon which a design is cut, the background being *ground*. Now, with an oil flame, while there is slight visibility of the source, it is entirely natural and therefore good.

Even with a small sized electric bulb of the carbon type the effect is passable, since, at least, the amber quality of light subconsciously suggests the thing which is lacking. But with a tungsten lamp we have a brutal glare, so painful to the eye that one cannot regard the lamp without squinting, and all the beautiful detail of the design is lost.

While the use of the amber gelatine film, previously described, will modify the color value of



Fixture arms at this angle are incorrectly placed; the globes expose the lamps

with the exception that the suspended particles in the former are often visible, and are flake-like and blotchy in appearance.

Another grade of this glass, known as Etruscan opal, is being offered by several glassmakers, with a granite surface treatment, rich in expression. Several excellent imitations of carved alabaster bowls have been quite beautifully rendered in

pressed form. Their effect when lighted is beautiful.

In choosing glassware it requires no expert to distinguish ground from opal glass. Invariably with ground glass there is the glaring spot light effect, despoiling the beauty of design or ornamentation and distracting the eye. Opal glass is known by its soft, pleasing diffusion, and concealment of source. It is only in its cheapest and most translucent forms that there is any visibility of source, and then this defect is only apparent at close range.

From the angle of utility, it is interesting to know that opal glass, by virtue of its suspended opal particles, has the property of redirecting light, even when in the form of totally enclosing globes. The light redistribution tends to assume the form of the globe. Thus, a sixteen candle power lamp, giving more light on the horizontal than from the tip downwards or base upwards, when placed within a ball of opal glass will have its distribution of light modified by the opal ball, so that it will be more uniform, and, like the ball, more nearly spherical. That is, in the case of a bare lamp hanging pendent where the greatest light was in the

(Continued on page 152)



Bend the fixture arms to redistribute light, but use more suitable glassware



The best effect with glass prisms is obtained when used in conjunction with amber film

A Summer Home Well Furnished



*The home of Mr. Charles H. Traiser, Clifton, Massachusetts.
Howland S. Chandler, Architect.*

AN INFORMAL HOUSE WHERE ESPECIAL CARE HAS BEEN TAKEN IN FURNISHING THE BEDROOMS SO THAT THEY MAY BE COMFORTABLE AND ATTRACTIVE—PAPERS, CURTAINS AND RUGS THAT ARE COOL AND ATTRACTIVE—A NOVEL DINING-ROOM SCHEME

BY MARY H. NORTHEND

Photographs by the Author



THE trend of the last few years has caused great attention to be paid to the correct furnishing of the home. Details which have hitherto been unnoticed are looked after and careful attention is given that the rooms, when finished, may be correctly done, so that no jarring contrast, glaring and out of taste, results.

A very good example of the progress in this direction of more careful furnishing is found in the Charles H. Traiser house at Clifton, Massachusetts, Howland Shaw Chandler, architect. It is long and low in general effect and is two stories high, with wide overhanging roofs. The exterior finish is of cement and the

house is built to fit the grounds rather than the grounds laid out to harmonize with the house.

The entrance to the house is approached by a brick walk flanked on either side by bits of sward and ending in brick steps which lead into a portico and thence to the entrance door. The rear of the house overhangs the water, an unbroken stretch, and the underpinning supports a long, wide piazza which is so near the water that one easily has the impression of being on a ship's deck. It is fitted with willow furniture and appropriate rugs. The entrance door gives into a vestibule which has a spandrel arch between it and the main hall. Here a well placed stairway is shown and the furnishings are noteworthy. The hangings are of gray Japanese grass-cloth and contrast beautifully with the portières of rose pink. The darkness of the hardwood floor is well lightened by the beauty of the imported rugs.

Turning from the hall with its slight suggestion of

Colonial design one enters the long living-room. This is a well-proportioned room which has for its chief feature a fireplace at one end showing Colonial detail, and in keeping with the white woodwork and cornice. As the view from this room is chiefly over the water the furnishing has been influenced by the summery prospect from the windows and has been decorated as a distinctly summer room. The furnishings are of willow which gives a lightness to the apartment, and greens and blues predominate in hangings, rugs and upholstery.

Adjoining this room is a library of good size. This is fitted up with book shelves, finished in gum wood and has a large open



Leading out of the living-room is a well appointed sun room finished in brick and lattice work, which makes an attractive lounging place



One of the suite of rooms in which lavender and white wistaria form the key note of the decorations

fireplace. It is distinctly the man's room of the house, retired, restful and dignified in treatment, and gives opportunity for undisturbed comfort while the main living-rooms are in use.

Leading out of the living-room is a well appointed sun room, which makes an attractive lounging place, finished in brick and lattice work. The color scheme here is green and white and everything is in pleasing harmony, the furniture being all of willow. The lattice work will eventually be covered with vines which have already been started as house plants.

The dining-room is brightened by the bay window extending along one entire side and providing a beautiful outlook. The trim is of white enamel paneling, extending about six feet in height. A rather distinctive feature is the introduction of Japanese paintings



The dining-room is paneled in white enamel and uses for a frieze squares of beautiful Japanese water colors. This shows a good example of a niche planned for the sideboard



The cut out wistaria border is duplicated in the cretonne covers, the curtains and the bedspread. The bedroom furniture is of graceful design

as a frieze set above and held by wooden strips joining the wainscoting. As there is the full brilliance of Japanese artists' colors, the effect is quite remarkable, giving coolness but providing cheery brightness. The lighting fixtures here also are carefully planned; four sidelights of Sheffield design are attached to the wall, two at either side of the door, and two at the niche that was built in to contain the sideboard. These fixtures heighten the effect of glass and silver on this piece of furniture. The center light above the dining-room table is of an opal glass that diffuses a pleasing glow about the room. There is absolute simplicity of decoration employed, but the whole treatment is very effective.

One feature well worth remarking here is the fact that not a single radiator throughout the house is exposed. All are hidden behind grill work of attractive design as evidenced in the illustration on the first page of this article.

The whole lower story has been thrown into practically one room, which allows for extensive entertainment in a comfortable way. It also allows a cooling breeze to circulate in the summer so that the house is never uncomfortably warm. The windows are well placed, allowing for plenty of sunlight through the day, and a constant current of air during the hot weather.

Simplicity is sought. There is a quiet elegance which is shown in the careful thought exercised in selecting every piece, and avoiding a surplus of even good furniture, arranging it so as to give scope for good taste and originality. For the proper arrangement and furnishing of a house is a problem which is not easily solved, and the careful placing of furniture in rooms by themselves is a task which if properly handled, gives refreshing results. Here the pieces may be original, or they may be reproductions, but still they show the good taste and dignity which mean a thoughtful working out of details.

The service department is well planned and shows a kitchen, butler's pantry, and ample store rooms. In fact, everywhere throughout the house are closets so ample and so many that they delight the housekeeper's heart.

If good taste has been shown on the entrance floor, as artistic furnishing is seen in the second story. This is given up to chambers, baths and dressing rooms. Notable among them is a suite of rooms which is finished in lavender and white. Now the idea of lavender and white as a color scheme may not appeal



Heavy mahogany is replaced with light and delicate fittings and the color schemes are carried out carefully in but two colors



Pink and white predominate in this girl's room and are repeated in the ribbon and rose border

to everyone, but could these rooms be seen in their natural colors, without doubt the impression would be that this is one of the most beautiful of color combinations. Graceful wistaria forms the foundation of the floral design in these rooms, the bunches of blossoms draped artistically from the ceiling. The same flower detail is shown in the hangings, bed and couch coverings, while even the screen is finished in lavender and white. The bed with its wicker appointments is done in the same color scheme. The lighting in these rooms differs somewhat from that in the other rooms, having little gas fixtures of artistic design inserted in the walls, while a reading lamp stands by the side of the bed.

While speaking of furniture it might be well to mention bedside tables that are in each bedroom. These are of the same design and construction as the beds and are covered with glass tops. Those who appreciate the luxury of reading in bed find

such articles add greatly to one's comfort. They may contain besides the lamp a water pitcher and glasses.

Another room in this house which is equally attractive, shows rattan and wooden furniture of comfortable form and artistic design in which pink and white predominate. This is a dainty room, furnished appropriately for the daughter of the house. The border of the wall paper is of ribbon and rose pattern, while the cretonne hangings are all of pink and white. The lighting is mostly from the sides, but over the dressing table has been introduced a hanging light which affords better illumination here where more light is appreciated.

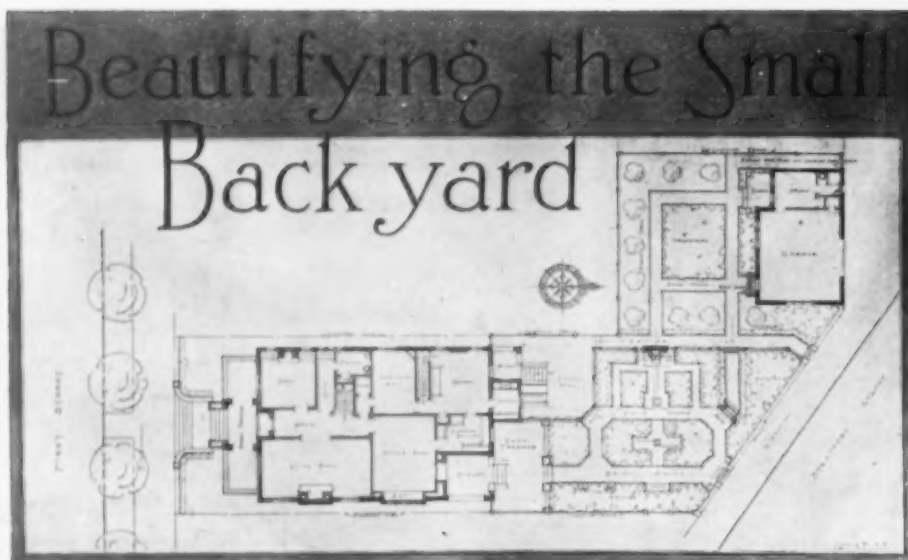
Each room is just as carefully thought out, and each is devoted to two colorings which harmonize perfectly. To be sure, occasionally we find a room furnished in the Colonial period, but the general idea throughout the house is for up-to-date, artistic and well thought out schemes which go for perfect furnishing. This plan has been chosen for exactly what it represents—the fitting up of a summer home, using care to exclude the heavy mahogany pieces and substitute light, airy and delicate fittings which harmonize with the idea of what a summer home should contain.

The house is as yet very new, having been finished only last year. In several years' time, when the vines have grown and the trees have grown up to overshadow the plain and simple exterior, one will see a decided change in the grounds. This may appear a great advantage, objection being made to the present severity of the exterior without its setting of trees, shrubs and flowers; but to the expert critic, there is a feeling of relief to find a house like this which speaks for itself in its dignity and well-defined originality of construction and manner of furnishing.

Especially in the bedrooms is the mistress to be commended. The idea of a two-color scheme for each, followed out to the smallest detail of harmony, is better than endeavoring to have each room a different single color.



The living-room is long and well proportioned, its chief feature being a fireplace of Colonial detail in harmony with the white trim



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Photographs by S. P. Negus, Landscape and Garden Architect

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Besides showing graphically how much can be done toward making a back yard "garden" that really deserves the name, the photographs demonstrate conclusively that a long period of time is not necessary for the place to assume an air of completeness and settled age. But a single year's progress is shown here, and yet in that period this place of Mr. Negus' designing has been transformed from a bare and unattractive back yard to a really pretty garden where the warm, red brick walks are bordered with flowers and box, the lattice work and arbor covered with vines, and the whole transformed into what it is intended to be—an outdoor living-room.

Perhaps a few words of explanation as to the reasons lying back of the design may be of interest. In the first place, it was obvious that no so-

called "natural" manner of planning would be appropriate in such a restricted space, surrounded as it is on all sides by rigid architectural lines. The scheme, therefore, is strictly formal or architectural in plan, such as would best "tie in" with the house and harmonize with the surroundings, and at the same time utilize the limited space to best advantage.

The garden is bordered on the street side by a high brick wall and separated from the adjoining properties by tall lattice fences. The problem here is really that of an outdoor living-room, and

there is no more reason for exposing it to the public gaze than to open up to public view the living-room inside the house. Whatever the merit of the argument sometimes heard against the English practice of enclosing their private grounds, there can be no question of its expediency in such a case as this.

The "back yard" here pictured is divided into four "compartments," if I may so term them: flower garden, vegetable and service quarters, terrace, and drying yard. The flower garden proper occupies a space of approximately fifty by sixty feet, while the vegetable and service quarters measure about forty by fifty feet. Nevertheless it is extraordinary how much gardening pleasure the owners have in their limited domain.

The main feature of the garden is a head of the sylvan god Pan in dull green *faience*, set into a cement and brick wall panel. He cheerfully spouts water out of his mouth into a basin containing gold fish, whenever he is given the cue by a turn of the handle on the terrace. The overflow from the basin trickles musically down a shallow brick channel in the walk into a central bronze drain which also carries off the surface water of the garden itself.



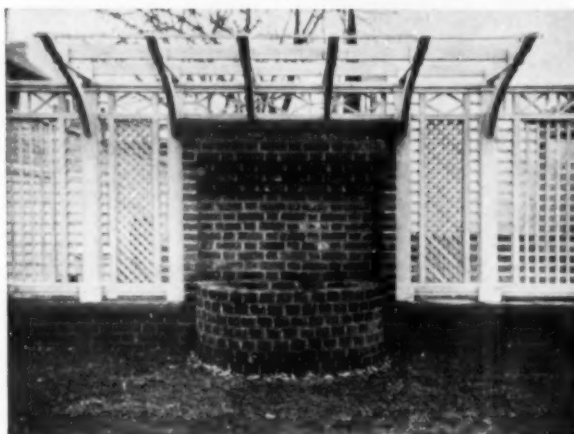
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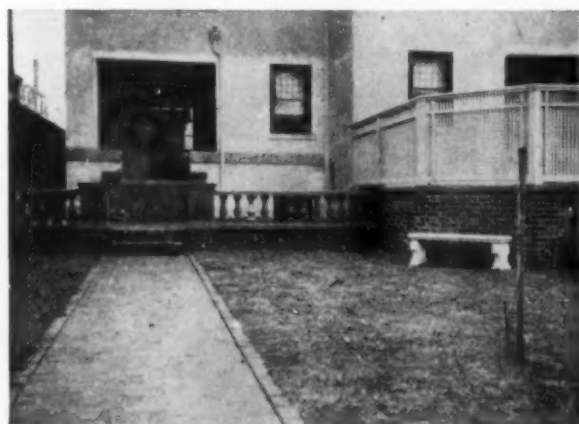
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For the reason that the garden has been designed with the object of being attractive at all seasons of the year, considerable use has been made of low, broad-leaved evergreen shrubs as a background for the more showy old-fashioned perennial flowers and bulbs which give an abundance of bloom and color throughout the spring and summer.

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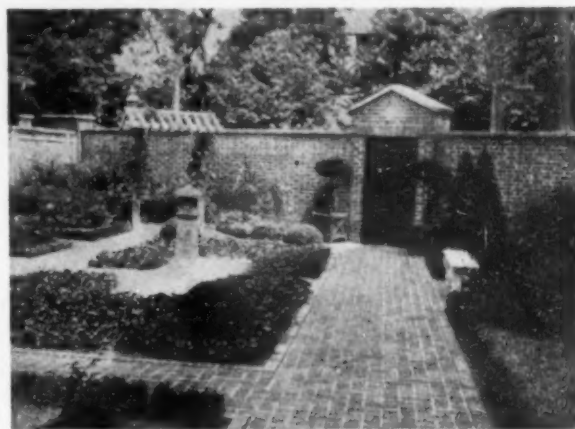
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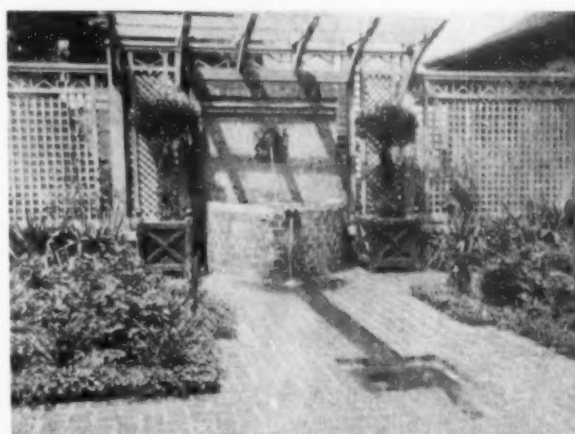
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(Continued on page 129)



An unpleasant prospect was shut out by the trees



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ITS HIGH DEVELOPMENT AND MANY POINTS OF INTEREST—ITS INGENUOUS METHODS OF FERTILIZATION—THE WORLD-WIDE SEARCH FOR RARE SPECIES—ITS EFFECT ON THE ANIMAL LIFE OF ITS ENVIRONS

BY TYNDALL BISHOP

Photographs by Nathan R. Graves and Ella M. Boulton

NO flower has a more peculiar hold on the imagination than the orchid. Around no other has there been gathered such a mass of legend and so much misapprehension. Notwithstanding a keen interest in and apparent appreciation of the orchid, there is really no flower about which the public knows so little, while willing to believe so much.

Perhaps the most glaring misconception, as it is the most often repeated and most generally believed, is the statement that all orchids are parasites, and writers add insult to injury by classifying them as fungi. Nothing is more untrue and nothing arouses the ire of the orchid lover more thoroughly. While recent investigations point to the conclusion that certain of the saprophytes have parasitical tendencies, yet in all the ten thousand known flowering species no real parasite has been discovered. True, a large number of them, and these the most interesting, grow on trees. But it is not from the trees to which they cling that they obtain their nourishment. They are not vampires, sucking the sap from the branches which give them shelter. On the contrary, these marvelous plants subsist chiefly on air. While the dust collecting at their roots furnishes some nitrogenous matter, their real living and the drink which chiefly sustains them, is the moisture of the atmosphere itself.

Instead of belonging to the fungi, the tribe of orchids forms the very highest caste of the vegetable kingdom. No other order of plants is so highly developed and no other exhibits such

a wide range of shapes and sizes with so many singular modifications of root, tuber, leaf and flower.

Their flowers, differing vastly from each other, some beautiful and elegant, others bizarre and grotesque, are so remarkable in many of their forms that it is no wonder that they have been thought to possess something closely resembling intelligence.

Charles Darwin was the first to read the meaning of their endless diversity of structure. Others, Sprengle, Brown and Hooker, had caught hints, but it was Darwin's painstaking study as set forth in the most fascinating of scientific works, "The Fertilization of Orchids," that revealed the secret of the orchid's life and incidentally threw a flood of light on the meaning of other flower forms. Earlier investigators had observed them to be barren in the absence of insect visitors, but it was reserved for Darwin to discover how the organs of almost all orchids are so arranged that fertilization can only take place through the transportation of pollen from flower to flower. In other words, the countless, cunning adaptations as seen in their flowers are all means to one end. The bent and aim of all orchids is the improvement of the species, and this, with a multiplicity of resources, they are attempting



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To attract the messenger, gorgeous colors are displayed and sweet perfumes wafted on the air. Honey, too, is usually provided in good store, but always in a way that prevents the insect from taking toll without performing the task that the crafty flower has assigned it. Sometimes no free honey is present. In order to get the sweets the insect must bore into the tissues. These tissues are placed in parts of the flower where the insect will come in contact with a sticky membrane when assuming a position to drill. This instantly glues itself to the intruder's head, and in flying off the insect drags the pollen masses with the membrane. Eager for more nectar, the insect now seeks another flower, where, in negotiating an entrance, it will, perforce, leave the pollen where it reaches the ovary. In other kinds of orchids, in the *Cattleya* for example, plenty of honey easy of access flows at the bottom of a long trumpet. Mistress Humblebee finds no trouble in reaching the feast, but in retreating she upturns a cup of glue and smeared with its contents rubs against the pollen masses and carries them away.

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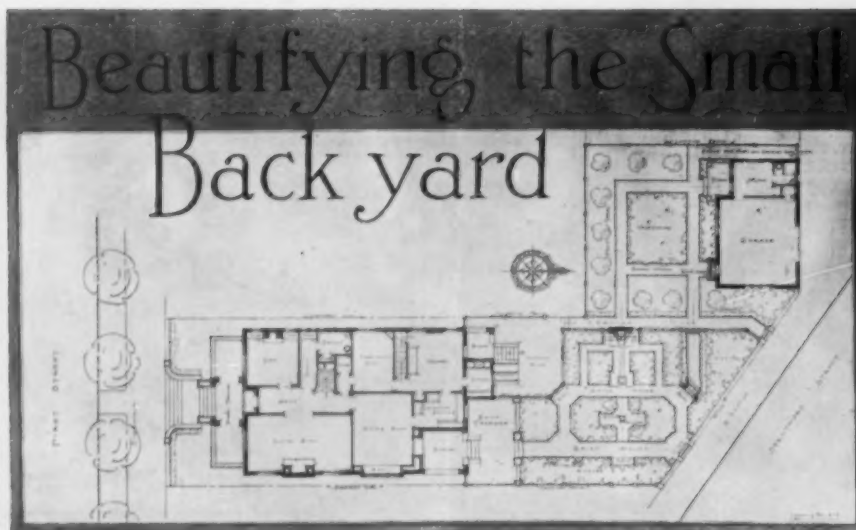
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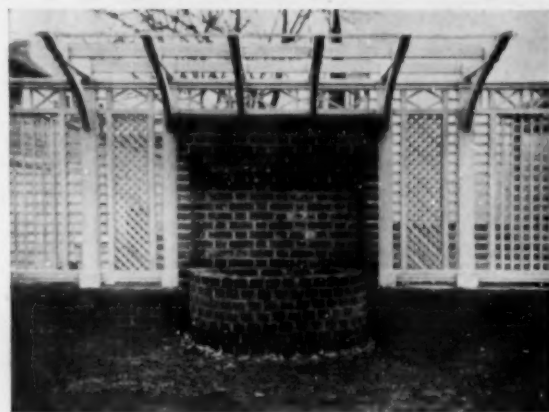
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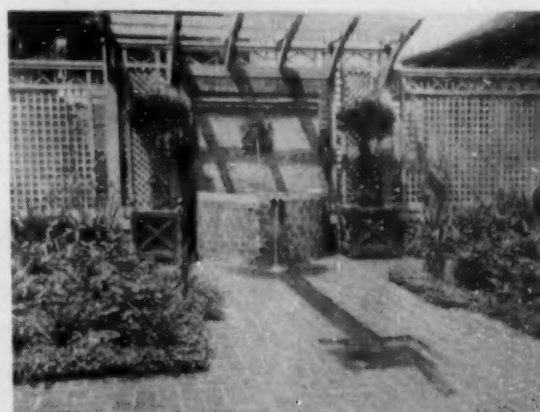
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- (Continued on page 129)



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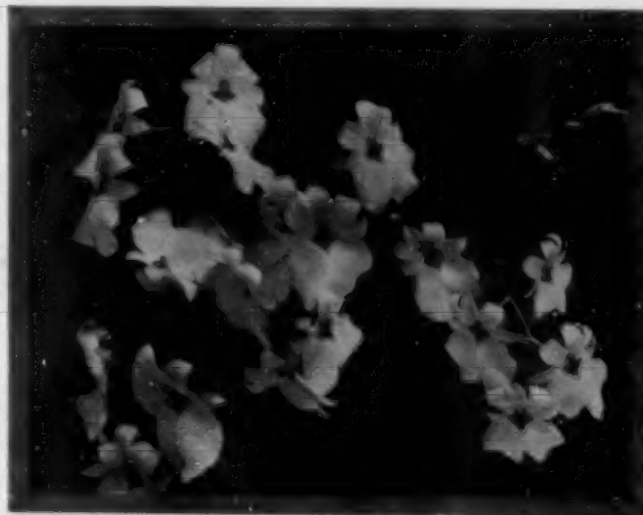
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flower, and the separation of the sexes has given rise to such distinct and unlike forms that for a long time botanists thought them to belong to totally distinct genera. Of their fertilization Darwin says: "Nature has endowed these plants with what must be called for want of a better term, sensitiveness, and with the remarkable power of forcibly ejecting their pollen to a distance. Hence, when certain definite points of the flower are touched by an insect, the pollinia are shot out like an arrow which is not barbed, but has a blunt and excessively adhesive point. The insect, disturbed by so sharp a blow, or after having eaten its fill, flies sooner or later to a female plant, and while standing in the same position as it did when struck, the pollen end of the arrow is inserted into the stigmatic cavity, and a mass of pollen left on its viscid surface. Thus, and thus alone, at least three species of the genus *Catasetum* are fertilized."

Notwithstanding their elaborate artifices, orchids are most dependant creatures, each species absolutely relying for the propagation of its kind on the special insect carrier it has selected. Thus we see whole groups reduced to the commonplace device of flaunting their white banners in the dark, the better to attract the night-flying moths by which they are fertilized. So, too, and for the same purpose, the sweet-scented varieties of the Philippines give forth their perfumes only after dusk. The *Aeranthus sesquipedalis* of Madagascar, a wonderful flower, with a nectary prolonged into a sheath from twelve to eighteen inches deep, can only be fertilized by a moth with a proboscis long enough to reach the honey secreted at the bottom of the pouch. This abnormal lepidoptera failing, the *aeranthus* must likewise perish.

Interest in orchids, however, is by no means confined to these curiosities. The great attraction is really on the esthetic side. The beauty of a large number of them is unequalled in the works of Nature, and would be sufficient to attract attention were orchids as common as daisies in the field. Naturally their interest is enhanced by their rarity. Orchids are never common. Although sometimes plentiful enough in the inaccessible tropics, they are, even there, but sparingly distributed at the best. There are many species, but each species is composed of comparatively few individual members. Wherever found they are among the unusual flowers, and yet the great family is so widely scattered that its members tenant nearly as wide an area of the earth's surface as do human beings. Some of them make their abode where man cannot live. They are found on the hot and arid hillsides of India, in the bogs of Maine and Canada, in the meadows of England, in the jungles of Brazil, in the wooded canyons of California, on the bare mountains of Sumatra, and indeed, except for the polar regions, there is no country to which

they are not native. One species, *Oncidium nubigenum*, the "orchid of the clouds," is found in the Peruvian Andes at a height of fourteen thousand feet above sea level, and variations of the *epidendrum* grow far above the timber line, where trees are unknown and snow is almost a daily occurrence. Other species are among the familiar wildflowers of the temperate regions, and "long-purples" and "dead-men's-fingers," flowers mentioned in Hamlet, are both orchids. Generally speaking, however, the species represented in the temperate zones are inconspicuous, usually to extreme modesty, frequently are devoid of beauty, and know no such variety of color or size as do their exotic sisters.

While in saying this I am not forgetting the lovely dendrobiums of Australia, nor the many, charming cypripediums of the American woods, yet it is uncompromisingly true that without the tropic varieties, interest in orchids would be confined entirely to the botanist or to him who has the patience to seek out the wonderful, wild plants of bog and swamp. Even then the stimulus would not be found that is now given by the many curious and puzzling forms, the wonderful contrivances and the surpassing splendor of the southern importations. From the tropics alone all orchids of horticultural value are derived, and amateurs have recruited their great collections from the same regions.

Numerous as exotic orchids are to-day, nearly all of them have been imported within the last sixty years. During this period the orchid-growing regions of the world have been ransacked, and while there are spots still untouched, jungle recesses which so far have baffled the most

ardent explorers, whole sections have had their glorious plants packed off by thousands to England and America, leaving in some cases their native habitat bare. Thus entire sections of Colombia, once the home of *Miltonia Vexillaria*, have been denuded of their treasures, and persons desiring specimens of this plant must now wait the tedious process of root division or the more uncertain results of seedling propagation. In these days the most ardently sought for of all orchids is the *Odontoglossum crispum*. During one search for this species when ten thousand plants were collected, four thousand trees were cut down to obtain them, and the camp was moved on week by week as the explorers exhausted the available supply. It has been estimated that a tree has fallen for every three pieces of *crispum* in cultivation. The forest devastation that their possession has cost the world may be realized when it is considered nothing unusual for a single collector to have five thousand of these plants on his shelves.

The small island, Santa Catarina, off the coast of Brazil, was the home of *Laelia elegans*, where with *Laelia purpurata* and *Cattleya Leopoldii*, it flourished in a profusion seldom known to



Our native, yellow lady slipper; compare with its exotic sister below, the *Cypripedium selenipedum*



(Continued on page 127)

The Place of Built-in Furniture in the House

WHERE BUILT-IN FURNITURE MAY COMPLETE A DECORATIVE SCHEME—WHERE IT FITS AND WHERE IT MAY BE OUT OF PLACE—OPPORTUNITIES FOR UTILIZING WASTE SPACE AND SUGGESTIVE HINTS

BY LOUISE SHRIMPTON

Photographs by Mary H. Northend, Jessie Tarbox Beals and Others

IN the distinctively modern house much of the furniture is a structural feature, an integral part of the walls. Ingenious built-in devices are also introduced throughout, expediting household service and promoting convenience. Furniture and devices are designed by the architect in connection with other architectural features; or are carpenter-built under the home-builder's direction; or owners possessed of handicraft training themselves design and build them.

Not the least of the advantages accruing to furniture of the built-in type is that it suits individual requirements. An ideal is faithfully carried out without the weary search through shops that often results in compromise or disappointment. An architect's plans and elevations, or instructions and a few dimensions given to the carpenter, produce a piece of furniture that is precisely what the owner wants. Every home-builder with a love for books has ideas as to their proper housing; open or closed cases are easily built in, so contrived perhaps that the seeker after books does not have to fall on his knees nor climb ladders to reach them. Every house mistress has convictions on the proper mode of storing away doilies. And in one linen cabinet of the built-in sort there may be bars around which doilies are loosely rolled; while another is fitted with a series of wooden trays on which the doilies lie flat, each set of them on a tray of its own. The practice among home-builders of giving careful thought to the disposition of each article of household gear makes for results of decided individuality. And as a consequence of this thought the interior sometimes becomes an epitome of the owner's tastes and convictions, a background of extraordinary value. A room may convey to the guest a subtle impression of literary or artistic culture, due, among other things, to the realization in the fittings around the walls of some long-cherished ideal of the owners.

A practical point is that furniture thus built fits the owners in size. There is a fireside seat made to measure for the man of the house. A desk is contrived at just the right height for the house

mistress, and with it a seat or bench. Sleeping-room fittings are built in varying sizes to suit the occupants. Comfort is a necessary characteristic. A built-in bench or seat, not of the right height or depth and without comfortable cushions is never used, becoming merely an ornament of doubtful worth.

In the well-equipped house, not only are the owners' personal preferences gratified and their living-rooms made pleasant and illuminative backgrounds, but the house as a place for housekeeping is successfully exploited. Useless walking is done away with by careful placing of the fittings that help in household tasks. Cupboards and racks holding linen, food supplies, or saucepans, are so placed with relation to other household fixtures that speed in service is assured. The endless series of entries and pantries once built, has given place to one or two rooms, the walls of which are covered with compactly arranged fittings. While the house in its methods is still inferior to office and factory, it is steadily advancing in efficiency as a work place. In houses built within the last year or two, the broom and dustpan are non-existent. Attach-

ments on each story are provided for the vacuum cleaner, run by electric or water power. Dust cloths need smaller allotment of space in kitchen cupboards with this dustless cleaning, and broom cupboards, formerly provided on each floor, are eliminated. Many ingenious devices are installed to save labor. In the hall closet is perhaps a trap door with a shelf beneath for firewood for a nearby fireplace. A small dumbwaiter is often put in between kitchen and the upstairs sitting-room, so that afternoon tea is served without stair climbing. A special refrigerator or tiny cool room is sometimes built in accessibly. The laundry chute invariably put in, saves the tugging of clothes-baskets downstairs to the laundry. These features and others impossible to buy ready-made are installed at



This attractive angle shows what can be done with odds and ends of builders' material



How the aspect of a room may be altered by built-in furniture—a separate library is formed by these bookcases

small expense when the house is being built.

An advantage of built-in pieces as opposed to heavy movables placed against the wall, at least according to the housekeeper

point of view, is that the built-in product avoids the storing up of dust. Even with a vacuum cleaner, the wall behind a heavy piece and the floor beneath it are not properly cleaned unless the piece is moved, a process involving much labor, and possible damage to the piece at the hands of a careless maid. The built-in piece is itself the wall and cuts out a section of floor. Its moldings may be plain and the broad surfaces unornamented, their perfect smoothness making cleaning or dusting an easy task.

In that best of economies in house-building, the saving of space, built-in furniture helps astonishingly. A small house with built-in features often possesses the amount of actual floor space available in a much larger one. Chests of drawers of varying depths, built into sloping roofs around dormers, are noteworthy examples of the utilization of waste space. Home-builders fitting up their first house find it possible through the building of these chests, to dispense with dressers or chiffoniers. A cheval glass is often fitted into a door panel instead of occupying valuable floor space.

Built-in wardrobes are the modern substitutes for closets. The contrast is great between the wardrobe and the old-fashioned closet with its waste floor space, its darkness, limited supply of hooks, and floor cluttered with shoes. In the wardrobe paneled doors disclose, when open, well-lighted compartments of convenient height, fitted with poles for hangers or filled with movable trays of light wood used for holding shirts or waists. Smaller ventilated compartments at the wardrobe's base hold boots and shoes, while separate doors at the top open into built-in hat boxes large enough to hold several hats. If a wardrobe is extensive, trays or drawers are numbered or lettered as an index to their contents. A child's wardrobe fitted with trays is found especially convenient, since small frocks may be kept at full length in them.

A window seat under a dormer is often fitted with a long drawer beneath, and with built-in chests or wardrobes on each side, giving



A good Colonial effect in keeping with the room is here secured by the built-in china closet



Ugly and useless chimney space can be eliminated by a symmetrical arrangement of cupboards



The built-in sideboard gives the desired space for silver and table linen, the long drawer affording room for table cloths

an attractive, white paneled effect to a sleeping-room wall. If the old variety of clothes closet is retained, it frequently has a window, while an inclined shoe ledge with heel rest projects from the baseboard. Linen closets are convenient features occupying an upper hall location. Sometimes a closet becomes a small room, with window as well as electric light. Broad ledges give opportunity for the sorting of linen and the performing of small household tasks, a high stool furnishing a seat. Convenient compartments are devised for blankets and sheets, and a shallow cabinet for medicines may also be a feature of this housewife's room. In a very small house a linen closet is compressed into a wardrobe, but is fitted with a good-sized compartment for quilts and with shelves and trays placed close together, for holding sheets and blankets. Hinged doors, one for each four or five shelves, opening downwards and supported by chains or props, form convenient shelves when assorting the linen.

Nooks and corners in a cleverly designed house, the odds and ends necessarily left over in building, are utilized for small fittings. A tiny music cabinet fills a living-room nook. A corner of the butler's pantry, of precisely the size to hold table leaves, is turned into a table leaf cupboard. A plate warmer is installed in another left over corner. Chimney space around flues, utilized in charming fashion for cupboards above or at one side of old fireplaces—those delightful cupboards with white paneled doors, fastened by wooden buttons—is occasionally used in the same way in a newly built house. The old cupboards, their closed doors exciting curiosity as to their contents, and when opened giving out faint odors of Oriental sweetmeats or of bygone roses, represent the poetic side of the cupboard, too often neglected in our modern quest for the practical.

In built-in furniture devised by the architect, he is given an opportunity to carry further his scheme and to ensure its harmonious completion. Furniture as an architectural feature has ob-

vious reasons for existence. The beautiful shell buffet of our Colonial period was designed in connection with cornices and fireplaces. It formed an essential part of a perfect whole. The modern movable china closet, standing out as an excrescence and inevitably ugly and in the way, is happily being replaced by the built-in china cupboard. In the modern Colonial house antique designs are copied as faithfully as the difference between old and present-day craftsmanship permits. In the house of modern trim, where flat surfaces, stained, are obtained in the woods used, the cupboards are unobtrusive but pleasing in effect. To cut off two corners of a room with built-in china cabinets is a device often used, giving adequate storing places for glass and porcelain. While the upper half of these cabinets is usually glazed, the lower is given up to cupboards with paneled doors, or even more conveniently is fitted with drawers of varying size.

The use of the bay for built-in furniture is a frequent architectural device giving a point of interest to an interior. A long window seat, either a box opening in sections, or fitted with drawers, or without any storing space beneath, is an effective use of the bay. In a country cottage or bungalow, a sideboard is frequently built in a bay with window above. In the built-in sideboard, precisely the desired accommodation for silver or table linen is secured, and there are long drawers for table cloths.

For a large piece of furniture of exceptional value, it is often possible to build a wall niche, enshrining and making it an integral feature. A sideboard, a family heirloom or the work of a modern craftsman, given a special niche with small built-in china cupboard above, is enhanced in importance and makes a spot of special interest in the room. An old desk may in the same way be installed in the living-room. In the sleeping-room a chest of oak or mahogany may have a niche contrived for it in a sloping roof, with a little space left above so that the top may be usable.

The craftsman who con-



In a room pressed for space the corner china closet may be a very desirable feature



Chests of drawers built into sloping roofs around dormers utilize waste space and remove the unsightly slope of the eaves



The effectiveness of this buffet was attained by the planning of an exact space for it by the architect

structs furniture around the walls of his house, or who personally directs a carpenter's work, makes out as a preliminary an inventory of household goods and chattels. The library is measured, and the amount of space to be given to books is calculated, with allowance for increase, or with space left for future shelving. In planning cases, shelves are made of varying heights to accommodate books of different size, a method that saves room and gives opportunity for interesting space divisions. The inventory made of china and linen ensures sufficient accommodation while it guards against the building of too many cupboards. Unoccupied storage room is a bad investment. In planning dish cupboards, shelves close together are designed for low, flat dishes. Little half-way shelves prove feasible for small dishes. If the location of each set of porcelain is carefully planned, space is

utilized to its fullest extent. The designing of furniture that is comfortable and usable and of fittings adapted to their purposes, is a task indulged in and enjoyed by many home-builders of handicraft tastes.

From what has been said above, it is evident that the appropriate use of built-in furniture is not of necessity confined to the house of craftsman design and simplicity of detail. Reference to the illustrations clearly demonstrates that there is excellent precedent for built-in work, not only in houses of modern Colonial design, but also in their prototypes of an earlier day. One caution should be heeded, however, in designing built-in work in any of the period designs: be very sure that it harmonizes perfectly with the rest of the house.

Designed by an architect, or planned and executed by a craftsman owner, built-in furniture in the successful house fills its own place and fills it unobtrusively. It does not strive to supplant the necessary and often beautiful movables or even to compete with them. It is merely, so far as the eye is concerned, part of a wall, forming a well-spaced, agreeable background for the people who occupy a house. Simplicity is its most valuable characteristic.

Foliage Plants Everyone May Grow

AN EXPOSITION OF A SUBJECT ABOUT WHICH TOO LITTLE IS GENERALLY KNOWN—THE NEEDS, APPEARANCE AND GENERAL CHARACTERISTICS OF THE MOST SATISFACTORY KINDS

BY F. F. ROCKWELL

Photographs by Chas. Jones and Others

THE peerless beauty of palms as house plants is never questioned, and if the details of their culture were more generally known they would undoubtedly be more generally used. The reason why they are not to be found wherever plants are grown in the house is not so much that they are more difficult to handle as that they are different in their requirements.

In the first place, while most house plants should be repotted as often as they begin to form a mass of roots about the outside of the earth ball, palms do best when restricted as to root room. Repotting once a year when they are small, and even less frequently when they are in large pots or small tubs, will be often enough. They grow very slowly, and it is not only useless but dangerous to attempt to force them along at a more rapid pace.

The best time for repotting is late spring—May or June. Use a pot only one size larger than that in which the palm has been growing. Remove carefully, *do not disturb the roots*, and put into the new pot carefully, ramming the new earth in firmly about the old ball with a thin piece of wood.

The soil for palms need not contain as much humus (leaf mold or peat) as that for most other house plants. Good, rich garden loam, with sharp sand added and bone meal worked through it, will be right.

Be sure the drainage is perfect. Crock the pots carefully. If any of the crocking from the old pots comes out with the ball of earth, remove it as carefully as possible and fill in the space with soil. After potting, keep shaded for several days.

While palms require plenty of water, no plants are more fatally injured by overwatering. Above all care must be taken never to

let water accumulate in saucers or jardinières in which the pots are standing. Water will soak up through a pot as well as down through it, and water-saturated soil will quickly become sour. When you do water, do so thoroughly, then see that the pots are kept where they can drain out, and do not water again until they show a tendency to get too dry. Much water will cause the leaves to turn brown. In this case, change the treatment at once. The amount of water required is much greater in summer than in the winter, when the plants are practically at rest.



Dracaena indivisa is a good house plant combining attractive foliage with great hardiness



If the piazza conservatory is floored with concrete, the plants may be freely watered without injury to the floor

Direct sunlight is not desirable for palms, but they should have plenty of light. Do not stick them away in a dark corner or an inner room and expect them to do well. They will stand such a situation several days without injury, but should be brought back to the light as soon as possible. They do well in north windows, providing the temperature of the room is high enough. Remember, however, that pots kept in a shady place will dry out much less quickly than those in the light or sunlight. If they are to be kept permanently where the sun does not strike it is a good thing to add charcoal to the soil, as this aids greatly in keeping it from becoming sour.

Give plenty of air—the more the better, so long as a proper temperature is kept up, as that counteracts the effect of the more or less poisonous atmosphere of living-rooms kept closed during winter. Beware of drafts blowing across the palms, but provide plenty of fresh air.

In the spring, as soon as it warms up outdoors—say after the apple blooms fall—place the palms outside in a sheltered position, where they can be given plenty of water. At this time, if they are not repotted, bone meal should be worked into the surface of the soil and a liquid manure of bone meal given once a month or so during the growing season.

Both during winter and summer, shower the leaves frequently with as forceful a stream as possible, to prevent scale and mealy bugs getting a start. Keep the leaves and stems clean by wiping off every once in a while with a soft cloth and soapy water, syringing with clean water afterwards.

Although the number of palms cultivated is very large, very few indeed—only about a dozen—will give satisfactory results in the house. The fact that a palm will live—or rather take a long time to die—under abuse, has misled people into thinking that it does not need as much care as other house plants. This is a mistake.

Palms may be considered in two classes: the fan-leaved and the feather-leaved, or deeply cut, sorts. Of the former there are but three sorts good for house culture.

Latania Borbonica, the Chinese fan-leaved palm, is the best known. It is one of the hardiest, standing a temperature as low as forty-five degrees at night. It is broad in habit, and the large leaves are deeply cut and drooping

at the edge, making a very attractive appearance.

Livistona rotundifolia, the Miniature Fan palm, is a more compact type of the above; not only the leaves but the whole plant being round in habit and growing quite dense. It is a beautiful, lively green in color, and making a neater plant, is in many ways more

deliana and the hardiness of *Kentia*." That perhaps describes it, but does not do it full justice. It has several times the amount of foliage that *Cocos Weddelliana* has, and is a more robust grower. Unlike that palm, it has leaf stalks growing all the way to the bottom, the lower ones gracefully recurved and the upper ones spreading airily. It is very easily cared for and on the whole wins on a larger number of counts than any other house palm.

Phoenix rupicola has gracefully arching, drooping foliage and is very handsome, the dark green leaves being even more feather-like than those of *Cocos Weddelliana*. It is also one of the hardiest.

Areca Verschaffeltii is unique in having a creamy colored midrib. It must be given the best of care, but will well repay any extra pains taken with it.

The *Kentias*, *K. Belmoreana*, the thatch-leaf palm, and *K. Forsteriana*, the Curly palm, are the hardiest of all the house palms and sure to give satisfaction. The former is of dwarf, sturdy habit, with broadly divided, dark green leaves borne up well on stiff stems. *K. Forsteriana* is of stronger growth, spreads more, and the divisions of the leaf are broader.

Cocos Weddelliana is the most artistically graceful of the house palms. The finely cut, feathery leaves spring well up from the pot and from the slender, erect stem. It is a small palm and grows slowly. I think I should give it a place among the three choicest palms for the house, although, unfortunately, it is not as hardy as some of the others. It is the best palm to use as a center for fern dishes.

Seaforthia elegans, the Australian feather palm, is a tall growing and stately variety, which does well in the house.

Caryota urens is commonly known as the Fish-tail palm, and on account of that distinguishing characteristic deserves a place in any good collection. It is a large growing sort and will utilize more root room than most of the others. It is not so strong as most of the others



Aspidistra linida variegata has handsome, white striped foliage and withstands unfavorable conditions

desirable for the house than *Latania Borbonica*. It requires more heat, however, and should be kept up to fifty-five degrees at night if possible.

Chamaerops excelsa has the distinguished feature of forming shoots at the base, thus having foliage where most palms are bare, and in old specimens unattractively so. Its leaves are shaped like those of *Borbonica*, but are smaller, and the leaf stalk is longer in proportion. It is a good strong variety.

Many of the feather-leaved palms are of more recent introduction than the old favorite fan palms, but they have won their way to a growing and deserved popularity.

Phoenix Rabelenii is one of the newest. It is destined, I venture to say, to become the most popular of all palms for the house. It has frequently been described as having the "beauty of Wed-



Cyperus alternifolius, the umbrella plant, has exotic beauty, though it is easily grown



The rubber plant is perhaps the most popular of indoor foliage plants, but it needs intelligent treatment to acquire a good appearance

described, but will succeed well if precautions are taken not to let it get chilled in cold weather.

Unlike the palms, most of the other foliage plants for the house are rapid growers, and depend for their beauty largely upon being grown quickly and under the most favorable conditions.

The Norfolk Island Pine (*Araucaria*) is, I think, the most beautiful of all decorative plants. Its dignity, simplicity and beautiful plume-like foliage of clear soft green, lighter at the tips, borne on straight branches that leave the main stem at right angles in whorls at regular intervals, make it unique among house plants. They have become very popular as Christmas gifts, but most of the fine specimens that leave the florist's during the holiday season, find their end, after a few weeks in a gas-tainted, super-heated atmosphere where they are probably half drowned by the excess of water given at the roots, in the ash-barrel. They should, with proper care, last for several years. Keep the air as fresh as possible, the temperature cool, forty-five to fifty at night, and water very sparingly during the winter months. In summer place outdoors in a sheltered spot.

For unfavorable conditions—extreme cold, dry air, dust and smoke—*aspidistras* are the most satisfactory foliage plants. The long flat leaves grow to a height of one and a half to two feet, springing directly from the base of the plant at the soil. They like plenty of water during the summer. The sort most commonly seen (*A. lurida*) has plain dark green leaves, but *A. l. variegata*, with its handsome white striped foliage, is a revelation to those familiar only with the former. *A. punctata* has spotted leaves. The variegated pineapple (*Ananas sativus* var.) is one of the most beautiful and probably the most satisfactory for use in the house, of all the variegated leaved foliage plants. The broad, tough, sword-shaped leaves, two to three feet long, rise from the center of the plant in habit similar to the screw pine (*Pandanus*), and are beautifully variegated with bands of

that none of it lodges in the axils of the leaves, as rot is very easily induced. New plants are produced from suckers at the base of the old ones.

Pandanus utilis is the variety most commonly seen. *P. Veitchii*, dark green, bordered with broad stripes of pure white, is much more decorative, a really beautiful plant. *P. Sanderi* is another good sort, with golden yellow coloring, that should be given a trial.

Farfugium grande,



The thatch-leaf palm is one of the hardiest of all house plants of its class



The leaves of the dracaenas give an almost fountain-like effect

better known as Leopard Plant, has handsome dark green leaves marked with yellow. It is of the easiest culture, standing zero weather. Old plants may be divided in spring and rooted in sand. There is a newer variety with white spots, very beautiful. The *Farfugium* is now more commonly listed as *Senecio Kämpferi*.

Another plant which I consider excellent for house use, but which is usually left to die in the vases or to go back to the florist's after its summer service outdoors, is *Dracena indivisa*. The long, narrow, graceful foliage, producing the most fountain-like effect of any decorative plant, and its extreme hardiness, should make it much more popular as a house

plant. As I write there is a large specimen on the desk above me, a few of its gracefully poised leaves swaying gently in the draft from the lamp, which is the pride of our winter garden. I would by all means advise every plant lover to try one. *D. fragrans* also makes a most satisfactory house plant.

The other plant to which I referred above, is the "silk oak." It is grown with the greatest ease and makes an extremely graceful, beautiful plant, either by itself or as a center for fern dishes, etc. Sow in March and grow on, shifting frequently.

The plant which probably has the surest claim to being the most popular house plant is the rubber plant (*Ficus elastica*). At least part of the secret of its success undoubtedly lies in the fact that—almost literally—you cannot kill it. But that is no excuse for abusing it, as there is all the difference in the world between a well-cared-for, symmetrical plant and one of the semi-denuded, lopsided, spotted-leaved plants one so frequently sees, and than which, as far as ornamentation is concerned, an empty pot would be far more decorative.

The rubber requires—and deserves—a good rich soil, and in the spring, summer and fall, all the water that the soil will keep absorbed. Give less in winter, as an excess at this time

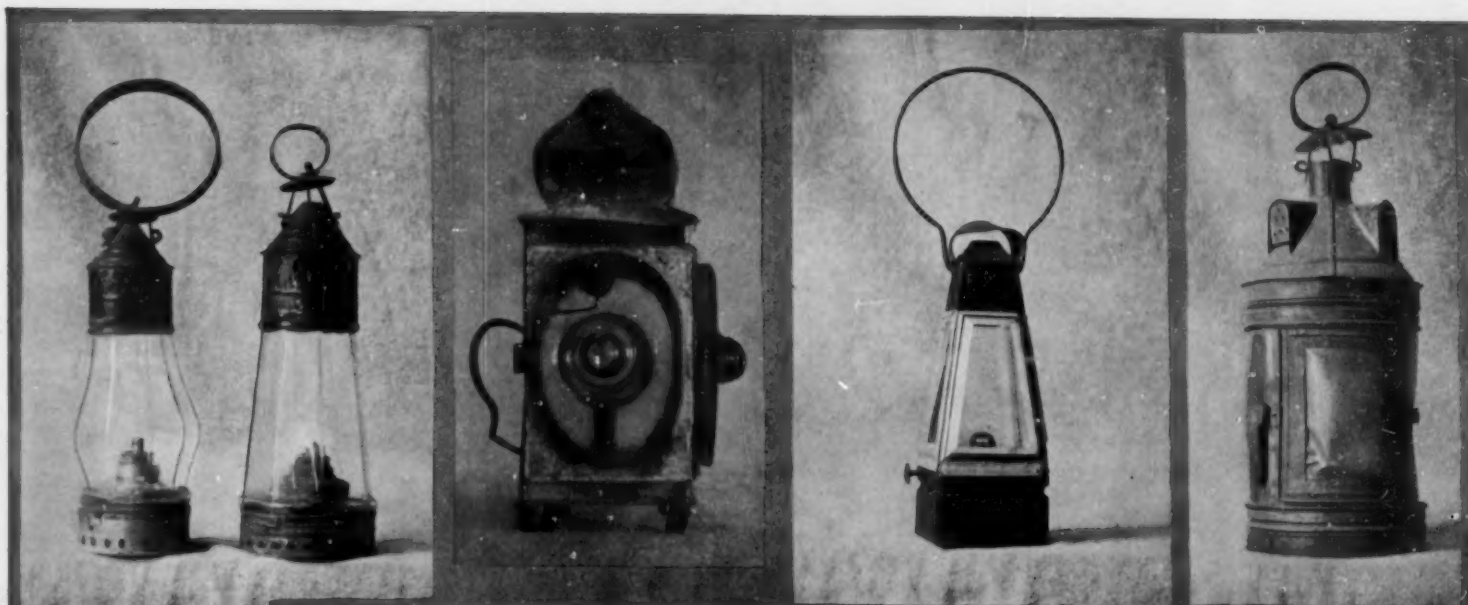
(Continued on page 126)



The araucaria requires comparative coolness

light yellow on either side of the dark green center.

The screw pine (*Pandanus*) is another favorite decorative plant, easily grown. The leaves are two or three feet long and come out spirally, as the name indicates. As they get older they bend down gracefully, giving a very pleasing effect. The soil for *Pandanus* should contain a generous amount of sand. Give plenty of water in summer, little in winter, and be sure



A Page of Old Lanterns

IN the days before public service corporations, the lantern was lamp and chandelier and street light. For there was no systematic street lighting prior to the enactment of 1774 which ordered lanterns for the streets of Boston. These illustrations show characteristic forms from several Salem collections. The materials of their construction are brass and iron, and the source of illumination was candles at first, but after 1774 whale oil lamps were used. Those of the bull's eye type were carried by watchmen, while the examples with bail handles were hung in the spacious hallways and carried by the citizens at night. The iron perforated type shown in the lower right hand picture, known as "Pinched" or latterly as the "Paul Revere" lantern, shed little more than a glow through holes punched in the iron and burred on the outside. To-day old lanterns may be used within the house, but they are especially applicable as porch lights. It is a simple matter to substitute the electric light for the old-fashioned illumination.

Photographs by M. H. Northend





The stone garage has the advantage of being more fireproof than one of frame construction, and it often has greater architectural worth



Another type of construction which is especially harmonious with the medium-sized half-timber house. The entrance is interesting

Serviceable Garages of Good Design

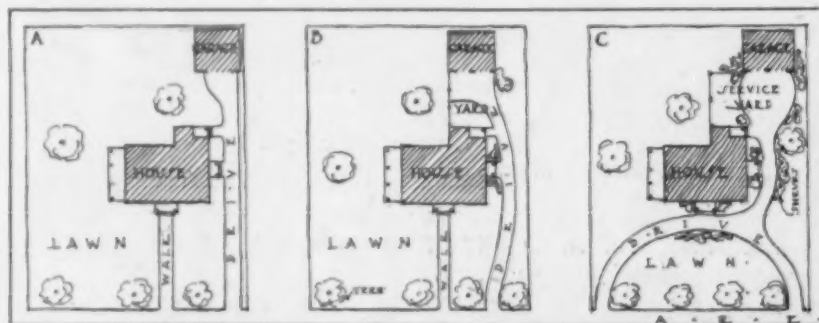
STYLE, LOCATION AND APPROACHES IN HARMONY WITH THE ARCHITECTURAL FEATURES OF YOUR PLACE—FIREPROOF CONSTRUCTION—EQUIPMENT TO FACILITATE CARE AND PROLONG THE LIFE OF THE CAR

BY A. RAYMOND ELLIS

Photographs by the Author and Others

THE location and building of a garage is of more importance than one usually supposes, on account of the architectural relation of the building to your house and its general effect upon the neighborhood. Just a shed somewhere in the background seems to be the logical conclusion; but there are several important conditions that should govern this. First, the drive must be located conveniently to the entrance of the house, then it should swing or curve gracefully to the garage and not run in a straight line as it often does from the street to the garage, as in Diagram A. The vista will be more effective if the garage is placed at the end of a curved drive so that shrubs may intervene and break the view, with a screen of foliage intervening to soften the lines of the building, as in Diagram B.

The shrubs may be in the foreground and still serve their purpose of breaking the straight lines and adding beauty to the vista. Diagram C illustrates a better arrangement, frequently used where there is plenty of room, with the house set well back from the street. If there is plenty of room the garage may be so placed that part of it will be hidden back of the house, as in Diagram E, screened with shrubs and foliage at the sides, giving just a glimpse of the low roof with good effect. The larger the lot the more opportunity to locate it prettily and in connection with the service yard, as in Diagram C. The location and inward view are very important, and if some study is given to this the result will be the better for it. These three diagrams should illustrate the usual conditions entering into the garage problem.



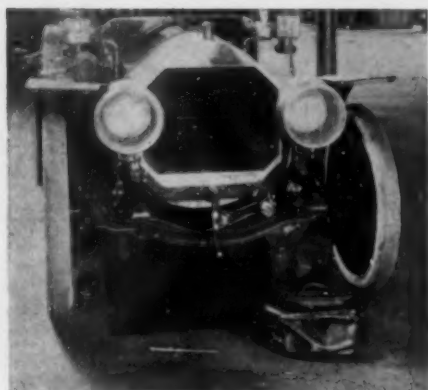
Three types of garage entrance driveways. The one on the left is too straight, but the others are more attractive



A small, formal garage of reinforced concrete construction



This type is adapted to housing more than a single car



A repair pit in the floor makes accessible the car's under body

There is considerable space in the ordinary eight-foot cellar that is not utilized, and in two cases I have used this for a garage. In each case the land sloped sharply toward the rear of the house, so that the ground at the back was a little below the cellar floor. The height of a

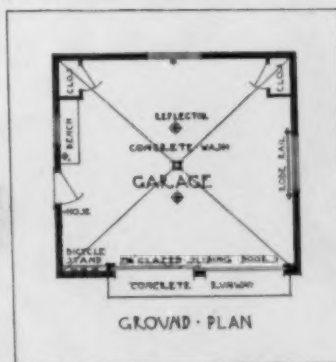
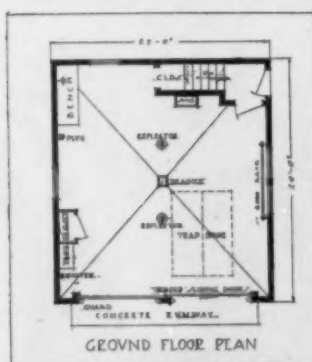
garage ceiling is usually ten feet, therefore the floor of the garage was two feet below the cellar floor. The house was high enough above the street sewer, so that the garage could be drained into it, but this could have been taken care of by a dry well if the location had not been as described. The cement floor was laid on the ground, and the garage was completely shut off from the cellar with brick walls and a fire door. The ceiling above was of reinforced concrete. In a new house, if the ground slopes to the rear, it is usually very easy to utilize this space for a garage. It is undoubtedly economical and convenient on account of the centralization of light, heat, power and service. A garage as part of the house is particularly convenient for the owner who drives his own car or for the woman who uses an electric vehicle. It might not be advisable for three or four cars, unless the house were very large and had an ell, the basement of which could be used for this purpose.

The design of the garage will, of course, correspond to the style of the house as far as is practical. The garage affords as much architectural opportunity as the stable ever did. If the house is old style, some predominating feature may be repeated, perhaps the same kind of roof material or color may be incorporated in the structure to show its relation to the house, unless the location is so far away that this can be safely disregarded; but even then do not vary the style of building on one estate. Further than this, the style of a garage may safely be left to your architect, who is competent to take care of this part adequately; but you must realize the requirements and importance of the garage in order not to hamper him unduly.

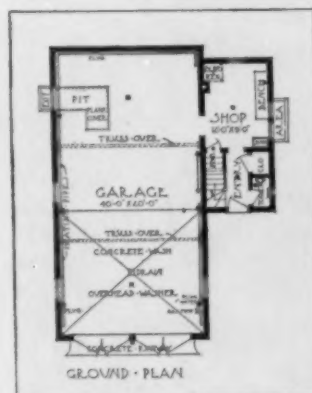
The garage should be fireproof, to prevent the spread of fire in case the gasoline tank leaks and vaporizes, or oil-soaked waste catches fire, starting an incipient blaze which may be easily put out if the surrounding material is not of such an inflammable nature as to spread it; the result is the saving of both the cars and the building. An explosion is not probable unless the gas vaporizes in confinement and the blaze spreads rapidly, enveloping the car. If the garage is frame and is close to frame buildings it is a hazard and endangers all the surrounding property. The fire insurance companies require that the tank containing the gasoline shall be buried at



The roof lines and appearance of the garage continue house scheme



The left hand plan is that of the garage shown above, while the other illustrates the building in the lower right hand corner of the page



The floor plan of the garage adjoining it



A good fireproof brick and stucco type having a shop on one side



A basement garage entered from the service yard



This frame and stucco style is designed to hold two automobiles

least ten or fifteen feet away from any building, and two or three feet below the ground, filled outside through a tube with cap and lock six inches above the ground.

The exterior walls may be of stone, brick, concrete or terra-cotta tile, plastered on both sides. The interior partitions should be of terra-cotta tile plastered, or of metal studs and wire lath plastered on both sides like the exteriors. The foundations should be of concrete. The concrete floor should be built on cinder fill to drain to a central trap, and this trap should collect all sand and grease, so that they can be easily cleaned out. The ceiling should be of reinforced metal lath or reinforced concrete beams and terra-cotta tile plastered. If the second floor is to be used for storage or living quarters, or any weight must be supported by it, steel beams and reinforced concrete should be used. If the roof is a flat one it may be covered with tin, tar or gravel, and with slate or tile if it is a pitched roof of frame construction. The second floor ceiling being fireproof, there is little danger of fire being communicated to the loft above.

If an independent heating plant is used, it should have no connection with the garage. Gasolene vapors are heavier than air, and consequently seek a lower level. If the boiler-room were connected with the garage, it might become filled with gasolene vapors that would explode when they came in contact with the fire.

Frame garages may be made slow-burning if the floor laid on the ground is of concrete and the inside of the garage proper covered with metal lath or plaster board, over which are applied two thick coats of asbestos plaster. This is retardent to fire and fairly fireproof when threatened with an incipient blaze, but it would probably disintegrate under a concentrated heat, letting the flames through.

The garage should be heated by steam or hot water with the boiler located in a small cellar built under one corner, or if it is close to the house and the house boiler is large enough and below the level of the garage, a main may be carried over, laid in tile and protected with magnesia covering. The small boiler-room may be built either in the basement or at one side of the garage, having an independent entrance from without.

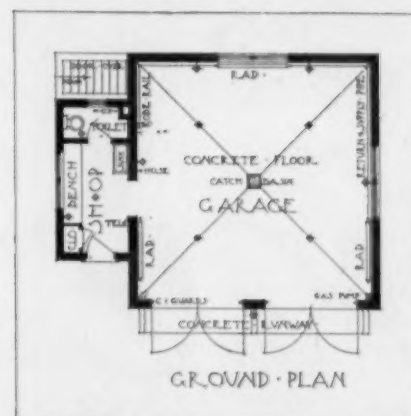
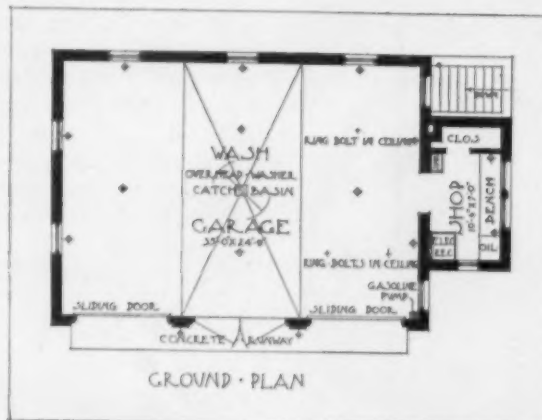
Every garage should contain a toilet-room and hot and cold water, which is usually carried over from the house in the trench with the heating pipes, but laid well below the line of frost. In a good many cases the drain of the garage is connected with the house drain, the sewerage passing through the house to the sewer in the street. There are, of course, some cases where the garage may be nearer the street than the house, so that it would be advisable to have it drain into the main sewer and take the



An interior showing overhead washer, heating pipes and wall lights near the floor



This fireproof garage of reinforced concrete is a good example of the more pretentious type



The arrangement of the upper right hand garage is illustrated by the larger plan, while the smaller one applies to the photograph below it



Another example of fireproof construction. Here the brick walls are plastered on the inside

water and electricity from the main street supply. Where garages are placed back of houses the heating, lighting and sewerage should be a continuation of the house system if possible. A cesspool may be resorted to where there is no sewer. If the conductors on the house are taken into a sewerage system with cast-iron pipes, the garage sewer can be connected at the bottom of the conductor where it passes through the house wall. There should also be hose cocks and an overhead washer in every garage for washing cars. A telephone from the house with the wires laid in an underground trench, should not be neglected.

Electricity is required for lighting, to furnish power for the

(Continued on page 133)



From the rear is shown an interesting adaptation of the gambrel roof to a house that is narrow in proportion to its length

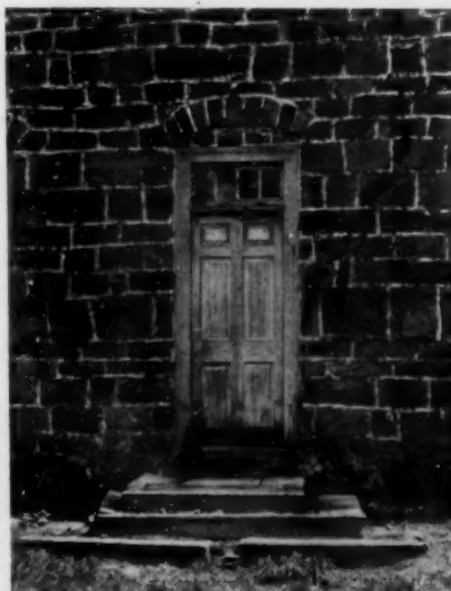


Between the two rows of narrow windows are courses of shaped stones that offer a pleasing variety in the design

Old Philadelphia Houses,

GRAEME Park, in Horsham Township, near the Doylestown and Willow Grove Turnpike, is one of the famous old houses of the Philadelphia neighborhood. It was begun in 1721 by Sir William Keith, one of the Colonial governors of Pennsylvania, and finished the following year. Here Sir William lived in great state, maintaining a retinue of servants and driving to the city whenever he had occasion to go thither, with his coach and four with outriders in truly regal fashion.

The house was in keeping with the manorial mode of life maintained by the baronet. Besides the main building shown in the illustration, there were detached wings on each side, in which were the quarters for the servants, the kitchens and the various domestic offices. These side buildings disappeared many years ago, and the whole place, unoccupied for a long period, has fallen into decay though



Even in the photograph the color and fabric effect of the field stones are apparent

II. Graeme Park, Horsham

this is not by any means irreparable.

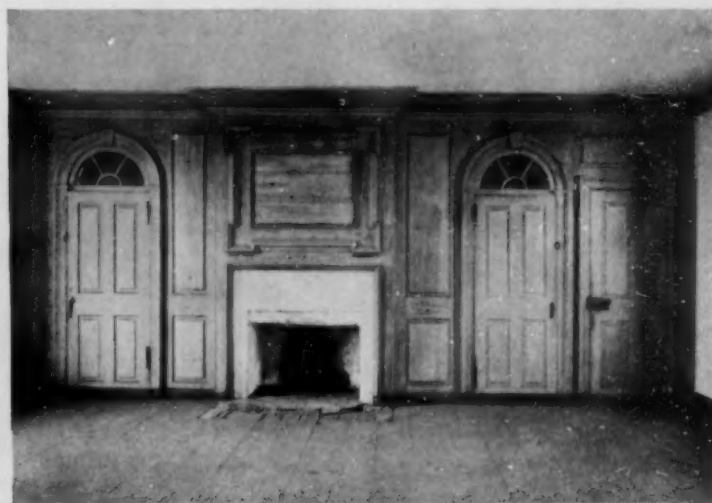
The front of the house is over sixty feet long, and it has a depth of twenty-five feet. The walls of rich brown field stone, carefully laid and fitted, are more than two feet thick, and over the doors and windows, tall and narrow in proportion, as was the style at the time of erection, selected stones are laid in flattened arches of the same type as those at Stenton. The comparison is interesting between Stenton, the brick house, and Graeme Park, the stone house, of almost the same date.

The great hall or parlor at the north end of the building is twenty-one feet square. Its walls are paneled and wainscoted from floor to ceiling, a height of fourteen feet. In the hall the fireplace is faced with marble fetched overseas; in the other rooms Dutch tiles are used for facing. There are three rooms on each floor,

(Continued on page 133)



Fine Colonial detail is evident in the rooms, especially about the great fireplace and mantel and in the wainscoted walls



Although these doors are not symmetrically placed relative to the fireplace, yet their design gives a sense of balance



THE HUNDRED PER CENT GARDEN



THE FIRST TWENTY PER CENT—SOWING SEEDS INDOORS—THE CHOICE OF SEEDS—GETTING AN EARLY START; SOIL; A SMALL GARDEN PLAN

BY F. F. ROCKWELL

NOTE: Heretofore the home garden has been looked upon by many people as more or less of a hobby, and deserving only as much attention as one usually gives to the pursuit of recreation. That it deserves to be taken up seriously, studied in all its details, and developed to the limit of efficiency, is a new presentation of the subject. How to have the very best garden possible, on a business basis, is the theme of the present articles, which take up carefully and practically one detail after another in natural succession, to the completion of the hundred per cent. garden. This series gives you concretely all the pleasures and profits of gardening.

NEGLECTING all personal delight and the benefit to health that accrues from gardening, one finds this year many potent arguments for growing vegetables. A few of these practical considerations should induce the hundreds of readers of this magazine who are in the position to engage in truck gardening. Though the prices of food stuffs are higher than ever, the means available to the home gardener for getting good crops with a small amount of labor are greater than before. Simply on the basis of business economy everyone should grow for himself a plentiful supply of vegetables that should provide the summer supply and well into the winter as well.

Several recent developments have so enlarged the possibilities that the term "new gardening" is not undeservedly used. The improvements tend to certify results, and perhaps one of the chief aids to success is a new and practical system of irrigation as suitable for the fifty by a hundred foot garden as for the large truck farm. This modern irrigation will do more to revolutionize gardening on a small scale than any other mechanical invention, plant introduction or cultural discovery of the last two decades; it will do as much to make garden results certain as the wheel hoe and seed drill did to make garden labor less. It is practically automatic in its operation, and almost the whole cost of equipment for a garden 50 x 100 feet would be two hundred feet of three-quarter-inch galvanized pipe at six to nine cents a foot (according to market prices); fifty brass spray nozzles at five cents, and two patent unions and handles at one dollar and eighty cents each. With this equipment you can get more out of that garden in one season than you did before in two or three years, especially since the schedule of companion crops and succession crops may be adhered to by the assistance of this artificial rain.

Improvement in varieties also has increased the possi-

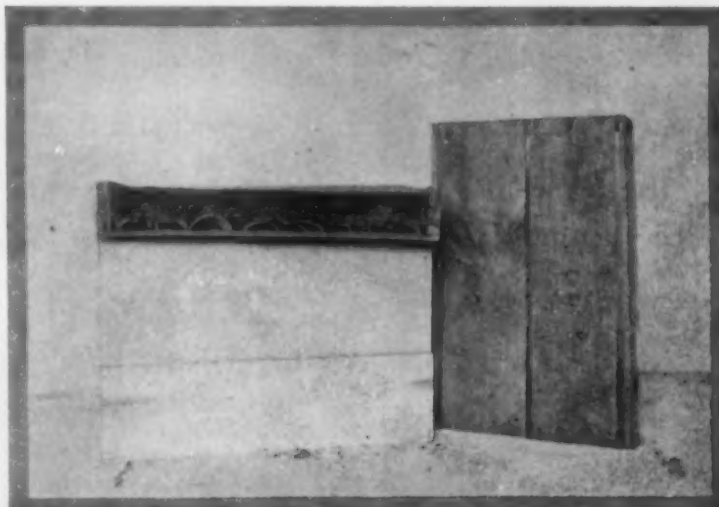
ble profit of the home gardener, for where the private planter gets better products and can use varieties that occupy less space and produce earlier, the advantage to the professional gardener is taken away in competition with competitors. Lower cost of production is effected through a better knowledge of fertilizers. Besides, good seeds and strong plants of much better quality than ever before are at the service of the home gardener.

With these aids and inducements to gardening in mind, let us consider the first step toward success, the preparation of the right kind of soil.

Proper soil for starting seeds is light, friable and quick. I believe that the biggest part of the trouble people have in starting seeds is due to carelessness on this point. Thinking that garden soil "will do," they take no further pains, and when, after careful watering, plenty of heat and the specified number of days' time, only a few scattered and crooked weaklings manage to struggle up through the crusted surface of the pan or box, the seedsman and the magazine writer come in for equal shares of blame. You can make a soil of the proper mechanical condition as follows: Take some dirt from the bottom of a pile of old, rotted sods or rubbish, or some light garden soil; add to it about

half its bulk of leaf-mold from the woods, or chip dirt from the bottom of the wood pile, and, if available, some sand, enough to "cut" it so that it crumbles apart readily when compressed in the hand—say, a peck of sand to a bushel of loam and two pecks of leaf mold. Mix together and sift through a sieve with meshes the size of a coal ash sifter or smaller.

At this season of the year, however, it may not be possible for you to get these things—in which case there are two alternatives left you; first (and easiest), go to a local florist and get a bushel of prepared soil, such as he uses for starting seeds. Failing in



In the loosely boarded box section place crocking and cover with sphagnum moss—above this put the prepared soil

this, get a pick, break up a few chunks of garden soil, and half a bagful of the semi-frozen rotted leaves and twigs which you can easily get in some hollow in the woods, and place them near the furnace to thaw out, and partly dry out. Old soil and manure taken from a last year's hotbed will answer the purpose finely.

Flats are the most convenient things to handle vegetable seedlings in. Seed pans are all right for such fine seed as many flowers have, but a common, rough-finished cracker-box flat will give you better results with your vegetable seeds. Get a couple of empty boxes, with their covers, from your grocer, mark them off into two-inch sections, take out the nails and clamps that come on the marks, and saw them up. When putting on the bottoms, leave cracks to facilitate perfect drainage.

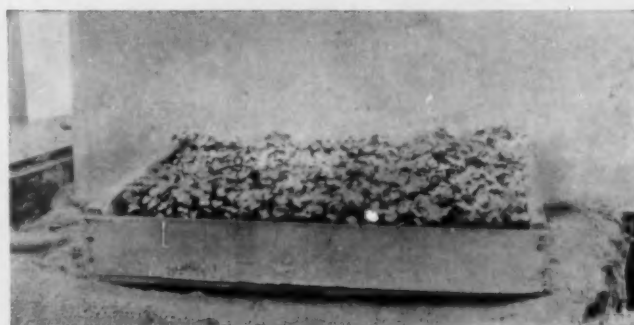
In the bottom of the flat place a layer of some rough material to serve as water drain, moisture-reservoir, and to save your supply of prepared soil. In the photograph, pieces of broken pots, covered with sphagnum moss are shown, but any similar roughage will do as well. Cover this with the prepared soil, packing firmly down along sides and in the corners to within about a quarter of an inch of the top of the flat, press the surface smooth with a piece of board, mark off rows about two inches apart with a small pointed stick, and all is ready.

Right here is where the beginner usually makes the mistake of planting enough cabbage or lettuce to serve him for about five years—if the plants would keep. In an ordinary cracker-box flat (about 13 by 19) there will be room for eight or nine rows. Each row should give from thirty-five to a hundred seedlings. Suppose we call it fifty for an average. Then the following planting of early vegetables would be about right for a medium-sized garden, and the employment of similar schemes have resulted well for the vegetable grower.

First Planting (February 1st to March 1st).
Cabbage { Jersey Wakefield... ½ row } 2 rows
 { All-head Early... ½ row }
 { Succession... 1 row }
Cauliflower (Snowball)... 1 row
Lettuce { Grand Rapids... 1 row } 2 rows
 { Wayhead... 1 row }
Beets (Early Model)... 2 rows
Onions { Prizetaker... 1 row } 2 rows
 { Ailsa Craig... 1 row }

For celery and parsley, both of which take a very long time to come up, a seed pan, or cigar box, or end of a flat which could be left undisturbed when the other plants were taken out, might do.

For a second planting, mostly of the warm-blooded vegetables, a



Do not crowd the flats with too many seedlings and look out for "damping off"

flat might be laid out as follows. (These will probably not average as many plants to the row as the others).

Tomatoes { Chalks Early Jewel... ½ row }	2 rows
{ Dwarf Giant... ½ row }	
{ Matchless... 1 row }	
Egg-Plant { Black Beauty... 1 row }	1 row
{ Neapolitan Early... ½ row }	
Pepper { Ruby King... ½ row }	1 ½ rows
{ Chinese Giant... ½ row }	
Okra { Perfected Perkins... ½ row }	½ row
{ Big Boston... 1 row }	
Lettuce { Brittle Ice or New York... 1 row }	2 rows
Celery { Winter Queen... 2 rows }	

These varieties mentioned above are all good sorts, and selected, where more than one of a kind is

suggested, with the idea of furnishing a succession. You may know others which you like better.

The seed should be scattered evenly but thinly—eight or ten to the inch—in the miniature drill, which should be rather broad and very shallow. Press them in firmly, *carefully tag each row*, and then cover about a quarter of an inch deep, pressing the whole surface down lightly.

Right here comes one of the most important kinks of the plant-starting art. Instead of giving the flat a dousing with the watering-can, as you probably have been in the habit of doing, under the mistaken

idea that it would be good for the plants, set the whole flat in the sink or bathtub and let in a little water, just enough to come a third of the way up the sides. Here let it soak until the moisture coming up through from the bottom shows on the surface of the soil, turning the latter dark in color. Then let it drain until it stops dripping. In this way you will have saturated the soil

in the most thorough manner, without washing out or packing the surface soil in the slightest.

To secure quick germination, seeds should be given "bottom heat." As it does not make any difference how dark a place they are in until they sprout, the flat may be placed over a radiator, on the back of the kitchen range or on the hot-air or hot-water pipes. Any surface upon which you can bear to rest your hand will not be too hot, as the heat will not be readily conducted to the surface of the soil. Cover the box with a loose-fitting pane of glass, to protect from mice and to conserve the moisture and keep the surface of the soil from getting hard.

In a few days the cabbage and lettuce seed will be up, followed soon by the others. The moment they break ground they will have to be supplied with all the light

(Continued on page 130)



At the left are seedlings just ready for transplanting; in the center one with the proper mass of rootlets and adhering soil; at the right seedlings too lanky—set them deep when transplanted

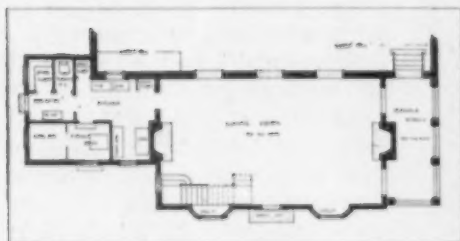


Place the seedlings to be transplanted on a board; make holes for them with the fingers and press them firmly into place



It is seldom that the small house is so attractive in its appearance and so homelike in its appeal as is this one finished with clapboards. Privacy was the chief desideratum, and the grounds are so secluded that they are really an annex to the house rooms

THE HOME OF
DR. THEODORE ABBOTT,
CORNWALL, NEW YORK

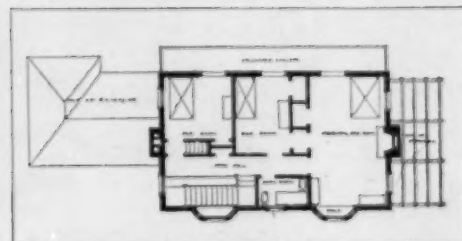


The kitchen wing is quite distinct from the living quarters of the house



The house is absolutely simple, yet has enough variety to make it interesting

Parker Morse Hooper
architect



The uncovered balcony on the second floor may be reached from any of the bedrooms



The lawn beneath the projecting balcony serves the purpose of a porch, but there is no porch proper on the house



The living-room, which is also used as a dining-room, is floored with red tile laid in interesting fashion lending color to the apartment



A garden wall forms an elbow at either side at the rear of the house enclosing a luxuriant growth. The French windows and the door open directly on the garden and a balcony overlooks it, making it seem another addition to the rooms. The balcony on this side is distinctly interesting



Inside the House

Timely Suggestions and
Answers to Correspondents



The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope

Floral Decoration at Home

ALMOST everyone has, at some time or another, found an occasion which required a floral decoration for the house, but unfortunately, at just such a time, the lack of the technical skill of the professional florist has raised obstacles that were not easily overcome. Given the same quantity and quality of stock to work with, the chances are that the amateur would do a better piece of work than the professional, but the latter's experience and knowledge of the mechanical part of the work give him the advantage. The professional's work is even; that is, the flowers seem equally fresh in all parts of the house. The amateur's work, on the contrary, is apt to be spotty, in that the flowers last placed will look better than those arranged earlier. Again the florist works with a rush, keeping his perishable stock in reserve until the last possible moment, something that cannot be done offhand.

Moss is the florist's standby. He first soaks it in water and after squeezing it binds it in forms to hold the flowers. For a mantel decoration, for instance, he first makes a mound of moss at the back and into this he sticks the flowers, using long stems if the effect is to be high. No wire is used, but the stems are pointed with a sharp knife as they are to be used, not before. The moss, if tied upon a frame, or even tightly packed, will hold the flowers in place and keep them fresh for a long time. In front of the moss, plants of maidenhair fern might be used, with the pots turned on their sides. This shows the top of the plant and makes a striking decoration. For a doorway he uses moss tied into a frame of poultry wire of small mesh. The moss will keep in place and may be placed safely in any position. Where a massed effect is desired flowers can be stuck into the earth of the potted plants and other plants banked about, giving an immediate and natural effect. To do this the stems must be long.

The florist will use all sorts of greenery provided it can be had in long streamers, and for this purpose there is nothing that can be used with better effect than the rambler roses if they happen to be in flow-

er. When cut in long streamers the ends of which can be put in bottles of water concealed by the foliage, good results are effected. The bottle idea works out well and will often make success where little might be expected. Roses used in this manner are particularly effective, and the rambles are available if not cut too long before being used.

The object the florist keeps in view is the care of his stock. He tries to keep it out of the light as long as possible, and while it must be near at hand he searches out a cool spot in the cellar and piles the flowers on the floor, covering them with dampened paper. If flowers are taken directly from a very cold ice chest into a warm atmosphere they are apt to wilt much more quickly than if taken from a cool place like a cellar.

Machine-Sewed Carpet Rags

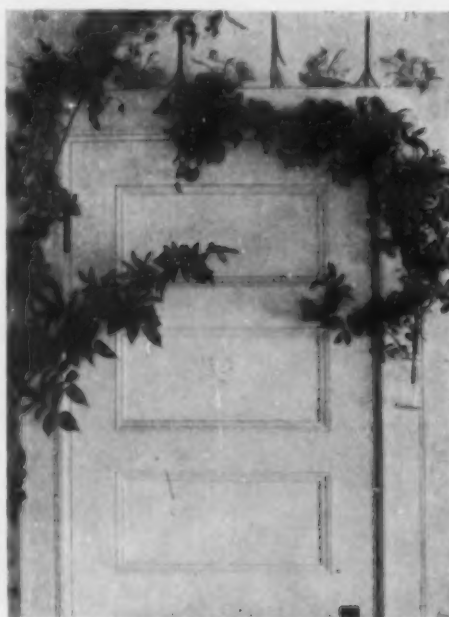
RAG rugs woven from new fabrics are not nearly so delightful as those which are the result of family saving. But new cloth may be machine-sewed to

advantage, making a smoother filling than if cut back and forth or in strips to be sewed by hand. For instance, two yards of new fabric may be joined end to end, one edge lapping the other, and missing exact jointure by the width of a carpet rag. Begin cutting or tearing at this left-out notch, after sewing with a short stitch three times along the lap. By cutting through the lap there is an even, continuous strand that will not break at the seams nor make a knotty bulge in the weaving.

Old cloth can be treated in the same way. Indeed, with fairly large pieces one can sew a long strip together, varying colors and proportioning them so as to make beautiful cloudings in the woven carpet. Join the ends as for new cloth, cut or tear, always cutting through the seams, and wind into balls. But often there are strips too narrow for such joining. Cut them to carpet rag size, laying each color to itself, and proportioning the width cut to the bulk of the material. If thick and thin stuffs must go in the same ball cut the thin ones to be folded double or treble. Next cut stiff paper into strips an inch and a half wide, lay the end of a strip under the machine foot, lap two rag ends on top of it, and sew them together through the paper. Turn the free end of one sewed rag so as to lie on the paper, lap a fresh bit flat upon it, sew through, and repeat till the strip is full. Now turn the paper around and sew a second row about half an inch from the first. Finish by sewing a third row. After all the rags are sewed pull away the paper strips, cut through the stitches between the rags and wind in smooth balls. Thin stuffs must be folded for sewing, taking care that the folds run straight. Arrange colors so as to avoid discords.

Radiator Paints

THERE is more to the efficiency of a radiator than the mere make or size of the apparatus itself. By varying the kind and color of the paint on your radiator you can increase or decrease quite materially the amount of heat given off by the latter, as the following facts demonstrate. Two coats of black asphaltum



Long rambler rose streamers in water holders are effective in doorways

paint increase the amount of heat given off six per cent. Two coats of white lead will cause an increase of nine per cent. in the heat, while rough bronzing gives about the same results as black paint. On the other hand, one coat of glossy white will reduce the efficiency of the radiator ten per cent. One to three coats of bronze paint do not materially affect the quantity of heat emitted, but additional frequent application of bronze operate to decrease the efficiency. The white enamel so extensively used on radiators in lavatories and bathrooms very materially reduces the effectiveness of a radiator.

To Clean Unlacquered Brass

HERE are several ways, old but good. For tarnished mounts upon old furniture tie a pinch of fine salt in a soft, thick cloth, moisten slightly with sharp vinegar and rub hard, taking care not to touch the wood with the salt swab. Polish, by rubbing until hot, with a flannel dipped in fine wood ashes—it gives a soft luster otherwise not obtainable. Brass candlesticks, dulled, not tarnished, need to be washed clean in hot soda water, dried and rubbed with wood ashes. Smear hand rails, etc., with salt wet with vinegar, let stand five minutes, then rub off and polish with either ashes or fine chalk on a thick cloth.

A Convenient Shelf Closet

THE closet of my nine by ten bedroom is so small that it can be used only as a linen press, and as storage space for boxes and so forth was badly needed I procured an inch thick board of redwood, two feet wide and long enough to fit into the end of the room over door and window, the frames of which supported one end and a strong cleat the other. As the ceiling was high this left a space of two feet above the shelf. To protect the con-



Cretonne and a board change the radiator into an ornamental shelf

tents of the shelf from dust as well as to hide the unsightly array, I curtained the space by tacking with brass headed tacks onto the side of an inch strip of pine, a series of cream colored cheesecloth curtains. The inch strip of pine had previously been nailed with long wire nails to the ceiling on a line with the front edge of the shelf. Each curtain section was



A ceiling closet is made by a redwood board above door and window

finished with hem and tiny heading at top, was slightly gathered, lapped one inch over the next and stitched firmly to a strip of strong tape as long as the entire length of the shelf. They were left disconnected on the sides for ease in handling. This shelf closet has proved a great convenience, taking up no space which could be used in any other way and interfering in no way with the arrangement of furniture or lighting of the room.

Hiding the Unsightly Radiator

IT is hard to imagine anything less useful and less ornamental than a steam radiator during the summer months. The radiator in our guest-room is in a very conspicuous place where no possible arrangement of furniture can hide it from view.

It was the lady of the house who first thought of a plan to convert the objectionable object into a thing of beauty and utility. A yard and a quarter of cretonne, a yard of cotton-ball fringe, an odd piece of board and a few upholsterers' tacks were all the material needed to make the cover shown in the first of the two photographs.

The board was cut to fit against the wall and extend half an inch beyond the front of the radiator. It was left long enough to extend out over the valve joint. Cleats were fastened edgewise across the bottom of the board to fit down between the sections of the radiator to keep it from slipping.

A piece of the cretonne was stretched over the top of the board and tacked down smooth. The balance of the cretonne was hemmed at top and bottom and gathered on a string run through the top hem. The string was fastened at the back of one end of the board and stretched around the front and fastened again at the back of

the other end. With the fullness evenly distributed, the fringe was tacked down on top of the cretonne with gilt-headed tacks. The radiator is completely hidden and the cover forms a useful shelf, at a total cost of about fifty cents.

Our success with this radiator fired the imagination of the man of the house, who, after making a crude sketch, sent an order to the lumber mill calling for

18 feet of 9" x 3/4" oak
7 " " 3" x 3/8" "
4 " " 10" x 3/8" "

This he constructed into a piece of furniture resembling a set of shelves, with all but the upper shelf and top concealed behind a curtain. When the carpenter work was done the oak was given a coat of fumed oak wood dye, and when dry was rubbed down with furniture wax, giving a rich, dull polish.

The curtain is made of aurora cloth, of which one and one-quarter yards—fifty-inch width—was required. It is supported on a brass curtain rod.

In the summer time this useful piece of furniture is placed over the radiator, which is entirely hidden behind the curtain. When the steam is turned on it is moved to another part of the living-room and fitted with two additional shelves for which cleats are provided.

The cost of this piece of furniture was

Lumber	\$2.50
Hardware	.20
Stain and wax (about)...	.25
Curtain material	1.25
	\$4.20

To look at these covered radiators when not in use one would not imagine that behind the curtains are unsightly shapes of metal. They are most successfully concealed, and surely the cost is light.



This piece of furniture can be fitted over the radiator when not in use



Conducted by
F. F. ROCKWELL

The Editor will be glad to answer subscribers' queries pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired please enclose a self-addressed stamped envelope

First Steps Toward the Vegetable Garden

WHILE the garden does not take a place of first importance in one's mind when the snow is piled high in the front yard, there is one matter concerning it that should be considered now. This is the matter of seed buying, and upon it depend your chances of enjoying a perfect garden next summer.

Take out your seed catalogues and your last year's garden records—if you haven't any, take the lesson to heart and make one this year—and go through them, checking up the varieties and amounts you want and making a temporary list. If you do not do this you will find at the last minute that you have too much of some varieties and too little of others.

Here are the amounts of the various seeds and plants required for a fifty-foot row, which is a convenient length:

Asparagus, 50; asparagus seed, 1 oz.; bean, bush, 1 pt.; bean, pole, ½ pt.; beet, 1 oz.; broccoli, 35; borecole (kale), 25; brussels sprouts, 35; cabbage, early, 35; cabbage, late, 20; carrot, ½ oz.; cauliflower, 35; celery, 100; corn, ½ pt.; cucumber, ½ oz.; eggplant, 25; endive, ½ oz.; kale, 25; kohlrabi, ¼; lettuce, 50; lettuce seed, ¼ oz.; leek, ½ oz.; melon, musk, ½ oz.; melon, water, ½ oz.; onion, ½ oz.; okra, ½ oz.; parsley, ¼ oz.; parsnip, ¼ oz.; peas, 1 pt.; pepper, 25; potato, ½ pk.; pumpkin, ¼ oz.; rhubarb, 25-20; radish, ½ oz.; salsify ¼ oz.; spinach, ½ oz.; squash, ¼ oz.; tomato, 20-15, and turnip, ¼.

Here are some good, standard varieties, that you get from most reliable seedsmen, and that have detailed descriptions in the catalogues:

Asparagus—Palmetto (heaviest yielder), Giant Argenteuil, Barris Mammoth.

Beans (Bush)—Early Red Valentine, Stringless Greenpod, Bountiful, Brittle Wax, Rust-proof Golden Wax, Stringless Refugee, Burpee Improved Bush Lima.

Beans (Pole)—White-seeded Kentucky Wonder (Burgers Green Pod), Golden Chester, Sunshine, Horticultural (used in place of pole limas in cold localities), Case Knife, Scarlet Runner, Early

Leviathan Lima, Ideal Lima, Giant Podded Lima.

Beets—Early Model (for earliest), Crimson Globe, Columbia.

Brussels Sprouts—Dalkeith, Danish Giant.

Cabbage—Early Jersey Wakefield, Charleston Wakefield, Early Spring, Allhead Early, Glory of Enkhuisen, Succession, Danish Roundhead (for winter), Perfection Savoy (best quality of all).

Carrots—Early Scarlet Horn, Coreless

(early), Chantenay, Danvers Half-long.

Cauliflower—Early Snowball, Best-early, Dry Weather.

Celery—White Plume (earliest), Golden Self-blanching (fall), Winter Queen.

Corn—Golden Bantam (earliest and very sweet), one of the several yellow second-earlies, Early Cosmopolitan or Howling Mob, White Evergreen, Country Gentleman, Black Mexican (small, but extra sweet).

Cucumbers—Extra Early White Spine, Davis' Perfect, Fordhook Famous, Vickery's Forcing.

Eggplant—Black Beauty.

Kohlrabi—White Vienna.

Lettuce—Mignonette, Wayahead, May King (early head varieties), Grand Rapids, Curled Simpson ("loose-head" varieties); Salamander, Hanson, All-season, New York, Brittle-Ice, (for summer months).

Melons (Musk)—Osage (Miller's Cream), Champion Market, Montreal Nutmeg (all large sorts); Rocky Ford (Netted Gem), Fordhook, Hoodoo, Jenny Lind, Paul Rose (small sweet sorts), Henderson's Bush (new "vineless" variety).

Melons (Water)—Cole's Early, Fordhook (early); Ice Cream, Hungarian Honey, Sweetheart, Halbert Honey.

Onions—Silver King (early), Southport White Globe (finest quality), Southport Red Globe, Southport Yellow, Prize-taker (for main crop), Ailsa Craig (largest).

Peas—American Wonder, Nott's Excelsior, Alaska (extra early, but not of best quality), Gradus, Early Morn, British Wonder (early, extra good quality), Boston Unrivalled, Telephone, Champion of England.

Peppers—Early Neapolitan, Ruby King, Chinese Giant, Sweet Mountain.

Radishes—Rapid Red, Early Scarlet Button, Crimson Giant, White Ocicle, Rocket; a large number of other good sorts.

Spinach—Swiss Chard (beet), Lucullus, Victoria, Long-standing, New Zealand (for mid-summer).

Salsify (Oyster Plant)—Mammoth Sandwich, Wisconsin Golden Island.

RUBARD-2		SEED-BED	
ASPARAGUS-2			
POLE BEANS-2			
TOMATOES-1			
CABBAGE EARLY-1			
CABBAGE LATE-1			
CAULIFLOWER EARLY-1			
BROCCOLI-1		BRUSSELS SPROUTS-1	
PEPPERS-1		EGG-PLANT-1	
CELERY-1			
ONIONS-3½			
LEeks-½			
CARROTS-4			
BEETS-4			
TURNIPS-1½		RUTABAGA-½	
PARSHIPS-1			
CORN-4			
PEAS-3			
BUSH BEANS-3			
LETTUCE-2			
MUSKMELONS-6 Hills		CUCUMBERS-7 Hills	
PUMPKINS-4 H.		WATERMELONS-5 H.	
WINTER SQUASH-5 H.		SUMMER SQUASH BUSH-5 H.	
		SUMMER SQUASH VINE-5 H.	

A planting plan. The figures at left and top indicate the length and distance apart of rows

Squash—White or Yellow Scalloped (bush, extra early); Summer Crook-neck, Delicata, Fordhook (second early, vine); Hubbard, Boston Marrow, The Delicious, Heart o' Gold, Simmes Blue Hubbard (winter).

Tomatoes—Chalk's Jewel, Early Freedom, Bonny Best, Earliana, Dwarf Stone, Dwarf Giant, Livingstone's Globe, Matchless.

Turnips—Early White Milan, Petrowski (early), Amber Globe, Purple Top-White Globe, White Egg.

How Much to Plant

SO far, so good, but it is still a problem to determine exactly how much seed of each variety you will need. While some seeds will keep for several years, it is generally better to get fresh ones every season.

First of all, get the size of your garden "over-all." Then figure up the amount of space each vegetable—not each variety—is to be allotted, taking the more important ones, i. e., those which you care most about, first. Vegetables occupying about three feet to the row are pole beans, tomatoes, peas, potatoes, cabbage, cauliflower, egg-plant and Brussels sprouts. They require two feet to the row. Parsnips, bush beans and salsify may be given a foot and a half; in rich soil, however, the beans will require about two feet. Lettuce, beets, carrots, onions, leek and turnips require from twelve to fifteen inches. The "vine" plants, such as cucumbers, squash, melons, both musk and water, require from four to six feet, and celery, if to be banked up with earth, will require about four feet. It can, however, usually be set out where some early crop, such as lettuce, early turnips or peas, has been removed.

If you find you will not have room for



Judicious pruning and proper care do much toward producing fine fruit

all these things, remember that potatoes, late cabbage, turnips, peppers, celery, watermelons, onions and parsnips all stand shipping well, and that you can get these at your grocer's in better quality than such perishable things as sweet corn, lettuce or peas, which must be gathered fresh from the garden to be in perfect condition. The diagram of a small garden will give you a suggestion as to how your own problem may be worked out. In deciding on what varieties of each vegetable to use, remember that many of the extra early sorts, such as smooth peas, early white corn and string beans are not as large or as delicious as the later varieties, and as there frequently is only a few days' difference between the two in the time of maturing, only enough of the former should be planted to assure one or two pickings. Moreover, most of the early varieties "go by" very quickly and if you are careless in choosing them or think too much about the first few weeks of the season and too little about the last, you are likely to find yourself with a supply of tough, over-ripe things on your hands which even the chickens will refuse.

The Ice Crop

EVERY small country place within reach of a lake or ice-pond and also subject to the seasonal holdup of the local ice trust, should have its own small ice-house. It need neither take up much room nor be an unsightly object. A little house twelve feet by twelve will hold several tons, and, aside from being filled, requires no attention throughout the year. The walls should be made double with a dead air space of several inches between them. The spaces do not require any filling with sawdust as the air itself is a non-conductor of heat. If you have to hire labor for the

filling with ice, see to it that it is done as soon as the ice is thick enough, as nine or ten inches of the first freezing, clear and hard, will keep longer than twelve or fourteen inches of half frozen slush, etc. Each layer should be tightly packed with sawdust in every chink, to prevent the leaving of air spaces that might cause the sawdust put over the top to run down through later, leaving exposed spots on the surface.

Pruning and Spraying

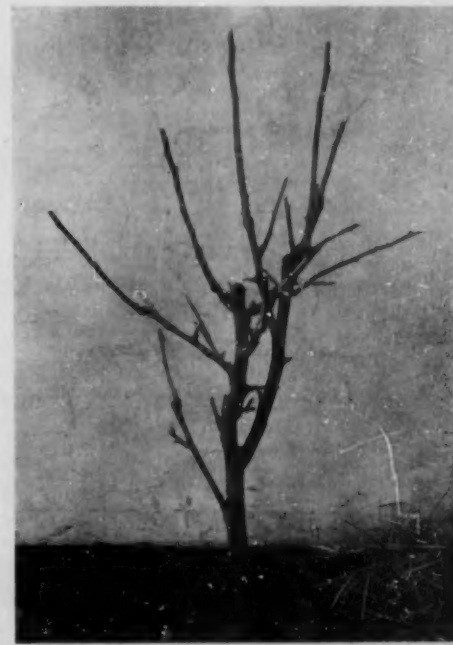
PRACTICALLY the only work which can be done outside at this time of the year about the garden and grounds, is such spraying and pruning as has not already been done. For the benefit of new readers I repeat briefly some suggestions given before. Apple trees and other fruit trees plagued with the San Jose scale should be sprayed thoroughly, covered all over with lime sulphur wash, extra strong for winter use, or with a diluted miscible oil, made for the purpose.

In pruning cut out all branches that cross or rub each other, and if they are over two inches in diameter be sure to paint over the wound with coal tar. Any broken or diseased parts should be cut out and treated in the same way, and any holes or decaying spots cut out cleanly to live wood and the wound filled with cement, first applying a coat of thin coal tar to soak into the wood. The surface of the filling should also be covered, to prevent its becoming weather cracked.

In spite of reminders and directions we keep putting such things off, and the result is often another season of poor fruit. Remember that much can be done in the way of planning ahead, even though the actual work on the garden may now be limited.



A small apple tree as it appeared before proper pruning and trimming



An illustration of the relative extent to which apple tree pruning should be carried



EDITORIAL



THE CULTIVATION OF DISAPPOINTMENT

AS far as the garden is concerned, February is a drear interregnum. Indoors, of course, one starts the embryo of future luxuriance, but in some ways the work is but an aggravation, especially to the eyes impatient for the growing glory of the out-of-doors.

About this time we generally turn to the gardens that spread their beauty through the pages of books. There are many that breathe their perfume perennially, but at no season is it sweeter than at this. Perhaps our choice of authors would not meet with your approval. Maybe Warner and Emerson and Thoreau—why prolong the list—do not awaken your enthusiasm. But we do want your agreement on a little passage that seemed to shine out with such kindly good humor from Stevenson's letters. You know it, perhaps; it contains the best cultural directions for February, so here it is:

"..... I am no cultivator of disappointments, 'tis an herb that does not grow in my garden; but I get some good crops both of remorse and gratitude. The last I can recommend to all gardeners; it grows best in shiny weather, but once well grown, is very hardy; it does not require much labor; only that the husbandman should smoke his pipe about the flower-plots and admire God's pleasant wonders. Winter green (otherwise known as Resignation, or the "false gratitude plant") springs in much the same soil; is little hardier, if at all; and requires to be so dug about and dunged, that there is little margin left for profit. The variety known as Black Winter green (H. V. Stevensoniana) is rather for ornament than for profit.

"John, do you see that bed of resignation?"—"It's doin' bravely, sir."—"John, I will not have it in my garden; it flatters not the eye and comforts not the stomach; root it out."—"Sir, I hae seen o' them that raise as high as nettles; gran' plants!"—"What then? Were they as tall as alps, if still unsavoury and bleak, what matters it? Out with it, then; and in its place put Laughter and a Good Conceit (that capital home evergreen), and a bush of Flowering Piety—but see it be the flowering sort—the other species is no ornament to any gentleman's Back Garden."

A NEW SUBJECT FOR INVESTIGATION

WHENEVER that elastic composure of ours has become quite settled, when we have become almost blasé and unaffected by the recurrent thrillers of our daily paper, when murders pall and we are thoroughly inured to graft and investigation disclosures, war scares, and political discussion, the versatile journalist springs a new medical discovery upon us and the response is immediate. We have discovered ourselves to be in immediate danger of dread, incurable diseases. Many of the warnings are wise and the care resultant a very good thing, but so often the scare is merely aimed at hysterical natures and the information, "news" merely on account of its bizarre qualities. We do not mean to disparage the work of the good guardians of our health—their warnings persist beyond the stir of blatant headlines. But there are serious abuses not local but universal and these excite no comment perhaps because they are so very, very common. One in particular finds its way even into the circle of the home. It is the evil of improper lighting.

To correct the evils there is no need of vast legal processes. There are no picturesque features of millionaire oppressors of the poor, no deep-dyed villain's sensational disclosures. After this statement many will say the matter must be unimportant; but though its correction needs no trumpeted publicity, its dangers are as real as its remedy simple.

The misuse of illumination gives us irritation at work, it pains and wearies us while we seek rest at home. Most of us labor under the delusion that we are getting good lighting as we increase its brilliance to a flood of light that searches every corner and drives away all shadows. In truth we are driving away comfort and leaving headache, eyestrain and bad temper in its place. There is a chemical change that takes place within our eyes when light enters the retina. That infinitely sensitive organism with its complex system of nerves must constantly readjust itself at every new thing we see and yet we over-exert this readjustment capacity by directing a glare upon our eyes from polished surface and unprotected light source, that scientists describe as many times beyond the normal amount consistent with a healthy condition. It is no wonder that we are overtired or nervous.

Furthermore, by aiming to drive away shadows we make our interiors garish, uninteresting. We have done away with that necessity of art contrast. Everything is of one tone, without highlights, flat and without variety. Besides, by insisting on brilliance, we have rendered negligible the color possibilities of lighting, and its decorative value.

Does this appear exaggerated? In thousands of instances it is no exaggeration. We have cheaper lighting, better lighting, but in many cases we waste our advantages through ignorance.

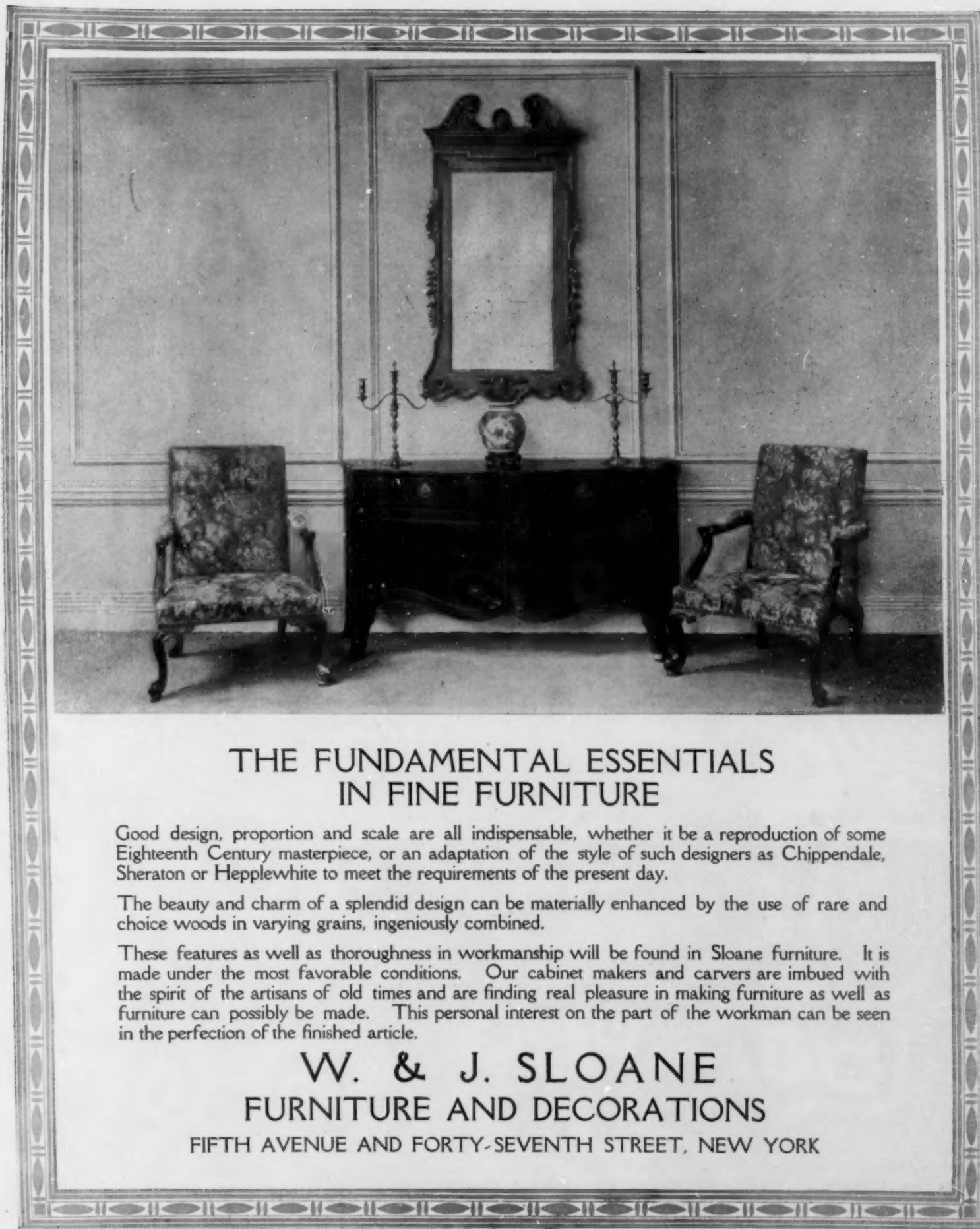
In another part of this magazine there appears the second article of a series that supplies the much needed information on this subject. Its object is to spread that necessary knowledge of how to obtain the benefits that science has put within our reach in source of light and means of using it. When we become aware that we may heighten the atmosphere of the home by our illumination, gain eye comfort and repose and when we apply the suggested remedies we will find even our dispositions changed for the better.

A REMEDY FOR THE SWOLLEN BUDGET

THERE seems to be at least one direct result of the constantly rising prices: we have a new topic of conversation that bids fair to overshadow that old favorite of ours, the weather. So far as finding a solution for the problem is concerned there is no remedy in sight. Most people wait for some legislative action, or look to the appointment of some commission to readjust costs. Meanwhile the expense grows, and there is little that the individual can do to change the figures of the aggregate high cost of living.

When the question is referred to the family budget, however, the case is different. Though the national figures remain the same, the personal ones can show a decrease. This is particularly true this year, for as spring approaches the planter of the small garden finds himself in a better position than ever to grow produce for his own table that will supply more than his personal needs throughout the summer and fall, and well into the winter. The labor saving tools, the better, hardier and more productive varieties, the recently discovered irrigation system for the small place—these are some of the factors that make it possible for the house owner to receive advantages far above the market gardener whose ultimate profit is determined by competition.

Most of the readers of HOUSE & GARDEN have the opportunity to cultivate a vegetable garden. To them the series entitled "The Hundred Per Cent Garden" is directed in order that they may apply to their home place those same careful economies that they employ in their business. The principles of scientific gardening are not abstruse nor dull learning, and the working out of them is a real pleasure, but we urge every one who may, to put them in operation, for they help to lighten the budget.



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(Continued from page 110)

causes the leaves to turn yellow and droop.

As the rubber is more difficult to propagate than most house plants, and since specimens will not get too large for several years, it will be best to get plants from the florist's. It frequently happens, however, that an old plant which has been grown up to a single stem becomes unwieldy and bare at the bottom. In such cases the upper part may be removed by "topping" and the main trunk cut back to within six to eighteen inches of the pot or tub, and water partly withheld until new growth starts. The old stem may thus be transformed into a low bush plant and frequently it makes a very handsome specimen. The topping is performed by making a deep upward slanting cut with a sharp knife, at the point you want in the pot for your new plant. In the cut stuff a little sphagnum moss; remove this after a few days and wash the cut out with warm water, removing the congealed sap. Insert fresh moss, and with strips of soft cloth tie a good handful over the wound. *Keep this moist* constantly until the roots show through the moss, which may be several weeks. Then pot in *moist* earth, not wet, and syringe daily, but do not water the pots for two or three days. Sometimes pots cut in halves and the bottoms partly removed are used to hold the moss in place. August is a good time to propagate.

Ficus elastica is the common rubber plant. The "fiddle-leaved" rubber plant (*F. pandurata*) is another variety now largely grown. It differs from the former in having very broad, blunt leaves, shaped like the head of a fiddle, which are marked by the whitish veins. Two other beautiful plants are *F. Cooperia*, having large leaves with red midribs, and *F. Parcelli*, with leaves marbled with white. They should be given a higher temperature than *F. elastica*.

To add a touch of color to the winter garden, there are two excellent plants which, while not of importance primarily for their foliage, still deserve a place in every collection. The first is the *Ardisia*—the best red-berried plant for the house. It is a dwarf, with very beautiful dark green foliage. While kept healthy it will be laden constantly with its attractive clusters of berries, one crop lasting over to the next. Seedlings make the best plants, and are readily grown. Sow in January to April, and plants will flower within a year and thereafter be perpetually decorated. Old plants can be topped and make fine specimens. By all means give the *Ardisia* a place in your collection.

The second is the decorative pepper. Some of the peppers make very attractive pot plants on account of their bright fruit, which is very pretty in all stages of growth from the new green pods, through yellow to bright red. Buy new plants or start from seed in spring. They are easily grown if kept on the warm side of the

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house. Celestial and Kaleidoscope are the two kinds best suited for house culture.

The "sensitive plant" (*Mimosa pudica*) is a pretty little green-leaved plant, the never-failing interest in which lies not in its beauty, however, but in the fact that it shrinks and folds up when touched, as though it belonged to the animal kingdom. It is easily grown from seed.

The umbrella plant (*Cyperus*) does well with ordinary care, and is at all times very attractive. The long, slender stems, each surmounted by a number of drooping slender leaves, somewhat resembling the ribs of an umbrella in the way they are held, are thrown up in a thick group from the base of the plant, making a most striking and artistic appearance. Its chief requirement is plenty of water.

While you probably will not have room for all these plants, or even a majority of them, do not be content to stick to the old universally known sorts. While a good specimen of a new variety of palm or rubber may not be as cheap as a geranium, you should take into consideration that it will last several years, and the cost, being thus distributed, is actually very little. A good plant is one of the most lasting, satisfying and worth-while "luxuries" you can treat yourself to—one which you will never be sorry for after you get it.



The Lure of the Orchid

(Continued from page 104)

orchids even in the tropics. It grew chiefly in inaccessible places, on the overhanging rocks and in the deep ravines of the coast. To gather the plants natives had to be lowered on ropes, but gathered they all were, and collectors no longer send home the *Laelia elegans*!

The orchid hobby, unlike other floral excitements, has never grown into a mania and has never known a period of inflation. The Tulip, the Dahlia, the Zinnia, the Camellia, each in its turn sprang into prominence, gave rise to wild speculation, had its day, and sank into oblivion. In quite another way the orchid has slowly and steadily made its way. Its cultivation, at first only possible to the immensely rich, is rapidly approaching the reach of all. Thanks to vast importations and improved facilities for domestic propagation, the number of plants in cultivation has so increased that prices of many of the most beautiful forms, which formerly were given in guineas, are now quoted in shillings. This has led to no decreased interest on the part of the more wealthy, who, on the contrary, have continued to improve the standard of their collections. As ordinary specimens have become cheaper, prices for particularly fine or rare plants have continued to mount from year to year, until now it is no uncommon occurrence for some desirable plant to fetch at auction over a thousand dollars.



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The adventures of orchid collectors are fully as interesting as those of hunters, explorers and gold prospectors. Much has been written of the Klondike, but few have heard of the ecstasy of the traveler Roezl, on beholding a remote and mud-built chapel draped with garlands of *Flor de Majo*, the chancel walls clothed in a scarlet and crimson blaze of *Masdevallia Harryana*. A price of \$5,000 was once refused by Sir Trevor Lawrence for one of the last specimens of the lost Lady's Slipper *Cypripedium faerianum*, which was later rediscovered in quantities and by accident by Mr. G. C. Searight of the Indian service while surveying in the Bhotan hills. Struck by its appearance, he sent a few specimens to a friend in Calcutta—word of its rediscovery was flashed over the world and shipments were rushed to London, where the florists had offered a reward of \$5,000 for its reintroduction.

The story of another Lady's Slipper, the *Cypripedium Curtisii*, is less widely known but fully as interesting.

A single plant of this species was sent to England from Penang by Mr. Curtis in 1882. It ranked among the finest, and amateurs watched with impatience the coming of a further supply. No more came, however, and collectors gave up all hope of ever again finding it. Finally the explorer Ericsson, while collecting other species in Sumatra, took shelter from a storm in a mountain hut. There on the walls amid the scrawled names of other travelers who had rested there, was a drawing of the lost *Curtisii*, and underneath was written "C. C's contribution to the adornment of the house." Ericsson at once commenced searching the neighborhood, and at last, when he was just about to give up in disgust, found the plant in a most unlikely place.

Interesting, too, is the history of the *Cattleya labiata*. As far back as 1818, when orchid culture was in its very infancy, the plant was received by Dr. Lindley as a packing around some lichens sent from Brazil. Dr. Lindley described it and named it after Mr. Cattley, one of the earliest of orchid enthusiasts. From time to time other plants were received which were taken for the true *labiata*, until, with the increased knowledge of the flower, came the disclosure that the true type was no longer in cultivation and that its home had been forgotten. For years it was the one ambition of collectors to find this treasure again. At length, in 1889, some plants were sent by chance to a dealer in Paris. At once collectors were sent after it, and before long it was one of the most plentifully represented plants on the shelves of the growers. Since its rediscovery, rather unpleasant to relate, gathering has gone on so ruthlessly that the plant has been nearly exterminated, and the last collector scarcely found enough specimens to pay his expenses. Perhaps, however, there is still some wild where the *labiata* is blooming in large quantities, waiting for the discoverer to add to the romance of orchid hunting.

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(Continued from page 101)

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- 1 *Pyrus Ionensis flore-plena* (Beachtel's crab apple)

Pot and Tub Plants—

- 4 *Hydrangea Hortensis Otaksa* (Otaksa hydrangea)
- 4 *Buxus sempervirens* (Standard tree box)
- 4 *Buxus sempervirens* (Pyramidal tree box)

Shrubs—

- 4 *Buxus sempervirens* (Globe-shaped tree box)
 - 5 *Berberis Japonica* (Japanese barberry)
 - 5 *Berberis aquifolium* (Mahonia)
 - 5 *Deutzia parviflora* (Small-flowered deutzia)
 - 10 *Deutzia Lemoinei* (Lemoine's deutzia)
 - 5 *Spiraea arguta* (Sharp-toothed spirea)
 - 5 *Spiraea Van Houttei* (Van Houtte's spirea)
 - 10 *Rosa rugosa* (Ramanas rose)
 - 15 *Rosa rugosa alba* (White Ramanas rose)
 - 5 *Paonia moutan* (Tree peony)
 - 5 *Rhodotypos kerrioides* (Rhodotypos)
 - 5 *Philadelphus lemoinei* Mt. Blanc (Mock orange "Mt. Blanc")
 - 5 *Syringa vulgaris Varieties* (Named Lilacs in Variety):
 - 1 *Alba grandiflora*
 - 1 *Madame Lemoine*
 - 1 *Marie Legraye*
 - 1 *President Carnot*
 - 1 *Souvenir De Ludwig Spaeth*
 - 10 *Ilex crenata* (Japanese holly)
 - 5 *Forsythia suspensa fortunei* (Fortune's golden bell)
 - 20 *Taxus cuspidata nana* (Dwarf Japanese yew)
 - 5 *Hydrangea paniculata* (Panicked hydrangea)
 - 5 *Viburnum cassinoides* (White rod)
 - 100 *Ligustrum amurense* (Amoor River privet)
- Shrubby Vines**
- 50 *Hedera helix* (English ivy)
 - 11 *Ampelopsis tricuspidata* (Boston ivy)
 - 5 *Lonicera Japonica Halliana* (Hall's Japanese honeysuckle)
 - 2 *Wistaria Chinensis* (Chinese wistaria)
 - 2 *Akebia quinata* (Akebia)
 - 4 *Rosa Dawson Rambler* (Rose "Dawson's Rambler")
 - 10 *Clematis paniculata* (Panicked clematis)
 - 1 *Clematis lanuginosa* Lady Caroline Neville (Clematis "Lady Caroline Neville")
 - 1 *Clematis lanuginosa* Henry I (Henry's clematis)

No-Rim-Cut Tires 10% Oversize

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So this is by far the most efficient, the longest-lived non-skid.

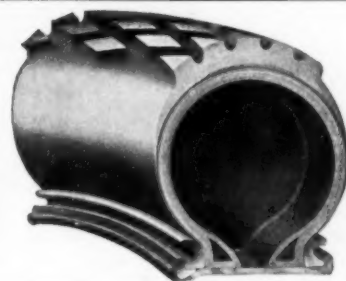
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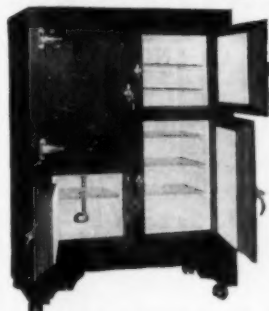
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- 1 *Clematis Orientalis* (Oriental clematis)

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- 30 *Alyssum saxatile* (Golden tuft)
- 30 *Phlox subulata* (Moss pink)
- 50 *Iberis sempervirens* (Evergreen candytuft)
- 10 *Yucca filamentosa* (Adam's needle)
- 10 *Althaea rosea* (Hollyhock)
- 10 *Achillea tomentosa* (Achillea)
- 10 *Phlox divaricata* (Wild Sweet William)
- 15 *Dictamnus albus* (Gas plant)
- 15 *Heuchera sanguinea* (Coral bells)
- 15 *Anemone Japonica* (Japanese anemone)
- 10 *Trillium Grandiflorum* (Wake-robin)
- 10 *Hemerocallis flava* (Lemon lily)
- 5 *Clematis recta* (Upright clematis)

Ferns—

- 10 *Adiantum pedatum* (Maidenhair fern)
- 10 *Dryopteris marginalis* (Wood fern)
- 15 *Polystichum acrostichoides* (Christmas fern)

Bulbous plants

- 150 *Colchicum speciosum* (Meadow Saffron)
- 100 *Eranthis hyemalis* (Winter aconite)
- 15 *Fritillaria meleagris* (Fritillaria)
- 50 *Galanthus elwesii* (Giant snowdrop)
- 100 *Lilium speciosum rubrum* (Red lily)
- 60 *Narcissus poeticus* (Poet's narcissus)
- 20 *Narcissus princeps* (Daffodil "Princeps")
- 20 *Narcissus Golden Spur* (Daffodil "Golden Spur")



The Hundred Per Cent. Garden

(Continued from page 117)

you can give them. If you haven't a convenient place near a window, get a couple of ordinary metal brackets, screw them securely on either side of the window and place a light board across on which to put the flat. This makes an ideal place for the little seedlings. The glass covering should be removed when the sun shines directly upon the box, as it forms a miniature coldframe in which the temperature would be too high.

From the time the flat is put in the window until the third true-leaf appears (when they will be ready to transplant) is the most risky stage of seedling growth. The dreaded enemy is the "damping off" fungus, which attacks the stems where they enter the soil, causing them to turn black and shrivel up or rot off. There are four precautions to take against it the first of which is to plant early enough to start over again if it should get the best of you. The others are: Proper care in



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watering. If the flat has been thoroughly soaked through from below at the time of planting, it should need no further watering until after the seeds have sprouted. When further watering is needed, as indicated by the surface of the soil becoming dry, the best way is to repeat the former process. If this cannot conveniently be done, water with a can, using the finest nozzle, and being careful to do it on a bright, sunny day when all the foliage and soil surface will have a chance to dry off before night. In either case saturate the soil thoroughly. The temperature of the water, contrary to some theories, makes little difference.

Maintain a proper temperature. In the case of the early plants (sown in the first flat) this will be forty-five to fifty degrees at night (never going below forty degrees, if it can be helped). The day temperature should be ten to fifteen degrees, higher.

Give ample ventilation. Remember that your little plants need airing every day. Make it your rule to give all the ventilation you possibly can without letting the temperature stay below forty-five degrees at night or sixty degrees in the daytime. The best way is to open a window in an adjoining room or on the opposite side of the one they are in, as a draft directly upon them may cause trouble.

Given the above ample but regular treatment, the little seedling should grow rapidly and acquire a healthy dark green color. When they touch the glass it should be removed altogether; and if they show any tendency to bend toward the light, occasionally turn the flat about to let them straighten up again.

In six to eight weeks after sowing they should have developed into quite sturdy little seedlings, and about the time the third true leaf may be just seen, they will be ready for "pricking off," or transplanting. Do not delay this operation a day after they are ready for it, especially if they have come up thick, as they will run the double risk of becoming lanky and of damping off.

Prepare flats similar to the seed flats, but three or four inches deep, instead of two. Into the bottom put a layer of very old, thoroughly rotted manure, and fill level full of good soil—that used for planting will be all right, but it will not matter if it is not so light or finely sifted. If no manure is to be had, put a layer of drainage material on the bottom of the box, and mix bone flour, at the rate of three to four quarts to the bushel, through the soil, preparing it, if possible, a week or so in advance.

Taking up the seedlings must be done with care, as the filmy little rootlets are easily broken. The seed box should be watered the day previous to have the soil in just the right condition. Then take up a small bunch of plants and dirt and gently pull the seedlings out, discarding all that are weak or show any sign of stem rot, and lay the rest out on a small piece of shingle or something similar, so that

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they are ready to your hand. Then, taking a plant in the right hand, make a hole with the left forefinger, into which lower the roots and about half the stem. Do not crowd them but press the earth firmly down and against each plant, using the thumbs and forefingers so that it may be made to stand up straight and cannot readily be pulled out. Fifty to a hundred plants may be put in an ordinary flat, but the former number gives more room and consequently better plants for the garden.

After transplanting, water, if possible, by sub-irrigation, as before. For the next few days shade the flats with newspapers from direct midday sunshine, after which they should have all the light possible. Give the same care in the way of watering, ventilation and temperature as they received before.

To put the plants outdoors provide an ordinary coldframe, with glass sash. They may be put into the coldframe directly after transplanting, but it is better, if possible, to keep in the house, or in a mild hotbed, for a few days, to give them a quick start. The treatment of the plants in the frame continues about the same as that already given, except that more water and more air are needed as they get stronger, and the days warmer.

The early plants, sown from February first to March first, will be ready to go outside about March fifteenth to April fifteenth. When these are removed to the garden, it will leave room for the tender vegetables, which are handled in the same way, except that, for the best results, they will require two transplantings, the second, if possible, into pots. They should also be given a lighter soil (more rotted manure or leaf mold in it) than that in which the early plants will thrive. They should also, of course, be given a higher temperature—fifty-five degrees to sixty degrees at night, if possible. Do not set them out in the frames until there is no danger of their being frosted by a sudden cold snap.

Hardening off the plants is of the greatest importance to prevent a setback after transplanting to the garden. This is accomplished by giving more and more ventilation and finally leaving the sash off at night as well as in the daytime.

All of the early things will stand a light freeze, if they receive proper treatment the following morning. This is to keep them shaded from the sun, and drench them with ice-cold water, so they will thaw out gradually.

Poor seed (not absolutely bad seed, mind) may easily make a difference of from twenty to eight per cent. in your garden crops. So you can readily see that, if you have spent time and money on supplying every other factor for a hundred per cent. garden, poor seed will be a pretty expensive luxury. The best seed is the cheapest, no matter what it costs. You have, for the most part, got to trust to the personal honesty of your seedsman. Therefore, use care in selecting him. The best seed houses test every lot of seeds



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they have to dispose of. Even so, the planter may test the seed houses, to try several before he settles on any one as the best.

Vitality, strong germinating power, is a prime requisite in good seed, and the slight trouble required to test the seeds for yourself will be well repaid. It is better to start them in soil, in a moderate temperature, than in wet cotton or a blotter.

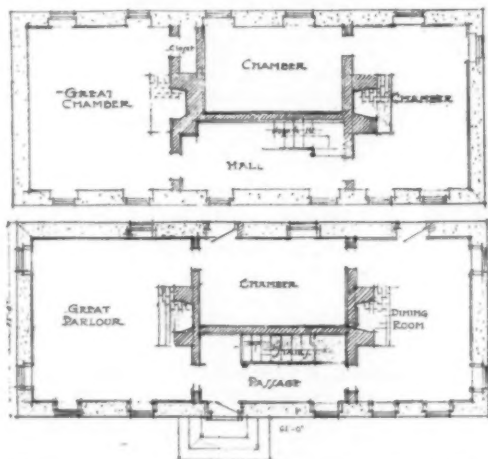
Good breeding, however, is just as important as vitality. We must know not only that the seeds will grow, but what they will grow into. A hint to beginners that I know will prove of practical value, is to go over several catalogues carefully, and as far as possible order each of the sorts you want from the house that introduced it. Then you will be pretty sure to get both vitality and good breeding in the things you want. Stick mainly to standard, well tried out sorts, however. The much praised novelties often prove very disappointing, as most seedsmen mention only their good points, leaving the customer to discover the bad ones. A list of tried and true sorts will be found in this month's Garden Department.



Old Philadelphia Houses

(Continued from page 115)

all of them of ample proportions. As there is a gambrel roof the third floor rooms have more space in them than the usual third floor rooms under a pitch roof.



Upper cut, second floor; lower, first floor
Plans by Joseph P. Sims

Heavy white oak was used for stairs and banisters and all the interior woodwork is remarkably beautiful and wrought in a simple and vigorous pattern.

HAROLD DONALDSON EBERLEIN

Serviceable Garages of Good Design

(Continued from page 114)

lathe and drill press and to supply current to the electric rectifier for charging electric vehicles. Gas has been used where electricity was not available for lighting



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Full information furnished as to the best plans for commercial orchards, and the best fruits of all kinds for the home garden. Catalogue or handbook of varieties, and instructions for planting, pruning and after-management on request.

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purposes by putting the gas fixtures back of a glass pane in a recessed opening in the wall, vented outside. It is not very satisfactory, however, and must be located very high.

Ordinarily it is quite safe to enter a garage smoking a cigar, and a great many men even smoke while they work on cars. Very few automobiles have leaky tanks, but there may always be dangerous conditions resulting from carelessness and apt to cause fatalities. To guard against them it is best to make the garage and everything about it as safe and fool-proof as possible.

Turntables are used in some cases where it is necessary to turn a car in a limited space or where there is no room outside, but the space under the turntable must be drained because the oil and gas accumulating there are dangerous.

A repair pit, over which the car may be run in order to work under it, is very practical. It should have an outlet at the rear so that in case of fire the mechanic will have a safe means of exit to the outside. It is much easier to work under a car or to inspect it from such a pit than when lying on your back. I have had some experience both ways and prefer the repair pit.

Three ring bolts should be placed in the ceiling so that if it is necessary to change bodies or raise the engine these may be used for fastening the tackle.

Oil should be kept in galvanized iron drums made for that purpose, as it seeps through oaken barrels and soils the floor beneath them. Oil is ruinous to rubber and catches dirt. Drip pans filled with sand should be kept under each car.

Swinging, sliding and folding doors can be used in the garage. The sliding ones are usually preferred because they take up less room. Swinging doors, if they swing in, sometimes interfere with the cars, and are rather unsightly when open if they swing outward. Where several cars are to be kept it is best to use the sliding door.

The average automobile has a width over the mud guards in the widest part of five feet six inches, and with the top down is sixteen or seventeen feet long. A large limousine with a double tire case on top is eight feet six inches high. Therefore doors should be at least eight feet seven inches or nine inches high. The height of the automobile top varies considerably, and the length of the car is likely to increase somewhat in the future, so that in designing a garage the changes likely to occur in the future cars should be considered. The space a large automobile requires to turn a circle in is from forty to fifty feet, but the car can be turned in a very small space by backing.

The care of the automobile is an exceedingly important matter. The owner cannot obtain the best results from a car unless it is properly looked to. The running gear must be kept free from mud in order to keep grit out of the bearings. Varnished surfaces must be kept clean and

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free from oil and dust by frequent washings and polishings. An even temperature of from fifty-five to sixty degrees should be maintained in garages during the winter, and the water used for washing cars should be lukewarm. Sudden changes from a high temperature to a low one and the sudden application of very cold water causes the varnish to crack or check. There is not a great deal of work to be done on a car if it is done regularly. If it is not done regularly the car soon becomes out of order. It is convenient for either the owner or chauffeur properly to care for his car in a well-equipped private garage. In a public one there is less opportunity to look after private property and therefore the work is left to others, who do it in an indifferent way and usually charge a high price for storage and service.

Quarters for the chauffeur can be provided for on the second floor of the average garage, and should consist of a general living-room, bathroom and two chambers. In garages where several cars are kept it is advisable to have a small machine shop so that the chauffeur, who is usually a good mechanic, can make the majority of repairs promptly.

The arrangement of electric lights requires some attention. In a number of garages I have placed a series of lights eighteen inches from the floor, so that a strong light could be cast under the car and on the running gear. The heating pipes are usually arranged in a series of coils around the walls to a height of about three feet, giving the maximum amount of radiation.

A machine for welding and vulcanizing should be provided in the garage, and cupboards should be built in for the storage of tires and various implements and clothing. There should also be moth-proof chests for robes.

After the garage has been constructed on the model lines mentioned above a well-drained driveway eight feet in width and built of macadam should lead up to it. The result of both will be distinctly grateful to all thoughtful owners of the automobile.



Training the Dog—VI.

(Continued from page 86)

from you, and back him into the corner, at the same time raising his front feet well off the floor. In a moment you will see the first advantage of the right angle formed by the room walls. As you press your pupil backward he will naturally attempt to keep on his hind feet, probably stepping back in the effort to preserve his balance; but the wall soon effectually checks further retreat and makes it possible for you to raise the dog's body into the desired vertical position by continuing the backward and upward pressure.

The dog is now standing on his hind

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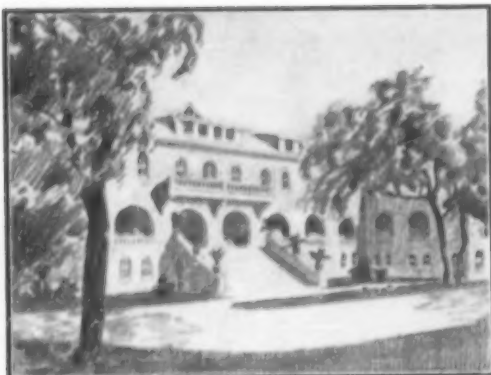
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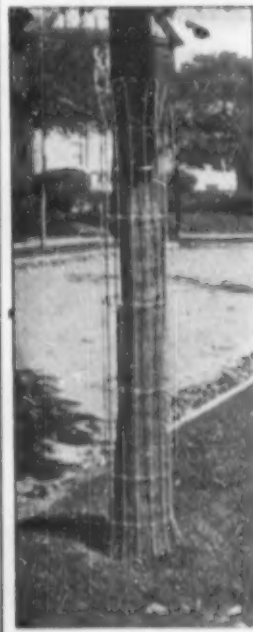


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legs literally "with his back to the wall," probably trying to step still further away from you, but making no headway in the attempt. Hold him thus a moment, and if he does not settle down into a crouching posture with his hind legs under him in a natural position, shift both his front legs to one hand and with the other draw the recalcitrant hind feet into the required position. It is essential that you insist on this matter of the proper placing of the legs; little or no success will be attained in teaching a dog to sit up unless he feels that his hind feet are in such a position that they will support his body in a state of balance. While placing the feet as described, exert a gradual downward pressure with the upper hand—you will see at once how to bring about the desired result—and having thus brought the dog into a more or less close approximation of the correct "sit up" position, keep repeating the appropriate order while you hold him there.

Perhaps at about this stage of the proceedings your pupil will be seized with a sudden weakness of the spine, and "cave in" most dejectedly. In this event the second advantage of the corner position becomes apparent: it is manifestly impossible for the dog to "cave" in more than one direction (forward), and this tendency you can readily check.

The proper position for the front feet of a dog that is "begging" is forward and up at an angle of perhaps forty-five degrees. As soon as the pupil reaches that stage of the trick in which he readily "squats" straight-backed in the corner, with hind legs solidly under him, gradually release your hold on his fore shoulders and raise his front paws to the position mentioned, keeping one hand under them to be sure they are not lowered.

When your judgment tells you that the dog has a pretty clear idea of what "sit up" means, try and induce him to do it without your helping him up. Do this in the corner, for he has learned the supporting value of the two walls and they give him confidence. Very often you will find it helpful at this point to motion him up with the hand, holding it above him and snapping your fingers to attract his attention upward while you give the command. It is well, too, to stand up yourself now, of course bending over enough so as to be close to the dog and yet above him.

It is impossible to set any fixed period at the end of which you can dispense with the corner of the room and perfect the trick without the aid of artificial support. Some dogs will catch the idea of the lesson in two or three trials, while others may need a week. The only sure guide in the matter is to study the particular case in hand and follow your own judgment. When the step is finally taken, do not expect too much of the dog at first. Steady him with both hands when he has his first experience in sitting up without the wall support, for in nine cases out of ten he will have difficulty in keeping his balance unaided.



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Do not prolong these lessons unduly. Remember that sitting up is an unnatural posture for any dog, and is tiring especially to a half-grown puppy. Let your pupil rest frequently, and the mutual results will be better.

And now just a few words in regard to rewards for proficiency in performing tricks. About 499 people out of 500 seem to think that a lump of sugar or some such stuff is absolutely necessary to induce Terry or Waldemar to go through his paces. It's *not*. A trick, no matter how absurd it may be, should be considered by the dog as just as much a matter of obedience pure and simple as anything else you tell him to do. In *some* cases (I hesitate to say this for fear the excuse may be too often used) a tidbit may be offered to cure a bad case of the sulks, but for a general working rule limit your reward to a pat and a few words of praise. Thus will your dog be dependable when required to "show off" and you will not have to keep on hand a box of fancy crackers or a pound of chocolate creams for his especial benefit.

R. S. L.



Our Winter in the Happy Valley

(Continued from page 94)

between the sleigh and the horse."

"Is that what you would have done?"

This was from the head of the table.

"I'm through, let's get busy!" exclaimed the irrepressible Madge. "What can we do to-day?"

"Can't you think of anything?"

"Think of too much. I want to snow-shoe, to ski—is there any such word?—to coast, climb the mountain, visit Buttermilk Falls, go through the gorge where I hear the water roaring this minute—"

"Better begin with the gorge. It is the nearest, and the shortest trip you can make."

"But it is more than half a mile through."

"But you can't go through. Giants forty feet tall guard that gorge. Harry can creep a few feet under the rocks with his camera and get a view of the mouth of the cavern from within."

"That will only take half an hour. We will go to Buttermilk Falls afterward."

But no one ever broke the spell of that gorge in winter in less than half a day and dinner was ready for the young folks when they returned to the cabin. Madge spent the short afternoon on snow-shoes, while Harry and Jack took turns in being bucked off the skis as they dragged a flexible flyer to which Marian clung, down a steep hill through the drifted snow. It was after supper when Marian, who was sitting beside me, demurely asked:

"What is it to be keelhailed, Uncle Archie?"

"It is having a line that passes beneath the keel tied to you and being hauled by

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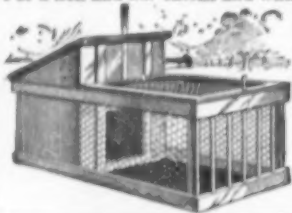
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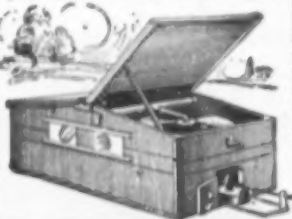
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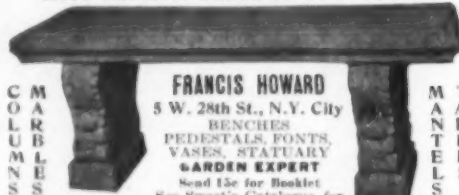


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it through the water from one side of the ship to the other."

"That's what I thought, and that's what has been happening to me. I've been dragged like lightning through drifts a mile long where I couldn't breathe for an hour."

"Why didn't you tell the boys to stop?"

"I didn't want them to. I want something to tell the girls at school that will make them die of envy."

"We are going to Buttermilk Falls in the morning," said Madge to her hostess as she stood sleepily before her, holding a candle at an angle of forty-five degrees. "What time must we get up?"

"You ought to start two hours before sunrise."

"Wow, but that will be cold and dark!"

"It will be eight by the clock, but down in the Happy Valley in midwinter the Sunday is between ten and two."

"I was afraid you didn't have any Sunday here," interposed Marian.

"Just you wait till it comes," said I, "and watch your Aunt Lucy wait you off six miles to a Sunday School that she runs for just such little heathen as you."

It was a gay party that started from the cabin before the clock struck eight in the morning and it was a tired party that five hours later, having wallowed five miles in the snow, begged to have its dinner served raw rather than have it delayed.

"Did you see any game?" I asked.

"Millions of them," exclaimed Marian.

"There was a bunch of wild hens, I guess they were, that made an awful noise when they flew and Jack held a stick in both hands and pointed it at them and said 'Click!' What do boys do that for? I've seen them do it to a cat. Then there were tracks of everything in the snow. There were the cunningest little mouse's tracks close to a tree and a big bear's track going right up the mountain. Jack said it was the track of a rabbit, or a fox, or some kind of a cat—he didn't mention the name. I think it was a bear, don't you?"

"Were the tracks near the big, flat rock this side of the falls?"

"Pretty near."

"Then I know all about it. Do you remember what happened to the children who mocked Elisha?"

"Forty-two bears tare them. Maybe it was forty-two children that the bears tared."

"Well, whichever it was, the descendants of those bears have settled near that big rock and they may have overheard some of your disrespectful remarks to me."

"We did see bear caves on the side of the mountains," said Madge, "and all kinds of gruesome monsters among the rocks, for the snow on the mountainside was full of deep shadows that formed strange profiles and made masks like distorted faces. I had to recite something about winter once, and I remember that:

'Nature was frozen dead—and still and slow,

A winding sheet fell o'er her body fair,' but there isn't any winding sheet about

this. There was life and sound and motion every minute. There was the roar of a small avalanche, the cracking of a great tree from the frost—that's what Harry said it was—a bunch of the dearest and noisiest little birds, and the way the sparkling water poured out of the dark cavern and tumbled over Buttermilk Falls was worth the whole price of admission. Harry is sure he got a beautiful picture of it."

"He said 'a bully picture'" explained the matter-of-fact Marian.

"I am going to get a better one tonight. I am going to take those falls by the light of the moon at midnight," said Harry.

"You are laying out a pretty lonesome walk for yourself," I remarked.

"Who says it will be lonesome with me with him?" interjected Marian.

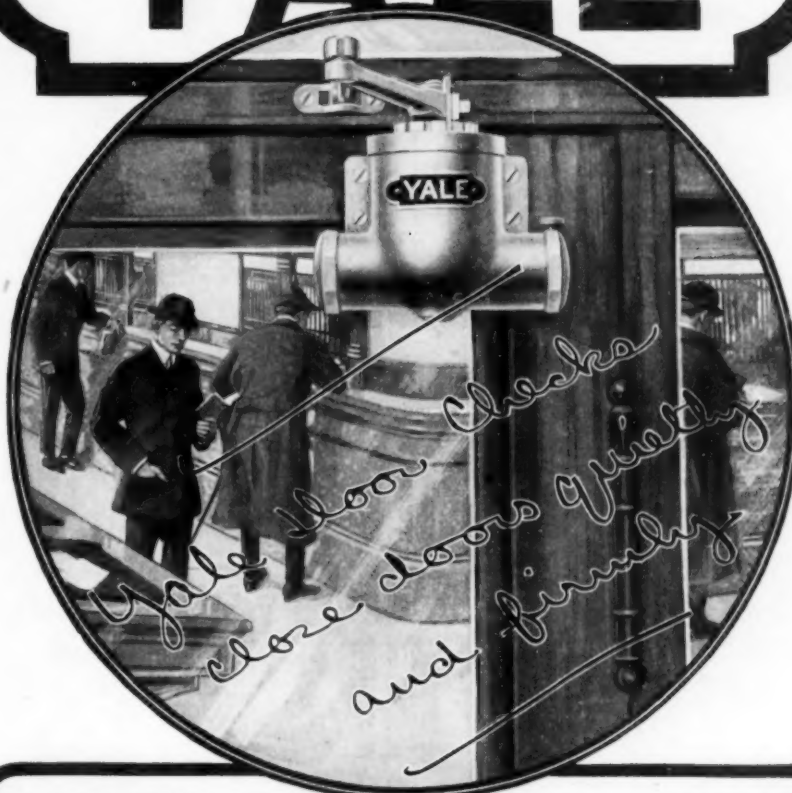
"Will anyone else help make the walk pleasant for Mr. Forsyth?" I inquired.

"Oh, Jack and Madge will tag along, but that won't make it any pleasanter for him."

The plan was carried out, though it took diplomacy to prevent the lady of the house from "putting the kibosh" as Marian expressed it, on the whole escapade. After Buttermilk Falls other moonlight views were taken, and during a ten minute exposure on one ravine Jack walked up the gorge swinging his lantern, which supplied one of the curiosities of the outing, for while the moving youth left no impression on the sensitive plate, the flame of the swinging lantern left a sinuous, fiery trail.

Ten days passed quickly to the jolly four. They tramped over all the half-broken roads, waded through the untouched snow of the deeper forests, explored the caves among the piled up rocks and followed the courses of mountain brooks through many a deep ravine. They fraternized with the children of the distant district school and accepted invitations to ride home with the merry youngsters on their ox-drawn sled. Once they chartered a boy with his slow-going team to take them on a straw ride over the hills, and were happier in their primitive outing than they had been on many an automobile trip. Marian became an adept on snowshoes while Madge developed skill on skis. Jack became infatuated with the study of the creatures of the wild and pored over my books on the subject by night and followed the trail of strange beasts by day. One sees what he looks for in the mountains and the boy's list of the wild animals he met was the amazement of even country-bred youths. He even impressed our wise cat, Bunny, who opened latched doors like a human being, for one morning she laid at his feet a flying squirrel, reasoning doubtless that even so sharp-sighted a youth might have overlooked this creature of the night. Jack's crowning adventure came when the broad trail of a bear, passing within a stone's throw of the cabin, was discovered one morning. The boy joined a hunter, who with rifle and dog

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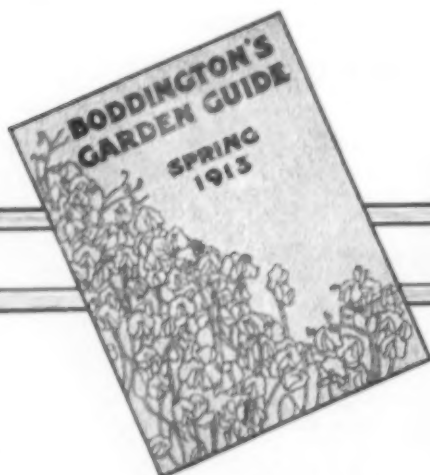
TRICKER'S WATER LILIES were awarded the Columbian Medal at the World's Fair, Chicago, 1893. Four silver medals, a silver cup and numerous certificates and cash prizes have recently been awarded me for water lilies.

If you contemplate making or planting a water garden or lily pond consult me. I have written the book, "The Water Garden," and have had many years' experience in this line.

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was following the beast, and it was after dark when we saw him again. But for the anxiety it would have caused us he would have camped in the woods with the hunter to have resumed the trail the next day.

Harry wandered with his camera in a country that Jack had found filled with living creatures, seeing none of them; but every distant mountain top or nearby rocky cliff, every tall, snow-burdened hemlock and low-growing mass of laurel drew his eyes like magnets. With the mercury at zero he made Jack stand for the human interest while he pictured dark shadows that lay across the path. He followed the snake-like course of the stream, sluggishly cutting its way through the drifts in the valley, and he pictured Bear Hole Brook bursting the bonds that the winter king had forged.

One day, there fell upon the cabin a shadow in the shape of a letter that Madge handed to the lady of the house with tears in her eyes. The letter began:

"We are happy to hear of the 'lovely time' you have had, but your school vacation is near its end and you must not fail to be home on time. Tell—" but the rest was too intimate to record here.

It was later in the winter as we sat by the blazing logs, opening our mail in the peace of our cabin home, when the lady handed me a letter, saying:

"How shall I answer that?"

I read, "What keeps you from dying of loneliness, shut in by the deadly dullness of your frozen country?"

"Tell her, if you like," said I, "that the days need to be forty-eight hours long properly to hold our happiness."

There came a glance from smiling eyes and the lady nodded as she studied the faces in the glowing coals.



The Collector's Corner Medallion China

THE rarest, most expensive and highest class specimens of what collectors call "Old Blue" are those pieces which are decorated with medallions. They seldom come to auction sales, for they are eagerly bought by collectors and dealers at private sale. A ten-inch plate at the Burritt sale in 1903 with the four portraits on it brought \$130, and they have doubled in value since then.

The choicest are those with four portraits like the platter which has a central view of Windsor Castle, Rochester Aqueduct at the base, and Jefferson, Washington, Lafayette, and Clinton at the top, making one of the oddest jumbles possible. Like all this blue crockery which has an acorn border and which was made by Ralph Stevenson, or Ralph Stevenson and Williams, the print is clear and the



YOU, reader, can grow chrysanthemums as large and fancy as shown here, if you start right. **BUY** the young plants now, grow on in pots or boxes of soil until **MAY**, then plant out in garden, and follow our **CULTURAL DIRECTIONS**. WE will send you postpaid by parcels post 20 choice assorted colors, strong plants, for \$1.00. OR you can make up the 20 plants, in part, of

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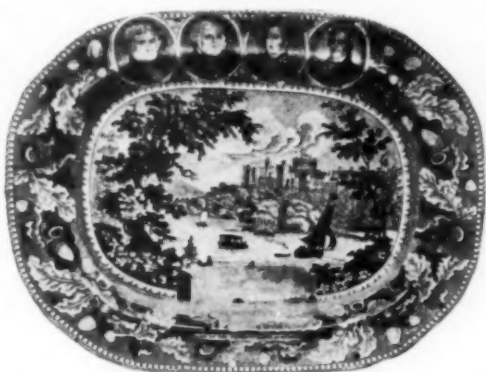
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color fine. The English view was used because it fitted the space. The bulk of this blue ware was made between 1820-40, and that marked R. S. W. was prior to 1834, when the mark was Ralph Stevenson and Sons. Only three of these platters have come within my knowledge, and I should hesitate to place a value on them, since the phenomenal prices brought at the Deforest sale in 1912 exceeded all previous records.



This pattern is among the choicest examples of "Old Blue"

On the plate shown with the four medallions the arrangement of heads is different, Jefferson comes first, then "Welcome Lafayette, the Nation's Guest," followed by "President Washington," and "Governor Clinton." The view in the center is "Niagara," at least it is so denominated on the back, where in addition to the impressed name, Stevenson, is an urn with the name Niagara on it in blue. While this view is found on both nine and ten inch plates without the medallions, when the medallions are present the plates are ten inch. The position of the medallions varies on different specimens, some almost entirely obscuring the house and falls.



The position of the medallions varies on different specimens

The view at the base is the "Entrance of the Erie Canal into the Hudson at Albany," not nearly so often used as the Rochester view. The value of this plate is limited only by the eagerness of the



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collector to possess it, and the length of his purse.

To many collectors the little six-inch plate showing St. Paul's Chapel, New York, with the Clinton medallion, and Rochester Aqueduct at base is one of the most interesting of all the medallion pieces. This also has the acorn border which is so attractive, and which is found on a series of beautiful English views as well as these American ones.

In this view St. Paul's looks very different from what it does to-day, surrounded by skyscrapers, for when it was built it was quite out of town, and placed with its back to Broadway, in anticipation of the town growing between it and the river, according to some authorities, or because the chancel was to be placed on its eastern side according to the ritual. This chapel is one of the few pre-Revolutionary relics left in New York.



One of the most interesting of all the medallion pieces

At the time of its manufacture this medallion crockery—for it is not china—composed dinner sets, for three sizes of plates, and platters and pitchers are known to bear the medallions. So far the forger has left it alone. It is an odd fact that very few pieces of this old blue ware of any description are known in England, and the details about many of the potters are meager and vague.

N. HUDSON MOORE



The Dying Hickory Tree

WITHIN the past ten years a large percentage of the hickory trees have died in various sections throughout the northern tier of States from Wisconsin to Vermont and southward through the Atlantic States to central Georgia and to a greater or less extent within the entire range of natural growth of the various species. While there are several and sometimes complicated causes of the death of the trees, investigations by experts of the Bureau of Entomology, U. S. Depart-

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ment of Agriculture, have revealed the fact that the hickory bark beetle is by far the most destructive insect enemy and is therefore, in the majority of cases, the primary cause of the dying of the trees.

The first evidence of the presence and work of the beetle is the premature dying or falling of a few of the leaves in July and August, caused by the adult or parent beetles feeding on the bark at the base of the leaf stem, but this work alone does not kill the trees.

The next evidence of its destructive work is the dying of part of a tree or all of one or more trees. If the trees are dying from the attack of the beetle, an examination of the inner bark and surface of the wood on the main trunks will reveal curious centipede-like burrows in the bark and grooved on the wood itself. These are galleries and burrows of the parent beetles and of their broods of young grubs or larvæ. The girdling effect of these galleries is the real cause of the death of the trees.

The broods of the beetle pass the winter in the bark of the trees that die during the preceding summer and fall. During the warm days of March and April these overwintered broods complete their development to the adult winged forms, which during May and June emerge through small round holes in the bark and fly to the living trees. They then attack the twigs to feed on the base of the leaves and tender bark and concentrate in the bark of the trunks and large branches of some of the living healthy trees, boring through the bark to excavate their short vertical egg galleries. The eggs are deposited along the sides of these galleries and the larvæ hatching from them excavate the radiating food burrows which serve to girdle the tree or branch.

The following recommendations for the successful control of this beetle are based on investigations, experiments and demonstrations conducted by the experts on forest insects of the Bureau of Entomology during the past ten years.

1. The best time to conduct the control work is between October 1st and May 1st, but must be completed before the 1st to middle of May in order to destroy the broods of the beetle before they begin to emerge.

2. The hickory trees within an area of several square miles that died during the summer and fall and those of which part or all of the tops or large branches died should be located and marked with white paint or otherwise.

3. Fell the marked dead trees and cut out all dead branches or the tops of the remaining market trees which still have sufficient life to make a new growth of branches.

4. Dispose of all infested trunks and branches in such a manner as to kill the wintering broods of the beetles that are in the bark; (a) by utilizing the wood for commercial products and burning the refuse; or (b) by utilizing the wood of the trunks and branches for fuel; or (c) by

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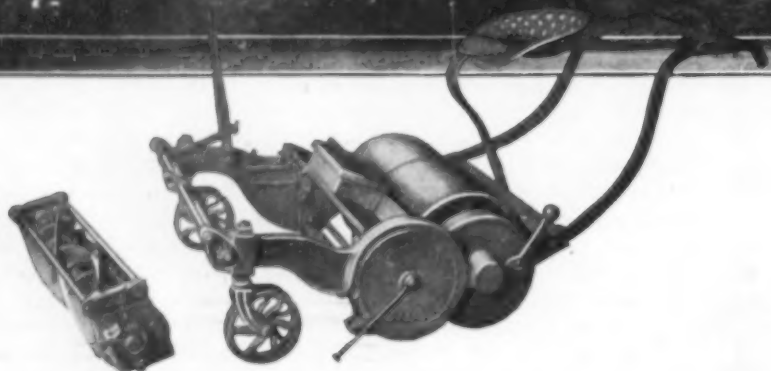
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Lawn Mowers

placing the logs in water and burning the branches and tops; or (d) by removing the infected bark from the trunks or logs and burning it with the branches or as fuel.

5. So far as combating the beetle is concerned it is unnecessary and a waste of time to dispose of trees or branches which have been dead twelve months or more, because the broods of the destructive beetle are not to be found in such trees.

6. Spraying the tops or branches or the application of any substance as a preventive is not to be recommended. Nothing will save a tree after the main trunk is attacked by large numbers of this beetle or after the bark and foliage begin to die.

7. The injuries to the twigs by this beetle do not require treatment.

8. The bark and wood of dying and dead trees are almost invariably infested with many kinds of bark and wood-boring insects which can do no harm to living trees. Therefore all efforts should be concentrated on the disposal of the broods of the hickory bark beetle, according to the above recommendations.

In order to insure the protection of the remaining living trees it is very important that at least a large majority of the dead infested and partially dead infested trees found within an entire community of several square miles, be disposed of within a single season to kill the broods of this beetle. Therefore there should be concerted action by all owners of hickory trees.

On account of the value of the hickory for shade and nuts and for many commercial wood products it is important that the people of a community, county or State who are in any manner interested in the protection of this class of trees, should give encouragement and support to any concerted or co-operative effort on the part of the owners towards the proper control of the hickory bark beetle.



Growing Mushrooms

VALUABLE suggestions on the growing of mushrooms are given by Prof. A. G. B. Bouquet, vegetable garden expert of the Oregon Agricultural College. Those afraid of "toadstool poisoning" need have no fear if they follow his directions.

"The kind usually grown commercially is the *Agaricus campestris*," says Prof. Bouquet. "The color of the gills (the under surface of the cap) is creamy white, turning later to a pink, and in some brown varieties to a grayish brown, and later still to white."

"The common causes for failure in mushroom growing are the use of poor spawn or spawn killed by improper storage; spawning at too high temperature; too much water at spawning or later; and improper preparation of the bed. One of

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"The manure must be in the primary stage of fermentation, and should not contain more than a moderate amount of straw or such substitutes as sawdust or shavings. It should first be piled in a heap three or four feet high, and if dry should be watered slightly to start fermentation. In four or five days it should be turned, and again in seven or ten days to permit of even fermentation and prevent burning in spots. In fifteen days or three weeks the temperature will begin to fall and it will be ready for use.

"The beds are usually three and a half by four feet and ten or twelve inches deep, with boards outside to hold the manure. The compost should be just moist—a state when water can not readily be squeezed out. Layers of four to six inches should be put in and packed slightly. The temperature should be allowed to fall to 75° before the spawn is put in.

"Commercial spawn comes in bricks which are cut or broken into two-inch squares, ten or twelve pieces to the brick. These are put ten inches apart an inch under the surface of the manure. It is usually unnecessary to water the beds after spawning, which almost invariably damps off the young spawn. If in two weeks there are no white threads in the manure about the spawn a layer of loam not too heavy nor too light, about an inch and a half deep may be spread over the surface. It should be barely moist, to prevent the bed from drying out.

"When the mushrooms appear the bed may be sprinkled lightly once or twice a week, but never soaked. The walks and walls of the house may be watered to keep the atmosphere moist. The mushrooms usually appear some six weeks after spawning. In picking, the cap, or cap and stem, should be grasped and twisted to remove easily from the soil. All defective ones and the small 'buttons' should be removed. Shipment is made in small boxes similar to strawberry boxes or in

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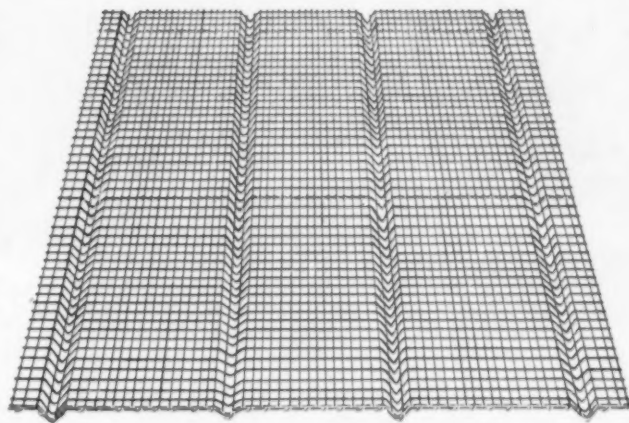
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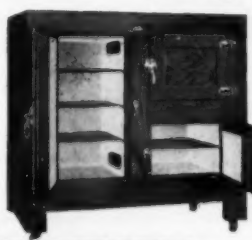
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cardboard boxes holding two to five pounds, often lined with paper to keep the mushrooms in good condition. The market price ordinarily averages thirty-five to fifty cents a pound, and sometimes goes up to seventy-five cents.

"The bed will produce successfully from six weeks to three months, many growers figuring the profitable yield to be half a pound to the square foot of surface. Many get two pounds to the square foot. When a bed is no longer profitable, the manure may be used for garden purposes, though useless for mushrooms since the heat is exhausted. The house should be thoroughly cleaned before another crop is raised.

"Those wishing printed matter on the subject may write to the Massachusetts Board of Agriculture for Bulletin 5, Farmers' Bulletin 204, 'Cultivation of Mushrooms.'"



A Cement Driveway

HERE is one owner's idea of an entrance driveway for automobiles. It is novel if not perfect. At least there is no macadam to be kept in shape, no dust for lack of sprinkling and no weeds to be kept out of the drive. Water will rush off without effecting the surface and tires will produce no ill effects.



The cement driveway does away with weeding, sprinkling and macadam repairs

There is, however, too much cement to give a pleasing result and too little grass to offset the mass of cement.

WERNER BOECKLIN



How to Kill Quack Grass

THE Department of Agriculture has issued Farmers' Bulletin No. 464, on "The Eradication of Quack Grass." Quack grass is well known to most farmers all the way from the Atlantic to the Pacific in latitudes north of the Ohio and Potomac Rivers. It is one of the most serious weed pests known in America. The grass grows under a great many dif-

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ferent names, among them couch grass, witch grass, and twitch grass.

The author of this bulletin has spent a number of years making a close study of the grass under field conditions all over the northern United States. Based on this thorough knowledge of the field habits of the grass, experimental work was started, which quickly resulted in a complete, cheap and practical method of eradicating the pest.

Farmers' Bulletin 464, embodying this work, can be had by applying to your Senator, Congressman or directly to the Department of Agriculture at Washington. It is well worth the perusal of all who are interested in such matters.



The Crocus as a House Plant

THE crocus is not commonly used for an indoor flower, but we have found its virtues many and its vices curable, and we prefer to do without something else, if necessary, for the sake of having this delightful plant in the house. Its blossoms almost rival the tulip in the variety of their colors, showing also various shades of purple not to be found in the narcissus and the bright yellow that is so rare in the hyacinth. A pan containing one or two dozen crocus corms, all at the blooming stage, is a sight to be remembered, and the flowering season for the crocus is a long one. Ours often continue in bloom for four, five or six weeks, while we are well satisfied if the narcissus has half this time of blossom. The corms and full-grown crocus plants are so small that many can be crowded into a small space, which is an advantage in handling and caring for them in limited quarters. They are inexpensive enough to satisfy the most frugal mind, some reliable houses offering them for ten cents a dozen and fifty cents a hundred, while even the best varieties, that are more desirable for the purpose of home bloom, only cost about half as much again. To grow crocuses in the house it pays well to get the finest kinds. A first quality corm will measure four inches around and ought to send up from six to a dozen flowers, which is another advantage over many bulbs more commonly seen in window gardens, some varieties producing not more than one flower to a bulb.

Good garden loam and sand, with a little very old manure in the bottom of the pot, is what we have used for potting crocuses. When the soil is procured the next step is to set the corms, flat side down, leaving half an inch or more of space between them, and taking care not to press them too hard, lest the roots lift the plants. When this is done, fill with soil enough just to cover the tips. The potting itself should be done as early in the fall as the corms can be bought, for

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the crocus gains nothing by being left out of the ground to waste its vitality. We often plant in a "seed pan" because we like the effect of a dozen or more plants blooming together. A flower pot sufficiently broad would be unnecessarily deep and heavy. The three or four inch depth provided by the "seed pan" is all sufficient for the slight growing crocus.

After potting, the soil should be moistened and set away in a dark, cool place of from forty to fifty degrees for about two months, until there is a vigorous root growth. There is more danger in bringing them into the light too soon than in leaving them in the dark too long, for the flowers depend on the strength of the root growth. However, if the leaves insist on growing in defiance of the darkness and coolness, they may as well be brought to the light, or they will acquire a spindling shape that cannot be corrected later. This state of things should be prevented by having their storage place as dark as possible, but this brings us to some of the small failings of this particular plant.

Our crocus, so attractive when once grown, has had a narrow escape from being destroyed by mold. A degree of dampness that did no harm to the narcissus, was almost too much for it. Wetting only when it seems to be becoming too dry for any growth is the safest remedy for this. The crocus is also attractive to mice, and to guard against them a mouse-proof box should be built with ventilation provided for by several holes in each end, the holes themselves being covered with window screen netting. Crocus plants have a fascination for the green aphids, which must be fought from the start before it increases to great numbers. Tobacco in the form of smoke, dust or tea will check the pest if used in time.

Naturally the best flowers must not be expected from corms that are imperfect or bruised; these invite decay and contaminate the healthy bulbs. The crocus is one of the plants that require slow forcing, which brings them into flower in mid-winter when their bright colors are most appreciated. In rearing them some points are to be kept in mind that are common to all bulbs: water well when coming into flower; supply with fresh air, but without draught; keep free from dust. Hot, dry air, such as would be found in a fire-heated room will not agree with them. The conditions under which we have grown them seem to suit them excellently—a light and very sunny room, where the temperature stands in the sixties in the daytime and lower at night.

The crocus that has bloomed in the house may be dried off gradually in a light cellar until the foliage is entirely dead and then planted outdoors in early September. The lawn is a good place. Lift a sod, set out the corms, replace the sod and in the spring the leaves will force their way through and the foliage die away before it can be injured by mowing the lawn. Crocuses planted in the garden will give

(Continued on page 150)



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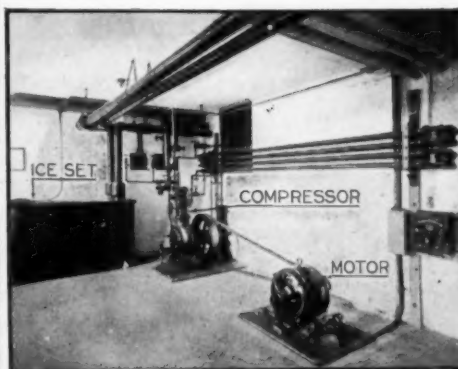
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is a literary gold brick, in a manner of speaking. Its cover design may be deceptive as to what it conceals in the way of reading matter.

Some magazines depend largely upon their exterior appearance to sell them; their interiors are not up to the standard outwardly displayed. Others back up striking cover designs with real merit in the reading pages, and in this class is

Travel

The cover of the February number shows one of the most famous churches in all Europe—the *Frauenkirche* in Nuremberg. In front of the great, brown edifice are market women plying their trade in the shade of huge umbrellas. Within the cover are these and other features:

Irkutsk the Unregenerate
Seattle and Two Neighbors
In the Shadow of the Matterhorn
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JAMES VICK'S SONS, Rochester, N. Y.
18 Stone Street The Flower City

(Continued from page 148)

much better returns if set in September than later, for in the fall they make their buds ready for spring weather at that time. If set as late as November the corms will send up very little bloom. Mulch for winter with two or three inches of coarse litter, and lift and re-set every three or four years, before they push out of the ground. They require a warm, dry spot for favorable growths.

The crocus can also be raised in water indoors if the choicest bulbs are chosen, but on that subject we cannot speak from experience.

The following table shows the dates on which we have potted, and brought the crocus to the light. Also the dates of first and last bloom of this attractive flower:

Potted.	Brought from Cellar.	First Flower.	Last Faded.
Oct. 10	Dec. 10	Jan. 28	Feb. 25
Dec. 16	Jan. 16	Feb. 16	Feb. 28
Oct. 29	Dec. 24	Jan. 27	Mar. 12
Oct. 29	Jan. 14	Feb. 28	Mar. 12
Oct. 5	Dec. 7	Feb. 13	Feb. 27

I. M. ANGELL

Edgings for Garden Walks

BOX edgings are troublesome, liable to great irregularities, apt to harbor insects, and suitable merely for quaint figures and old-fashioned geometrical designs. They are the proper accompaniments of parterres and small flower gardens that are laid out with numerous narrow gravel walks. The dwarf gentian if planted in double rows in soil that suit it sometimes, makes a neat edging. Heaths, also particularly the common Lyng (*Calluna vulgaris*) may, when promptly trimmed, produce an excellent edging for a heath garden or bed of American plants. The smaller periwinkle, kept in due limits, is useful, as an edging under trees, as is the common ivy.

The most valuable requisites in an edging are neatness, diminutiveness, or capability of being regularly trimmed, quietness of appearance or harmony with whatever is behind it, and permanence. In each of these respects grass will, in nearly all circumstances, have the advantage. The common heath is more expressive and characteristic, however, near rocky surfaces.

W. R. GILBERT

Filling the Ice House

ON most small country places ice is stored in winter for next summer's use, and in many instances where the tyrannical ice-man is now depended upon, a small icehouse might be profitably used in his place. Very often the mistake is made of waiting for thick ice, in the belief that labor is saved thereby. This saving is a very doubtful one, however, as it takes longer to handle very heavy cakes, and the ice is very seldom as good as the clear first freezing, which can be had, usually, eight to ten inches thick. A space of about a foot should be left between the ice and the side walls of the house, to be packed firmly with sawdust as the house is filled.

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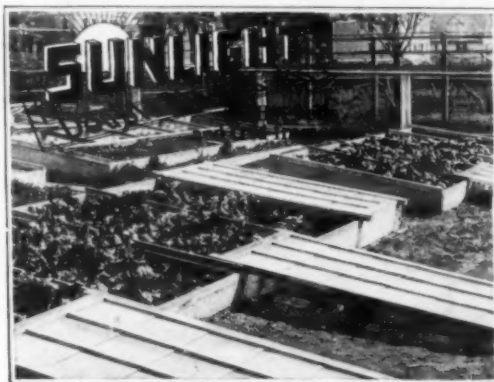
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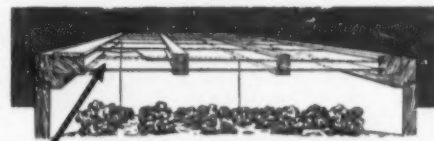
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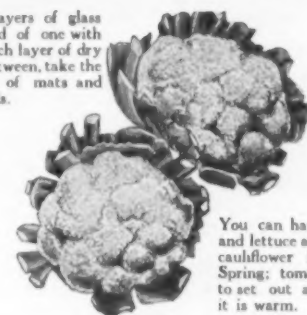
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The Vital Functions of Light in the Home

(Continued from page 96)

direction of the side walls, with much less light thrown upward, and downward, the enclosing ball of opal would cut off by absorption some of the side wall light, but would increase by diffusion the light in the upper and lower portions of the room.

In the diagram shown the heavy horizontal line passes through the center of a light source, which distributes its light without any enclosing globe as shown by the outline. In other words, it distributes the greatest light at an angle of forty-five degrees below the horizontal, with scarcely any light directly beneath the lamp.

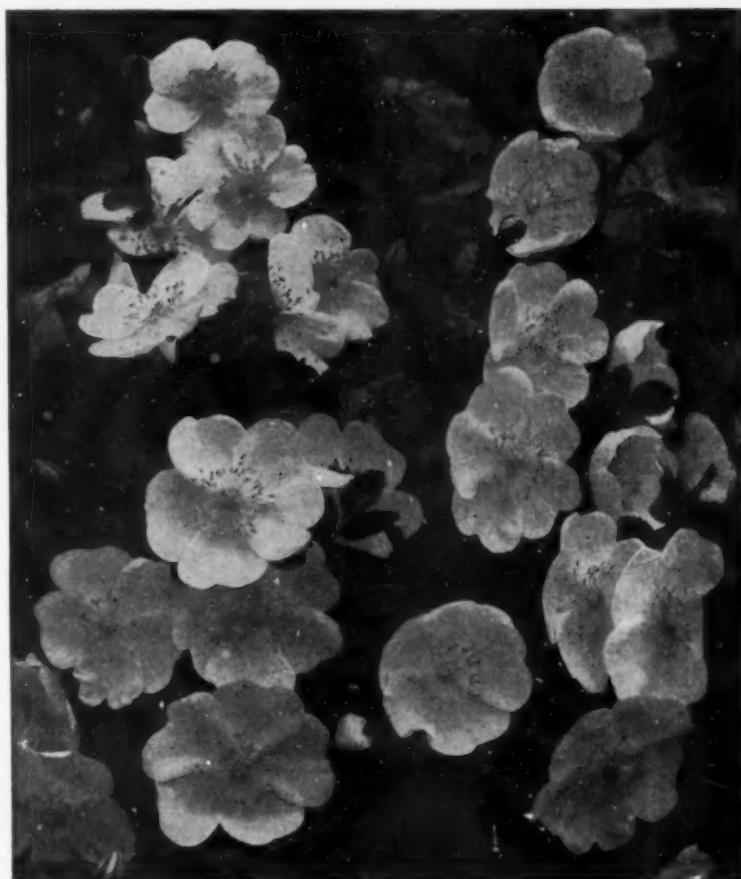
Outline II shows how the distribution of light was changed by placing a cylinder of ground glass over the source—there being a slight loss by absorption of the glass, but practically no change in distribution.

Outline III tells a different story, however, for above the horizontal a great amount of light is thrown, simply by placing a cylinder of opal glass over the source. It will be noted that the increase above the horizontal is accompanied by a slight decrease below, but the object of the test was to prove that distribution of light can actually be changed by enclosing opal globes, and that, moreover, without distortive spot light effects. The thing to remember is that these observations apply only to enclosing globes, and that the light will be distributed about enclosing opal globes in a form similar to their shape.

Upon page 95 is an example of an interior marred by the use of ground glass globes. Cover the upper portion of the picture by placing the first finger transversely on the page, hiding the lights, and note how pleasing the effect is. The presence of glaring light sources in the visual field is not only a distracting factor, but a perpetual menace to eyes and nerves. With the wonderful economy of modern illuminants there is no longer need to sacrifice artistic effect, appearance and eye comfort, all for an extreme and fanatical re-distribution of light. Place your illuminants in attractive globes of the densest opal, and rest assured that there will be ample light emitted for all useful purposes. The pleasure to be derived from artificial light sources which can be regarded fixedly without annoyance, which are a part of their environment and delight the eye, is wonderful.

Very often light fixtures are so constructed that opal glassware can only accomplish the elimination of glare and harsh white light. The above is such an example, and one which is very common, particularly where the appropriation for fixtures is limited. The difficulty in this case is with the fixture arms, which are incorrectly placed at an angle. The position of the illuminants is such that if their tips are exposed by globes having an opening, as illustrated, the effect is very

(Continued on page 154)



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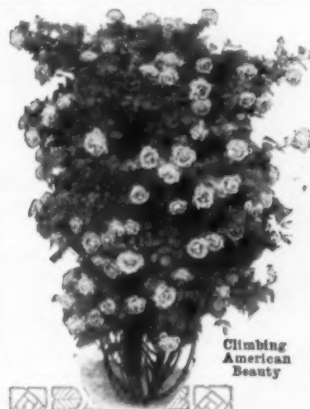
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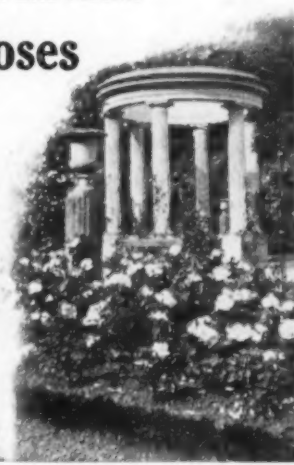
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glaring, similar to that of ground glass globes in a pendant position.

By bending the arms as shown very clearly in the drawing which appears at the bottom of page 96, and using an enclosing opal globe, reading conditions would be greatly improved and more light directed below the horizontal. Of course amber film should be used for color modification, and the design of the globe should be selected to harmonize with the motif of interior decoration.

The glassware shown on the modified fixture is of the semi-enclosing type, and should never be used in the home, since it suggests by its ribbed effect the prismatic type of glassware so devoid of beauty and so commonplace through its commercial application.

In some instances where period expression suggests the use of cut glass in prism form, as illustrated, it is desirable to allow direct rays of light to impinge upon the inner facets of the prisms to obtain life and sparkle. Such fixtures are always marred, however, by the characteristic white light effect of modern illuminants. Amber film in cylindrical form will give the desired color modification, without distracting from the brilliancy of the prismatic effect which can then be observed without eye-strain.

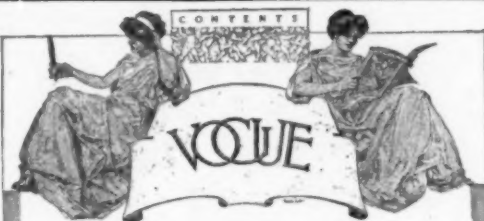
Several glassmakers offer prisms made from iridescent opalescent glass, which are most attractive. Wherever fixture finishes obtain in mellow gold tones, do not forget that a white light makes them harsh and garish, while amber deepens the color value and adds tone, expression and ensemble.

In all cases where delicately etched and colored glassware is involved, particularly on side wall fixtures, the brightness of the source must be greatly subdued to avoid obliteration of ornament. The decorative value of the side wall lamp lies in its expression and symbolism. Modulation of quality of light is imperative, nothing being more incongruous or inartistic than a violent splotch of light against the wall directly behind the lamp. A soft and subdued tone may be effected by placing absorbing screens of etched mica, superimposed, until the most agreeable density in wall tone is attained, contributing to that essential feature of decoration—shadow. The significance of the side wall as a desirable location for an art lamp lies in the opportunity which it affords to express character in lighting, and to reconcile light and decoration in an appreciation of the beautiful.



A Correction

ON page 14 of the January number of HOUSE & GARDEN the house attributed to Charles Platt as architect should have appeared as the work of Aldridge and Delano, architects. The house in question is the home of Mrs. C. B. Alexander, of Bernardsville.



for the Coming Year

Motor Fashions	January 1
Smartest novelties for owner, guests, car and driver.	
White and Southern Fashions	January 15
The trend of coming styles as seen in the Southland.	
Smart Fashions For Limited Incomes	February 1
First aid to the fashionable woman of not unlimited means.	
Forecast of Spring Fashions	February 15
The earliest authentic news of the Spring mode.	
Spring Patterns	March 1
Working models for one's whole Spring and Summer wardrobe.	
Spring Dress Materials and Trimmings	March 15
How the Spring models shall be developed.	
Spring Millinery	April 1
The newest models in smart hats, veils and coiffures.	
Spring Fashions	April 15
The last word on Spring gowns, waists, lingerie and accessories.	
Bride's	May 1
Late Spring fashions and special bridal interests.	
Summer Homes	May 15
A journey "thro' pleasures and palaces" in Newport and elsewhere.	
Summer Fashions	June 1
The final showing of the Summer modes that will be.	
European and Travel	June 15
Where to go, how to go, what to wear and how to wear it.	
Hot Weather Outing Fashions	July 1
The correct wardrobe and equipment for all outdoor sports.	
Vacation	July 15
The perennial interests of Summer described and pictured.	
Outdoor Life	August 1
The beau monde at play in Newport, Bar Harbor and the Berkshires.	
Children's Fashions	August 15
Outfits for the infant and the school boy or girl.	
Autumn Millinery	September 1
A guide to the season's best expressions in hats and bonnets.	
Forecast of Autumn Fashions	September 15
The first accurate forecast of the fashions for Autumn.	
Autumn Patterns	October 1
A grown-up picture book, featuring Vogue's patterns for Fall and Winter.	
Autumn Shopping	October 15
A tour through the best shops of two continents.	
Winter Fashions	November 1
Vogue's dress rehearsal of the Winter mode.	
Dramatic and Vanity	November 15
The fine arts that make fair women fairer.	
Christmas Gifts	December 1
Vogue's solution of the Christmas Shopping problem.	
Christmas	December 15
Midwinter fashions, festivities and frivolities.	

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The demand for these Spring Fashion numbers always clears the newsstands in a few days. Even though you are getting Vogue regularly from your newsdealer, it will pay you to reserve in advance these special Spring numbers.

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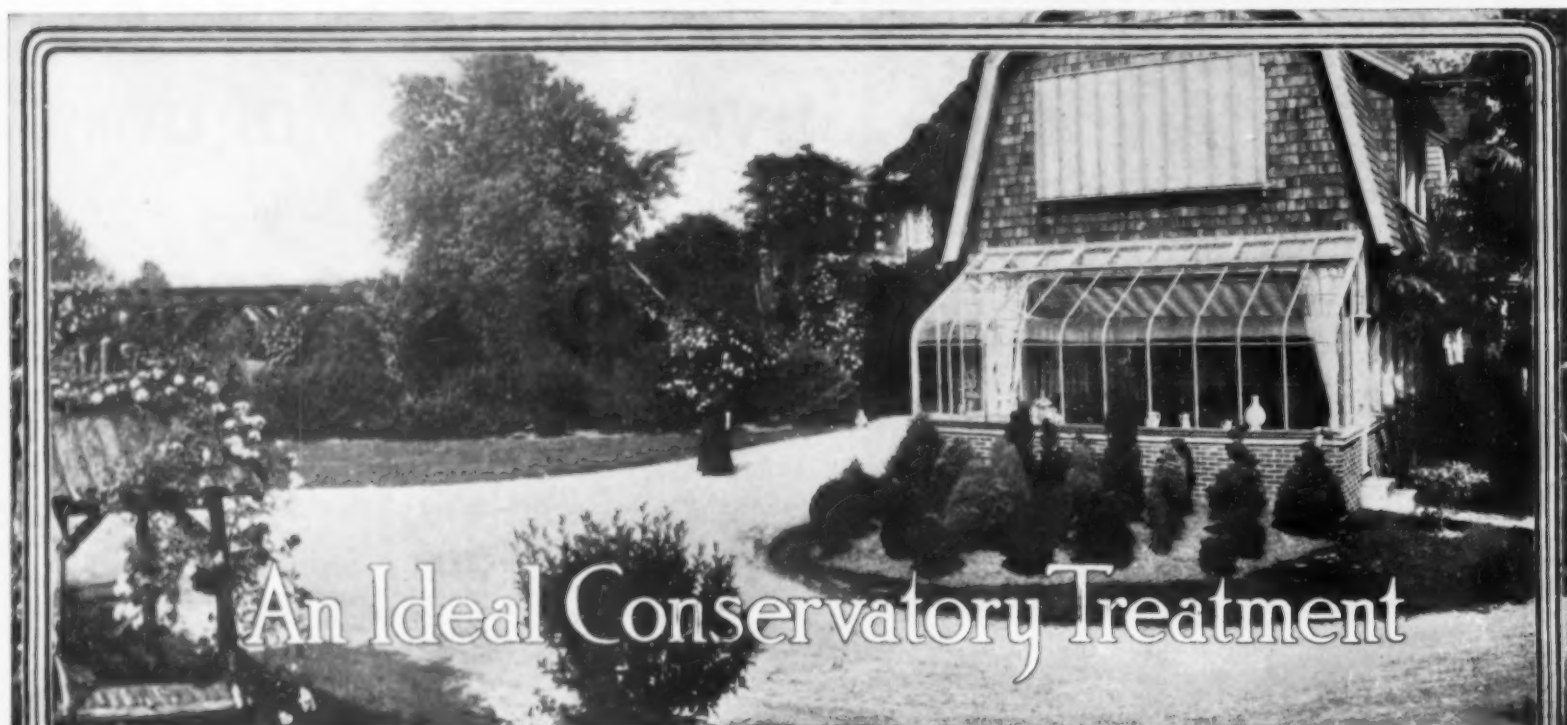
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| ☐ SMART FASHIONS. | Feb. 1st |
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| ☐ SPRING PATTERNS | March 1st |
| ☐ DRESS MAT. AND TRIMMING | March 15th |

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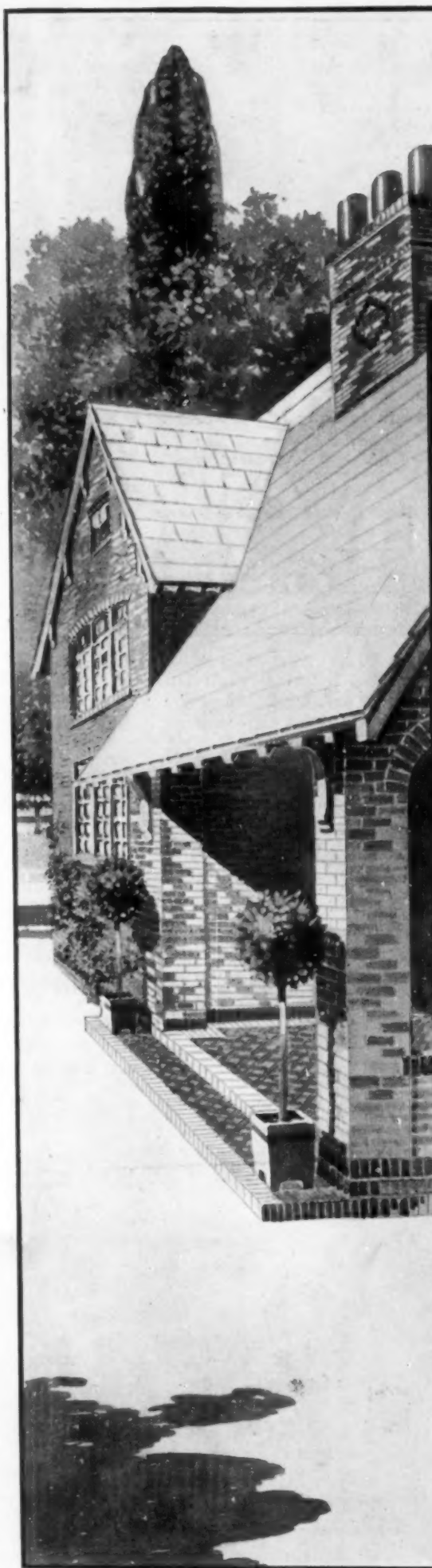
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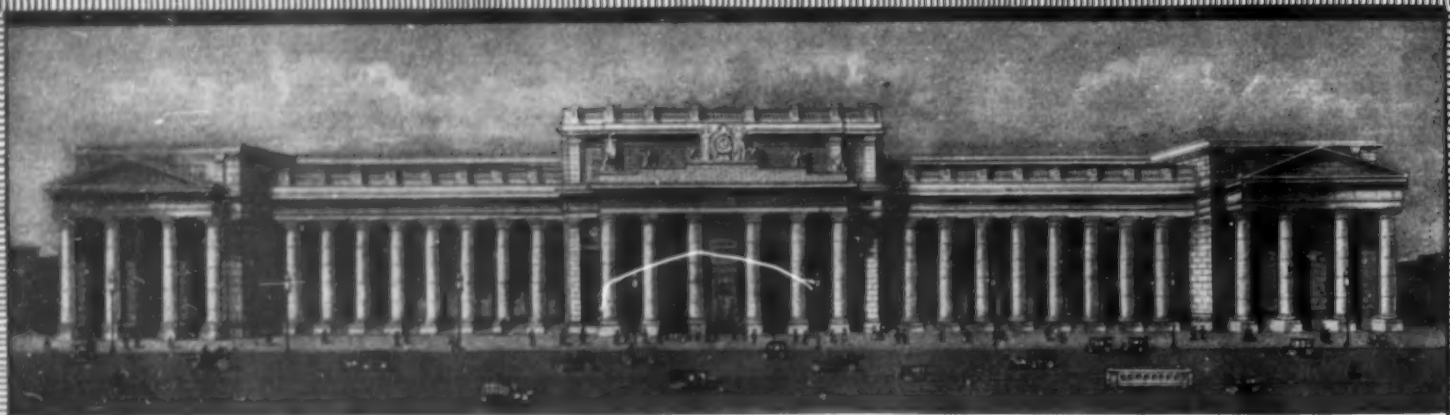
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YOU can't "talk suburban homes" without mentioning Long Island. It is the HOMELAND on the tongue of everyone who loves all that the name HOME implies. When you go to Long Island you're not a pioneer—thousands of homeseekers have blazed the trail; have settled there in congenial communities, established schools and churches, organized clubs for men and women; beautified the surroundings, caused stores of every description to be built. You're not going to a land of promise, isolated from the world's greatest amusement and business center. The transit facilities, like the improvements in each town, are there now. No one, seeing, denies the wonderful superiority of Long Island over all other suburban districts in climatic conditions, due to salt-water surroundings, the healthfulness resulting, its unique and endless variety of sports or recreations, its perfect roads, and physical advantages.

The Long Island Railroad has spent millions of dollars to facilitate traveling, installing electric service, modern station buildings, and tunneling under the East river to the center of Manhattan, to the colossal \$100,000,000 Pennsylvania Station, Seventh Avenue and Thirty-second Street.

Unlike other suburban sections that offer but one "lay of the land" for homeseekers to choose from, Long Island offers many, embodying hills, valleys, plains, farmland and the shores of beautiful bays, lakes, Sound and the mighty and majestic Atlantic Ocean. Think of it! Any condition and setting for a suburban home less than an hour away from the greatest city in the world. There is nothing like it, nothing to compare with the advantages offered homeseekers to locate on Long Island. Go there NOW to live. Have an early choice of its beauties, its investments, its opportunities for health, pleasure and profit; for the summer or for the year around.

A book has been written, profusely illustrated, showing this wonderful diversity of hills and plains, lakes, meadows, the wealth of water privileges (like nothing else in the world), its summer resorts and its wonderful climate. The book is for you. Do not turn aside from Long Island until you have written to the General Passenger Agent, Long Island Railroad, Room 371, Pennsylvania Station, New York, enclosing ten cents postage for your copy.



What Long Island Offers the Home Seeker

BY A. W. DEAN

TEN years ago Long Island was little known outside Brooklyn, even to New Yorkers. It was considered inaccessible and regarded as a mixture of waste land and flimsy summer cottages. To-day the Long Island service is extended to the remotest ends of this one hundred and thirty mile strip of land. It has added

electrified roads, so that distances beyond thirty miles from the city are brought within commuting accessibility available for almost everyone. As a vital factor in the life of our largest city, Long Island is of great import. From the census of 1900 to our last one the population of the five boroughs of New York City has increased thirty-nine per cent, or over a million and a third, a greater percentage increase than ever occurred before. Manhattan is greatly congested, and has but a limited opportunity for extension. In the days of Malthus, wise heads would be dubiously shaken when the future of the city was considered. But the rediscovery of Long Island has made it a factor in not only increasing the possibilities for better homes, but also adding to the daily supplies of food stuffs. The Island is unique in the number and diversity of its opportunities. Its importance may be judged

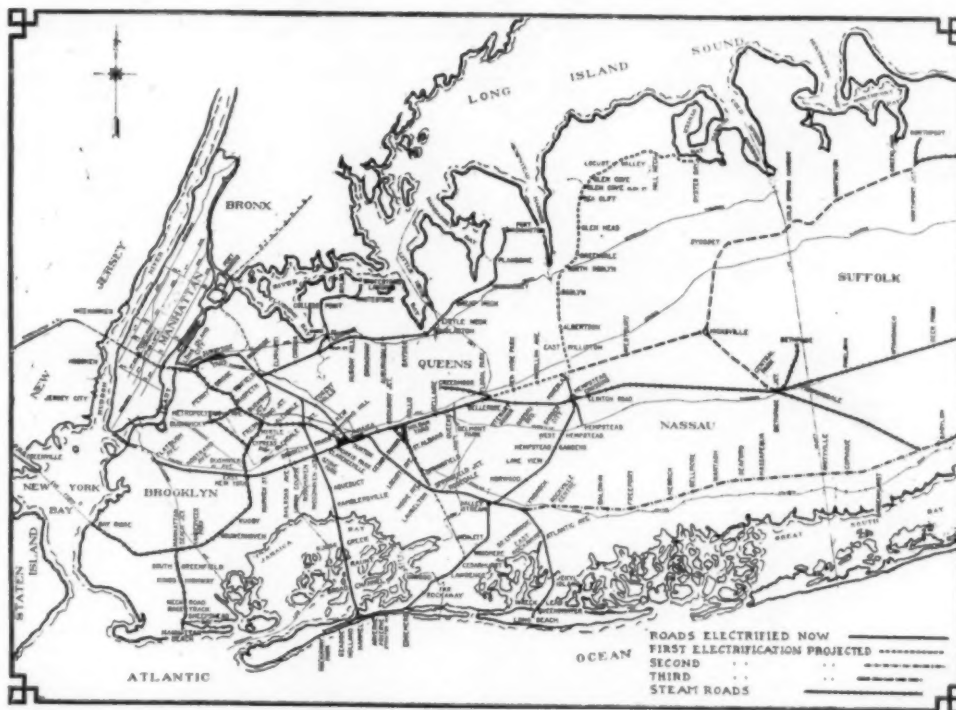


The beach at Long Beach offers wonderful opportunities for surf bathing and a climate pleasing the year round

when it is considered that its population equals that of New Jersey, and is over double that of Connecticut. Yet all this great section has been so closely connected by a network of railroads that practically two-thirds of its extent is within easy commuting distance of the city. Along the rolling hills of the north,

with the beautiful harbors, home sections of all sorts are in touch with the city. The farms in the center of the Island are able to bring in their products as quickly as if they were on the immediate borders of the metropolis. The anomaly of a seaside home in connection with the city is changed here. For there are many dwellers at the ocean edge who are as close to the heart of New York City as though they lived in uptown Manhattan.

As the Long Island road is about to open a new electrified branch of its service to Port Washington, it seems fitting that some of the manifold opportunities of this section be spoken of, and that the great assistance to metropolitan congestion might here be shown. Noticing the map on this page, it will be seen that electric roads run from the Pennsylvania Terminal to Port Washington, to Mineola, to Long Beach, and to Far Rockaway. Later the work that



This map of the Long Island Railroad shows how the system has been extended and its efficiency increased by electrification. The projected roads that will open up all this territory within the near future are indicated in the key



Laurelton shows well-shaded streets and pleasing lawns that are without the appearance of bare newness



At Wampage Shores near Port Washington there are interesting driveways and pleasing buildings of a good type

PANORAMIC VIEW OF THE ESTATES OF GREAT NECK



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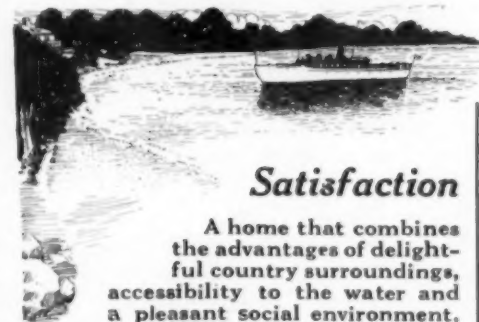
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The home of Mr. Carleton Macy at Hewlett, Long Island, a section that has become noted for the good architecture of its homes



A stucco house at Long Beach that is representative of the high class dwellings being erected there

has already been started will open up the branch to Oyster Bay, then the branch from Lynbrook to Babylon, and finally that from Floral Park to Northport. So that all this section will be within an hour of the heart of New York. Let us note the characteristics of sections in order to show that this great district renders available a country home to the city man of all degrees of cost and kind, from the great estate to the suburb proper, and from the residential section to broad farm land.

There are various places within the metropolitan district suburban in character. Flushing is on the north shore on the Sound, a district of well-shaded streets. It was once an old, Dutch village, and has the look of a settled community. On another branch the electric trains of the railroad reach Forest Hills, Kew, Richmond Hill, Jamaica, and farthest out, Garden City, which, however, is only eighteen miles away. After what appears hardly any time at all, the train from New York comes from the tunnel and stops at Forest Hills, where under the direction of the Sage Foundation a model settlement is being erected. The best precedents of European rural architecture have been followed, and the latest advances in building and sanitation and lighting have been adapted. Kew and



On the Estates of Great Neck there is beautiful woodland as well as water front property

Richmond Hill also have homes that are architecturally beautiful and at generous spacing. And even on the edge of Jamaica the homes are placed as in a wide rolling park. Another branch of the railroad goes to seashore homes, but at about the same distance from New York. Here in sight of the sea, but with woodland roads and landscaped lawns, some of our best country house architecture may be found at Hewlett, Woodmere, Cedarthurst, Lawrence, and Far Rockaway. And on another spur of the same division the road goes to Long Beach, where a cottage settlement has been built about a great hotel facing the sea. These sections mentioned have all been built up according to the best ideals, and afford country homes at a great range in prices.

Going along the north shore by way of the new Port Washington division, one enters the district of great estates bordering on the Sound. In this district development companies have rendered homes that are estates to individuals. For the corporation is enabled to accomplish just what the individual of large means is able to do for himself, and in reality the homes here have all the advantages of landed estates. The most distant on this division will be within about thirty minutes of the heart of New York.



The home of John R. Hoyt in the Great Neck district of easy approach on the newly electrified line



Great care was taken in the Estates of Great Neck in the layout of fine, curving driveways and interesting landscaping



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This is characterized by the Estates of Great Neck. The chief developments are along the Sound, and with the various beautiful harbors afford unusual opportunities for sailing and bathing. The enjoyment of these pleasures is greatly assisted by some of the best-appointed country clubs in the East. Continuing further along the coast, but on the Oyster Bay division, the towns of Roslyn, Glenhead, Glen Cove, Locust Valley and Oyster Bay are passed through. The general characteristics of these sections are quite like that of the previous one. Magnificent homes of individuals adjoining the beautiful developments of property where the landscaper's art has vied with the proficiency of the engineer in making the district livable and attractive.

On the Port Jefferson division, which runs from Jamaica via Hicksville to Northport, are the towns of Cold Spring Harbor, Huntington and Northport, and within commuting distance of the city all the year round. All this district enumerated is covered with a network of wonderful roads that wind up hill and down dale, through woodland and forest, giving the traveler the impression of being miles from city streets. It only takes a few minutes by machine to turn inland from the railroad and to reach the rolling farms or estates of the country gentlemen.

The south shore is flatter, and the major part of its inhabited coast line fronts upon the Great South Bay. Rockville Center, Freeport and Amityville have, near the railroad, the more modest homes, and within automobile distance the acres of the wealthy. In the neighborhood of Babylon and Bayshore, about an hour out from town, is Brightwaters, where the home-seeker may choose a water frontage, a site on the pretty lake a little further inland or the pine woods beyond. As one goes still further eastward to Islip, Great River and Oakdale, one reaches another section of



Along the crest of the beach at Saltaire bungalows of an interesting character have been constructed



The long board walk that passes most of the Saltaire houses connects the Great South Bay with the ocean beach

pretty parks and expensive properties of wealthy individuals. Beyond on this southern side comes a section of beautiful summer homes at Blue Point and Bellport, Westhampton, Quogue, Southampton and Easthampton. Westhampton is delightful in that the bay and the ocean are both easily accessible, and this town with Quogue and the other Hamptons is in the famous Shinnecock Hill district, where rolling dunes approximate Surrey scenery. The strip of sandy beach that separates the Great South Bay from the ocean is now being developed as a summer section, and kept in touch with the railroad by a fast launch service. Here at Saltaire a recent discovery of science will turn the power of the waves into electric current.

Between these two varied coast districts

that offer beautiful home sites lies the Middle Island. Out from Jamaica, in the neighborhood of Westbury are the large, expensive homes of those whose chief interest is in horsemanship and stock raising. A little further beyond, at Hicksville and Farmingdale, are large truck farms that are in daily touch with the city. The section beyond this in the center of the Island was formerly considered waste land. But under the efforts of the President of the Long Island Railroad, an Experiment Station was started at Medford and another at Wading River, farther out. The result of several years has been to show that all this area is exceedingly suited to cultivation. Indeed, it was discovered that three hundred and eighty varieties of plant growth could flourish here. And as the first Station was placed on the worst ten acres that could be found, the conclusions are not at all over-estimated. Vegetables of all sorts and exceedingly fine quality have been marketed from these Stations, and as the expense for clearing the land can, in many cases, be met by the sale of the cord wood, there are exceedingly good opportunities for



A bungalow at Belle Terre in its woodland section. Other properties command a broad sweep over the Sound



Jamaica Estates is within the metropolitan district, but boasts an interesting character of rural homes



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Roslyn Estates on the North Shore is spoken of as a colony of private estates, and is one of the interesting inland sections, graced by all types of architecture of exceedingly good forms

farming here. This activity under the direction of Mr. Fullerton has gone to prove that this inland section, not only the sandy strip, but the scrub oak places, is particularly fitted to become an agricultural district with fine transportation and exceedingly advantageous physical and soil conditions. This district extends from the pretty inland lake of Ronkonkoma out to the beautiful clear-water bays of Great and Little Peconic, Shelter Island Sound and Gardener's Bay.

This brief geographical description should go to show that within a comparatively small area there are conditions which do not exist in any other single section. Beauties of scenery, rural and suburban homes of all sorts, profitable farming opportunities, poultry farms whose location gives them advantage over their rivals, pleasures of Sound and Bay and Ocean, and all this rendered so accessible that the entire district has almost been brought within the metropolitan boundaries.

When the projected electrified roads are completed, this condition will be improved still more. And it will render New York unique as a city. For although some suburban sections are older and more finished, they do not offer anything like the diversity of



The land is high at Northport and from many places such as Sunset Hill a view of the harbor is to be had

attraction to be found here. And one feature of the growth that is very satisfactory to consider is that almost all the work that is being done is of exceedingly high class and made under the most advanced ideas in building and engineering. As the farm land becomes developed, Long Island may find itself self-supporting for its products, and besides able to help solve some of the pressing problems of living costs that oppress the metropolis to-day.

In addition to these various advantages there is another factor of attractiveness still to be mentioned

—the social life. Many consider that rural or suburban districts are dull places, lacking culture in the metropolitan sense. Nothing could be further from the truth here. On Long Island has grown up a new sort of American social life, that, as in England, clings about outdoor sports. The various country clubs provide interesting centers for gaiety that is by no means limited to the summer colonies but flourishes in winter also. Some of these clubs are as pretentious as the Piping Rock Club—perhaps the most perfectly appointed club house in the country, with a system of bridle paths extending for seventy miles—others more modest, but each offering many diversions to a refined membership.



Shoreham is beyond Port Jefferson, with most of its houses built overlooking a broad expanse of Sound



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