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Roofing the Poultry House

The roof of the poultry house is a problem to the average poultryman solved by the state of his pocketbook, climate and the location of his buildings. In counting the cost, one must consider the possible expense in keeping in repair a roof cheap at the outset. Some roofs absorb the sun's rays to such a degree as to make the building too warm. In certain locations a fireproof roof is imperative.

Wood, metal and the tarred paper or felt roofing have peculiar qualifications which adapt them to individual requirements. The paper or felt roofings appeal to a great many people, as the work of applying the material can be done by an amateur. These roofings are laid on over boards and secured to position by nails, the joinings being made watertight with cement. Plant roofings should be turned well over the edges of the roof and fastened securely. Allowance for lapping of the strips is made on the material and this lap should be observed. The cost of the cement and nails necessary for the work is included in the price of the roofing per roll. There are several good tarred roofings on the market at one dollar and eighty cents or one dollar and ninety cents per roll of about one hundred square feet. When buying, it is best to select those having a fireproof surface. Two-ply felt roofing is more economical than the one-ply, as it makes a much more lasting roof. After three or four years it will require repainting, and this must be done promptly to preserve the roof. The price of the felt roofings varies, costing from two to twenty and one-half dollars per square foot.

All flexible roofings must be laid over boards that are fitted closely, else they will tend to break over the crevices. The galvanized steel and iron roofings are the most durable of all. The best grade of galvanized iron costs from four dollars and twenty-five cents to five dollars per one hundred square feet, covering the cost of laying, but as it is absolutely fireproof, lower insurance rates are obtainable on buildings where it is used. The galvanized roof is very warm in summer, which is some sections proves an objection. Tarred paper also is hot.

Roofs of cedar or white pine shingles outlast the plain roofings, and really cost less in the end. One poultry man who has had experience with metal, felt, paper and shingle roofing, prefers the last, claiming that it serves him best for least cost.

M. R. CONOVER
Colonizing Poultry

Colonizing poultry is not a new idea, but a very old one. However, it is a reliable principle because it is based on the inexorable laws of nature. It was intended that fowls of all kinds should roam at will and live in flocks. These flocks should not be too large or too small to secure the best results and eliminate labor for the caretaker.

Colony houses, with or without a floor, with three sides and roof wind and storm proof, with one side facing the south, covered with netting and a door at the side, built large enough to accommodate at least twenty-five fowls, should be provided for the laying stock during the summer months. The location should be beneath a tree of considerable size, beside a bunch of bushes or in the edge of the woods, the idea being to secure for the flock protection from the sun. These houses should face the south and be located some distance apart to prevent the flocks from mingling.

The object in thus colonizing the laying stock is to give them a chance to partly feed themselves and secure in proper quantities green and animal food so essential to continued egg production. Better health and vigor are thus maintained and more eggs are thus produced than by any other system or method ever devised, for free range is an important factor to success in poultry culture.

Breeding stock so colonized is productive of the very highest results in fertility and future growth and development in the chicks hatched from their eggs.

No better way has ever been discovered to raise chickens than by the colonizing plan. In flocks of twenty-five with unlimited range and houses large enough to accommodate them until near maturity they will grow like weeds. This plan is copied after the way in which the partridge rears her young. Open front houses approach the evergreen tree for roosting quarters. The growing chick needs lots of exercise and freedom. In small colonies he gets the things so essential to his best growth and development.

A. G. S.

West Highland Terriers

The alert little Scotch dogs known as West Highland terriers, are among the brightest dogs in the world, and they are a new breed in this country, for until eight years ago not one was known in the United States. Now several are owned by dog lovers, but they are not yet listed at the bench show, which is strange, since these dogs are among the oldest breeds known to the dog world, and are among the gamiest specimens that sportsmen know.

They are almost exactly the same as the now well-known Aberdeen or Scottish terrier, save that they are always white in color. They are, perhaps keener and brighter than the Scottie, if such a thing were possible, and they have all his excellent points.
These white West Highland terriers are as desirable for pets as they are for sporting dogs and are especially gentle and docile with children, learn very quickly and make admirable trick dogs.

Wind, and weather make no difference, as they are essentially game and hardy. The coat is thick and strong and very wiry, having the same peculiar quality for shedding snow and rain that the Scottie's coat has. The little fellows are stoutly built, with deep chest and great bone and substance, and a very rough coat. They are dogs of pronounced character, and are never sneaky or mean, and make the finest of comrades for both young and old.

West Highland Terriers are great hunters by nature, and need only a slight training to make them most accomplished sporting dogs. They hunt rats, woodchucks, rabbits and even foxes—terriers having been known to shake the life out of foxes considerably larger than themselves. They are enabled to do this because of the great power of their jaws and teeth, strong necks and compact bodies. They are especially famous as woodchuck exterminators, and New England farmers do not know how valuable such a dog would be to them, for there are few dogs that are successful woodchuck hunters.

These dogs rarely are ill, and they are so sturdy and hardy because they have not yet been in-bred or weakened by much bench showing. They seem to be immune to distemper or other dog ailments, and they are very neat and well ordered. Their photograph gives but little idea of their great attractiveness, for no lens can catch their alertness and sprightliness; they are all life and action, and the camera gives back only a still image. There is something so droll about their appearance that they attract everyone's attention. They have such short, stocky legs, such big heads and such shaggy, wiry coats that they are very odd-looking. There are no kennels breeding these dogs in this country, and very few in England, but in Scotland every other poor crofter may have a fine specimen. They are greatly beloved by the Scotch and most kindly treated by them, for the Scottichmen love the little animals' pluck and intelligence and loyalty. They go hunting with their masters and are of great assistance.

In writing to advertisers please mention House and Garden.
The Scotch grow to be deeply attached to these little dogs, and one man who owns several of them always has some story to tell of their intelligence. One of his dogs named Fiorag, which is Gaelic for squirrel, has a wise little trick which she plays when she wants to get a warm, cozy seat. She goes to the door and wags her tail as if she were begging to be let out, and when her master rises and goes to the door she darts past him and nestles down into the warm recesses of his vacated chair.

They have tremendous endurance, these little dogs, and it seems almost impossible to tire them. They are not heavy eaters, and not at all particular, but are just wise, wholesome, healthy, fine little dogs. Real "doggie dogs," as some one described them.

G. A.

The Woolly Aphis

I HAVE discovered a new kind of pest on my young apple trees (now 4 years old) which I am not familiar with, and write to ask if you can tell me what it is and how to kill it.

It appears on the branches, especially at the ends where they were pruned last season, in the form of a white, woolly substance and under the glass can be seen several grubs in each effected spot, which seem to come out of the wood itself. I have sprayed with arsenic and also petroleum emulsion, but without any effect.

If you can give me any information on the subject same will be greatly appreciated.

E. L. F.

In reply to your query, we would say that from the descriptions given in the letter the pest is probably the Woolly Aphis of the Apple. This insect is interesting because it has two distinct forms, one of which is found on the branches above ground and the other below the surface of the ground upon the roots. The root form is much the more serious one of the two. It lives upon the roots, sucking the juices from them and stimulating the tissues to produce swellings or galls. The roots finally decay, break away from the tree and eventually the tree dies as a result of the presence of this root louse. When this pest becomes well established in a young orchard it is exceedingly injurious.

Very good results have been obtained by hoeing away the soil in a circle about the tree to the depth of 3 or 4 inches. The diameter of the circle will vary, depending upon the size of the tree. It should be at least 2 to 3 feet in diameter for trees 10 to 12 years old. The ground in the circle should be soaked with a 15% solution of kerosene emulsion, using 2 or 3 gallons or even more to the tree. This material will penetrate the soil and kill great numbers of the aphids. In some cases it has held the aphis in check very effectually. After the emulsion is applied the earth should be replaced. This should be done only while the tree is in leaf; if done while the tree is dormant the roots are apt to be injured by the kerosene.

The branch form can be controlled by spraying with a 10% solution of kerosene emulsion or with whale-oil soap; one pound to 5 or 6 gallons of water.

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From a photograph by Julian A. Buckley

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Colonizing Poultry
The Wooly Aphid

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HENRY H. SAYLOR, EDITOR.
There is a magnificent and inspiring object lesson for makers of country homes in America, in the way the older countries care for and reverence their trees. In acquiring sites for our country and suburban homes, we cannot keep too firmly in mind the fact that beautiful old trees form an asset the value of which it is difficult to overestimate.
A Little Home in a Peach Orchard

AN ARGUMENT FOR THE EARLY BUILDING OF A HOME OF THEIR OWN BY EVERY YOUNG COUPLE—WHAT HAS BEEN SECURED IN PENNSYLVANIA FOR $2800

BY LOUISE TAYLOR DAVIS

Photographs by the Author and H. H. S.

ONCE the building of a house seemed to me a grave and weighty matter, by no means to be undertaken until the "parties of the second part" were quite settled in life and well on their way to affluence. Now I think that every young couple should, at the first possible moment, build them a house, be it ever so humble. Our own experience in house-building has brought about in me this change of mind.

Three years ago the time arrived, which comes to most married people sooner or later, when we felt that we couldn't stand boarding, we couldn't stand apartments, we couldn't stand hideous rented houses—in fact, we couldn't be happy unless we had a house of our own, built according to our own ideas. It was then we began seriously to consider building. The result is our home, small, but attractive, and exactly suited to our needs. The entire cost of the house was $2,800, a price for which I knew a summer bungalow could be built, but which I had never realized would be sufficient for the building of a real house.

Our first idea, in fact, had been a bungalow in which we might live for seven or eight months of the year. It was at this juncture that the architect proved himself a benefactor. He advised us to build a comfortable, all-the-year-round house, and in reply to our solemn warnings promised to keep the price down to a bungalow figure. We were fortunate enough already to have a lot, which in itself was a great incentive to us to build. It was situated on the outskirts of the village, in the midst of a young peach orchard, which had been set out on the gentle slope of a hill covering about three acres. To my doubting mind, the middle of a peach orchard seemed a queer place to build a house, particularly as the trees were only two years old, and rather raggedly. I suggested that we remove those on our own property, and plant in their stead the more conventional shade trees and shrubs. As I met with firm protest from my husband and the architect, I gave in, and today will gladly admit the superiority of the masculine judgment. The trees are now well grown and healthy, and furnish an amount of foliage around the house which it would have been impossible to obtain otherwise in the same length of time. As for the peaches they bear—well, those trees could only be removed now over my dead body.

This was not to be the only unconventional thing about the placing of the house. One end of the lot adjoins the street, to which the house turns its back, giving the porch the splendid view over miles of country.

One end of the lot, 50 x 200 feet, adjoins the street, to which the house turns its back, giving the porch the splendid view over miles of country.

The location of the stairs is an unusual feature of the plan; they were not in evidence from the living-room.
The exterior of the house is quaint and unusual, with its small-paneled windows and sharply sloping roof line, broken by the dormers which make possible the good-sized bedrooms. Wide boards are used in the construction, with a foundation of field stone, and a shingled roof. The house is painted white, with green trim, and the roof is stained red. The wide porch to me is one of the most satisfactory features of the plan. I have sat uncomfortably on many a porch where one's head seemed to press against the house and one's knees against the railing. On this porch, people may sit in groups, instead of in a straight and formal row.

The living-room is entered directly from the porch, and I must pause here to describe the front door. It is of the two-piece variety commonly known as the Dutch door—that is, the upper and lower halves open separately. It is made of five-inch oak planks, and chamfered, or beveled where the edges join. There are heavy battens on the inside, and the door is swung on rough iron barn hinges which run the entire width of the door and are painted black. An iron thumb-latch is used instead of a knob. The whole effect is of quaintness combined with great solidity.

The living-room extends the whole width of the house, but is divided into the living-room proper and a little music-room by means of a partition which reaches only part way to the ceiling. The walls of the living-room, as of the entire house, are rough plaster, of a warm gray tone which makes a most successful background for pictures and pottery. The woodwork is cypress, treated with two coats of brown shingle stain, which allows the beautiful grain to be seen. The ceiling, both here and in the dining-room, is formed simply by the joists and flooring of the rooms above, left rough and stained the same brown. This was a treatment dictated by economy, but eminently satisfactory in effect.

The most striking feature of the living-room is the inglenook, which is opposite the front door, to the left as one enters. The wide chimney is made of the roughest brick the architect could find in a personal visit to the brickyard. This also forms the broad hearth, which is slightly raised above the level of the floor, a plan which I think is good. It gives the inglenook a certain detachment from the rest of the room, which in the case in point proves very attractive.

We usually find visitors regarding our mantel-shelf with a puzzled expression, and hasten to explain that is is a railroad tie, left in its natural state, with the exception of an application of shingle stain. On each side of the chimney is a built-in settle. The wide seats are hinged to furnish convenient lockers underneath for kindling wood, and so forth—principally and so forth, as every housewife can testify to such tuck-away places. There must be one last and most important tribute to the chimney—it draws to perfection. I might mention here that the house is heated with hot air, which has proved very satisfactory.

The little music room, which is at the opposite end of the long room from the fireplace, is just large enough for a piano and some bookcases. It has a window which opens on the porch, and two casement windows set high in the other wall above the bookcases. These, by the way, were built in after we were living in the house. The disposition of a fairly large library was a serious question, which we solved by putting in shelves wherever there was a space.
There is a wonderfully attractive atmosphere about the large living-room, with its dark-stained ceiling beams, rough-plastered walls, dark cypress woodwork, and the great inglenook, with its raised floor of rough brick. It is interesting to compare this room with the stuffy little front parlor of the modern development house, built fifty at a time at a cost no less than this.

for them. Besides those under the casement windows, there are shelves built against the partition between the living-room and the music-room; more shelves built under the three windows at the fireplace end of the room, and still others against the wall on each side of the chimney, above the backs of the settles. The shelves are homemade, constructed of odds and ends of lumber, and cost next to nothing.

The opening between living-room and dining-room is directly opposite the front door. An attractive feature of the division between the two rooms is the high back of the settle, the space above which is filled by square spindles set close together. The dining-room is comfortably large, for which I make my compliments once more to the architect. There was much more unbroken wall space here than in the living-room, and for a while we considered adopting some such treatment as a wainscot effect. However, when the furniture was

Looking towards the opposite end of the living-room, showing the music-room and at the left the dining-room. At the extreme right is the double Dutch door leading to the porch.
in place, pictures judiciously hung, and shelves put up for pottery, the effect was so good that we decided to leave the walls as they were. In matters of house furnishing and decoration it is very easy to make the mistake of acting in haste and repenting at leisure. I am convinced that it is best to begin housekeeping in a new house with only the barest necessities in the way of furnishings, and devote a great deal of time and thought to the subject before completing the work. In this way one is much more apt to get things which suit the house and seem an integral part of it—not like strangers in a strange land. For instance, I have a clock which occupied at least five different positions in the house for varying periods of time, while we vainly tried to persuade ourselves that it looked well. At last we decided that it didn't belong, and put it away on the top shelf of the linen closet, since when I have felt happier.

The placing of the stairs leading to the second floor of the house is quite unusual. They occupy a space just their width, between the dining-room and the kitchen, and are completely shut off from both rooms by doors at the foot. A small window, opening on the back porch, gives the necessary lighting. This was the only part of the plan which did not appeal to me in the beginning. I did not like the idea of guests having to pass through the dining-room in order to get upstairs. Now that I have lived in the house, however, I find that this small objection is far outweighed by a number of advantages. A great deal of space is saved in the living-room by the arrangement, I am sure the house is warmer in winter for it, and the members of the family or the maid can go up and down stairs without disturbing callers who may be in the living-room.

The kitchen has windows on two sides, and the outside door on a third, an arrangement which has an obvious merit in summer. There is no provision made on the plan for a closet in the kitchen, but we have supplied that deficiency by having a kitchen cabinet and shelves for dishes built in. These were included in the cost of the house. A thing I particularly like in the kitchen is the fact that the chimney bricks are not plastered over, but are allowed to show in contrast to the plaster of the walls.

Upstairs we have three bedrooms of comfortable size, a bathroom, and a large linen closet. Anyone who has seen only the exterior of the house finds this hard to believe, but the explanation lies in the fact that there is absolutely no waste space in the house. Every inch, practically, has been utilized to good purpose, and I do not see how the given space could have been divided to better advantage.

The two bedrooms in the front of the house have roomy closets, while hooks in the linen closet supply the lack of this convenience in the third room. At the side of the house in the back which has no dormer, there is a large space under the pitch of the roof which serves as a trunk closet. In the bedrooms are found the same rough plaster walls and dark-stained woodwork as downstairs. The woodwork throughout the house is perfectly plain, and the doors are fitted with thumb-latches and bolts, instead of the usual doorknobs and locks. We have several times been on the point of tinting the bedroom walls, but as yet have not done so, chiefly owing to our inability to come to an amicable agreement on the subject of color. We have decided, however, that this is to be a thing of the very near future, as is the painting of the bathroom and kitchen walls.

We have planned a great many things for the future, but our plans now are chiefly concerned with the exterior of the house. Now that the interior is fairly complete, we have turned our attention to gardening—realizing painfully what might have been, if we had begun this work years ago.
When the garden planning is all complete and each row has its proper relation to its neighbor, when the harmonies of color and form show forth the constructive unity of the artistic scheme, and bench and path are in the exact arrangement, is the work all done? Is there nothing more to do but the future weeding and spraying, the cutting and pruning? There is still one thing left out: the sun-dial. Whether the first thought or the last detail, it is necessary for completeness.

Somehow the dial is closely linked with gardens. Its very name conjures up the associations of the old-fashioned — not merely a past decade or century, but way back before man had ceased companionship with Nature. The sun-dial is the interpreter of the garden's divinity, the sun; or perhaps the embodiment of its active principle which fosters life in the tiny seed-germ. We might repeat Lamb's question, "What a dead thing is a clock, with its ponderous embowelments of lead and brass, its pert or solemn dullness of communication, compared with the simple altar-like structure and silent heart-language of the old dial. It stood as the garden god of Christian gardens. Why is it almost everywhere vanished? If its business use be superseded by more elaborate inventions, its moral uses, its beauty, might have pleaded for its continuance."

Not everywhere, however, has it disappeared, for the finer sentiments which garden-making nourishes have called it back to renew its message and preside once more over the realm of growing things. Nor does it come as a relic

A sun-dial with a millstone base that is simple and unpretentious

The dial is not merely decorative; it should be easily reached from the paths
A very attractive feature on some of the English lawns is the live sun-dial with numerals and gnomon of growing plants.

Fig. I. The plan of the gnomon, showing size in relation to dial-face

As dead monument to other days, but an accurate time marker—it must be this or nothing, for a sun-dial out of adjustment or improperly calculated is as shiftless and melancholy a specimen as a dead clock which points sadly to six o'clock at high noon. The impression that such a sun-dial is beyond the reach of modest income is erroneous. One need not travel to the older lands and pay fabulous prices to bring home one of doubtful history; for in the large cities here there are numerous places to buy them, from the simple horizontal ones to the great globes of absolute precision. Then, too, the hunter of the antique can often find a treasure to reward his search. But if time or money stand in the way, there is the opportunity of making one. Dial makers may produce more elaborate and finished works, but anyone can make a fairly accurate instrument and have the added joy of creating something.

Of the many different kinds of sundials, the horizontal style is the one most common to gardens. It lends itself most easily to garden decoration and its plotting is most simple. The directions given by the late H. R. Mitchell of Philadelphia for this sort of instrument are exceedingly plain, and will be sufficient for the beginner in dialing without further enlargement. With a rule, compasses and a protractor, these can easily be followed on paper and later transferred to the permanent material to be used for the dial.

The horizontal is perhaps the simplest of dials; there are some, however, of greater precision and ingenuity.

The first thing to do is to lay out the gnomon—the triangular object which serves to cast the shadow. To do this one must know the latitude of the given place where the dial is to be used. For New York City, for instance, this would be 40° 44' (about). Upon the base line describe this angle and continue it to C, a variable distance depending on the size of the gnomon desired. From C, a vertical line is carried to the base line, and the gnomon is complete in its simplest form. Since only the upper edge and sufficient base for support are needed, the foot can be shortened and the back cut away in any fanciful design, as suggested in the diagram. One thing worth mentioning at this point is that when the gnomon is cut in the permanent material, sufficient provision should be made to hold it firmly with the base line flush with the surface of the dial—such as with screws run vertically through the plate.

The next step is to lay out the face of the dial. This is shown in Figure II. Draw a horizontal line CD, and at its center erect a vertical. From the intersection E, as a center, describe a circle the radius of which will equal the length of the line BC in Figure I (the length of the gnomon's face). The points C and D upon the circle will be the six o'clock points made by the daily passage of the sun. Inside of this circle another circle should then be drawn whose radius should equal the length of the base line (from B to the dotted perpendicular from C, Fig. I). The two quadrants of the outside circle A to D and A to C next divide into six equal parts—indicated by o, o, o, etc. Do likewise with half of the inner circle and obtain the points z, z, z, etc. From each of the points o, o, o, etc., draw lines parallel to CD, and from each of the point z, z, z, etc., draw lines parallel to AE. Mark the points of intersection x, x, x, etc., and
draw lines through them from the central point E. Where these lines cross the circles will be the hour points. In drawing the figures for the hours they should have the same inclination as the lines radiating from E. The half and quarter hours should be made in the same way by dividing the distance between the points on the outer and inner circle, and where the lines from E intersect will give the position for the half hours and quarter hours. The minutes, if one chooses to put them in, can be spaced off with the eye, as the distances to be divided are short. The lower half of the dial can be laid out in precisely the same manner given above and the hour marks extended to, say, four o'clock in the morning and eight o'clock in the evening; but for ordinary, practical use from six o'clock in the morning to six o'clock in the evening covers all that is needed.

In laying out a dial in this way, no allowance is made for the width or thickness of the stile or gnomon. If a thin gnomon is used, that is, of metal 1/16 of an inch thick, it is scarcely necessary to make any allowance; but if a heavy gnomon is to be employed, having, say, a thickness of 3/16 or 1/4 of an inch, then, instead of the single line AE (Figure II), there must be two parallel lines the same distance apart as the thickness of the gnomon. In this case, an easy method would be to cut into two equal parts the preliminary diagrams we have been describing and to place between them a strip of paper the exact thickness of the gnomon to be used.

As the hours about the middle of the day are closer together than those early in the morning or late in the afternoon, it makes a much better looking dial to shift the center towards the twelve o'clock mark and to draw a new circle from this point (Fig. III).

The completed dial worked in brass as it appears with the gnomon and hour lines in position.

The lines radiating from E should be extended to this new circle and the gnomon increased in proportion. That the dial should give the best results, a practical rule for the length of the gnomon is that the upper tip of its sun edge be directly over the outer line of the border containing the figures of the hours (see Figure I). The center of the new circle should not be moved, however, from side to side, but must always be on the line AE midway between the two six o'clock points, as shown in Figure III.

With your dial planned, the question of materials is to be considered. Brass has the advantage of being very lasting, but perhaps demands more skill in marking than some other things. A smooth piece of slate can be had, however, of sufficient thickness to be durable. This is easily marked and decorated. Thomas Jefferson, who spent some of his leisure hours in plotting dials, worked them in slate, and at least one of them remains today. The modern discoveries in the practical uses of concrete offer a new field adaptable to the uses of the sun-dial maker. The lines, and even the gnomon, can be put in when the material is still soft and the numerals can be cut out of some metal, fitted with a key to hold them and let into the hardening substance.

The sun-dial is not complete without its motto. The quaint phrasing of many of them seems to signify the ever present voice of its daily service. There is nothing gloomy about a dial, and the often used lines reminding us that time is flying or that we must live while we have time, are mal apropos. It is not time that is flying, for time is permanent; we are moving, and the epicurean warning of the shortness of life is melancholy rather than full of the gladness of life. A dial on the

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How the Japanese Arrange Flowers

AN ART THAT IN JAPAN IS TAUGHT TO THE YOUNGER GENERATION AS WIDELY AS MUSIC IS TAUGHT TO OUR OWN SONS AND DAUGHTERS

BY BUNKIO MATSUJI AND F. W. COBURN

Photographs by Luther H. Shattuck

AMONG the many lessons which the domestic architecture of Japan, reserved, dignified and restful down to this day, offers to Occidentals, none is more unexpectedly suggestive than the one which is revealed by a little study of the Japanese art of flower arrangement or ikebana. It comes, indeed, with something of a surprise to the American to learn that the art of placing flowers or foliage in vases or elsewhere is taken seriously by every Japanese of taste and discrimination; that there are different schools and theories of flower arrangement; that peripatetic teachers of the art give lessons to the sons and daughters of middle-class families just as the piano and violin teachers go their rounds among us; that much of the wonderful skill of Japanese designers and pictorial artists is acquired through early acquaintance with the principles of artistic composition as taught by the exponents of ikebana.

The stranger within the gates of any cultivated household of Japan receives from the master of the house a tray of freshly cut flowers. His part it then is to place them so as to evince his taste, his understanding of honored traditions of decoration. On festal days in the great cities of the Empire shopkeepers remove from their windows the usual display of goods and show a single precious vase with some flower of the season placed in accordance with the canons of ikebana. The crowds surging the streets on such occasions praise or condemn the merchant’s display with the discrimination of an audience at one of our symphony concerts or of the spectators at the opening night of one of our exhibitions of pictures.

Herein, then, is one of the secrets of the artistic power of the Japanese. The love of flowers is universal; these people, with their almost preternatural intelligence and sensivenes to esthetic impressions, are practically alone in having rationalized the use of flowers and foliage in decoration. Occidental bad taste in the use of the most exquisite of natural forms has been manifested for centuries in a thousand ways; in the showy vulgarities of van Huysum, and other Dutch flower painters; in indelicate and unimaginative conventionalizations of floral forms in millions upon millions of yards of textiles and wall papers; in the tawdry display of expensive exotics with which the “swell florist’s window and the multi-millionaire’s mansion are overloaded. In Japan flower arrangement has been one of the recognized fine arts since its canons were established by Yoshimasa, a distinguished artist of the sixteenth century. This man laid down rules and precepts which, a little later, were amplified and refined by Riikiu, Hideyoshi’s clever master of the tea ceremony. During all the later flowering forth of Japanese art, in the sumptuous development of the Tokugawa period, the marvelous pictorial efforts of the artists of the Ukiyo, or popular school, down to the present day, when Occidental and commercial influences have greatly injured the architecture and allied arts of public buildings, but only to a slight extent the household art—in all this time all the Japanese people have kept reminding themselves of their expressive axiom: “Fruit nourishes the body; flowers, the soul.”

To transfer the cult of ikebana bodily to this western land would be as impossible, however theoretically desirable it might be, as to change our more florid and assertive domestic architecture to the refined and subdued austerity of Japanese middle-class homes. Valuable instruction, nevertheless, it would be for any American man or woman to sit at the feet of one of the Oriental masters of flower arrangement.

Such a student would soon feel that the essential ideas of the Japanese about flowers are right. Theirs is a cult of floral forms that may be grown out-of-doors under strictly natural conditions. The forcing processes of the hothouse are distasteful even in present-day Japan, addicted to many innovations from the Occident. No follower of any school of ikebana would think of using a flower out of its proper season. In a semi-tropical country something is always in bloom, beginning with the January plum blossoms, which often appear simultaneously with snow flurries,
and ending with the fall flowers which have hardly ceased putting forth in December. Nature and convention dictate the flowers which may be used at any season. An overblown rose or orchid from the greenhouse would be regarded as a monstrosity by the conservative and serious-minded members of a samurai family. Equally rational are the customs of handling the flowers taken from garden, field or roadside. Nothing is more abhorrent to the Far Eastern mind than the so-called bouquet of culled flowers from whose stem the foliage, in whole or in part, has been removed. It is always remembered in Japan that flowers cut in the early morning last longest; that the character of the lotus and other water plants is best preserved by tying a string around the stem and cutting below the nucature; that rain water is always preferable to spring or well water for keeping the freshness of flowers.

To preserve indoors a suggestion of the relations of the individual flower to other flowers in nature is part of the Japanese convention. Grass flowers and tree flowers may be mixed, but only as they would occur out-of-doors. Both kinds, indeed, may be used in the vase, but one above the other. A perspective arrangement is held highly desirable, as with marsh flowers in front, mountain flowers behind. The reverse arrangement would be in bad taste. It is against the canons to combine three kinds of tree flowers or three kinds of grass flowers; but they may be brought together in the proportion of two and one or three and two. In certain circumstances four tree flowers and one grass flower, or vice versa, may be displayed together. Most often in the choice of flowers for a room, the single wall painting or kakemono is considered. It would be inadmissible to introduce a real flower which would compete with the same flower as depicted

An example of bad ikebana—one of the “seven diseases of flower arrangement.” It is regarded as an artistic crime to utilize two stems of practically the same height and width.

Flowers of the woods and of the meadows grouped in accordance with accepted principles of flower arrangement attached to a post. It is a rule that a flower shall not seem to spring from the centre of a vase. Accordingly a little transverse Y-shaped wooden crotch, of the kind used by boys in this country in making sling-shots, is often inserted and the stem of the flower confined to the apex of the Y by a thin piece of bamboo. While flowers are welcome in the Japanese house, a profusion of them would be held barbaric. In ikebana, as in all else, simplicity is a prime consideration. Of the old-time dictator, Hideyoshi, it is told that while enjoying the peaceful life of the ancient capital of the Empire about 1580, he one morning visited Rikiu, master of the tea ceremony and disciple of the originator of flower arrangement. The artist's garden, as Hideyoshi noticed admiringly, was aglow with morning-glories. The ruler accordingly said: “Good sir, I should be delighted if you would invite me some morning to a display of your arrangement of these exquisite flowers. Call it your morning-glory tea party.”

Rikiu gladly made his preparations for this event. On the appointed day Hideyoshi arrived, fully expecting to feast his eyes as before on a brilliant mass of flowers the while he enjoyed the tea for which Rikiu was celebrated. On

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Getting Acquainted with the July Flowers and Shrubs

AN INTRODUCTION TO THE MORE COMMON AND THE LESS KNOWN FLOWERS BLOOMING THIS MONTH SO THAT NEXT YEAR'S PLANTING NEED NOT BE, BY NAME ALONE

BY HENRY H. SAYLOR

Photographs by Charles Jones and others

The way in which most gardens are made is upon the merits of names rather than the merits of the flowers themselves. For, after all, the great majority of gardening amateurs start their activities early in the spring or late in the winter by ordering packets of seeds from the beguiling pages of a seedman's catalogue. Of course there are pictures in it, and in these days of photographic progress the pictures bear a very reasonable resemblance to the originals—ideal originals, to be sure, and better than most of us will ever grow, perhaps; but after all we must find no fault with high aims. Let us be thankful that the day of the woodcut catalogue is practically gone, for with it the question of whether an illustration represented "the finest improved spinach" or a new giant-flowering hollyhock could be determined only by the relative proximity of the descriptive blocks of text matter.

The great bulk of the flowering plants, shrubs and vines, however, must necessarily go unprinted even in the modern catalogue, so that in making up his list the gardening beginner is forced to base his choice on his scanty knowledge of plants, or, lacking even that, upon the sound of the name itself. Thus it is that the demand upon seedsmen for such fascinating things as love-in-a-mist, amaryllis, asphodel, rosemary, love-lies-bleeding and marshmallow continues to be very heavy indeed, while other plants of less romantic names but of far greater practical value and beauty to the garden remain comparatively unknown.

There is a far better and shorter road to a successful flower garden for the novice than that which lies directly through the seedman's catalogue. It is a road leading through that same novice's own notebook. The time to get acquainted with the future inhabitants of that ideal garden of his is during the whole flowering season. If you yourself must acknowledge your novitiate in gardening, try this scheme of making the personal acquaintance of the month's flowering plants and shrubs. Surely in your own neighborhood there are gardens containing treasures with which you might easily become acquainted. Visit them with open eyes and an inquiring mind, and start your notebook now.

Rule it up with columns for common and botanical names, height, color, flowering period, location in sun or shade, for classification as to annual or perennial character, planting time for seeds or plants, for cultural hints from your neighbor's experience—which you will find him willing to dwell upon at length, and finally for a few informal descriptive remarks that will fix that particular plant once for all in your memory.

If your own neighborhood offers too few examples, visit a nearby nurseryman's place. That is where you will find a wealth of material for your notebook, with the additional advantage that you may order
This is tickseed, the perennial Coreopsis \textit{Canescenslata}. \textit{Calliopsis} is the name given the annual \textit{Coreopsis tinctoria}. Lavatera or annual mallow, two feet high, with a pink flower blooming ten weeks. You may meet the last blooms of the long-spurred columbine (Aquilegia), which takes kindly to shady places.

Let me assure you that the following out of this scheme will save your many a mistake, many a disappointment in your garden-making. By it you will save at least a year or two in the attainment of a satisfying measure of success in your home surroundings. There is nothing so discouraging in the gradual acquiring of garden knowledge as to find, after a year or two of planting seeds, that the result is not at all what you have been led to expect by lurid word-painting in the catalogues or the still less dependable choice of flowers on the strength of names alone. Here are some of the really good things you will meet in your interesting travels. These are taken from those plants and shrubs that bloom first this month, but there will be other entries in your notebook, recording flowers that started to bloom in May or last month. It must be borne in mind that any statement regarding a time of blooming can be only approximate. A dry season or a difference in latitude will change these dates by several weeks. The assumption is that we are investigating bloom in the latitude of New York. A rough rule is to allow a week earlier or later...
You will find the larkspur in both annual and perennial sorts; all need rich, well cultivated soil.

The zinnia is an annual that is attractive only in its choice varieties; beware of magentas.

The Japanese plume poppy (Bocconia cordata) makes an excellent screen for unsightly utilities.

for each one hundred miles south or north of this. First, the perennials:

Cardinal Flower (Lobelia cardinalis) is a plant giving one of the few pure red garden flowers. Native to some portions of New England, it can, however, be grown readily in nearly any soil. Shade about the roots and a slight winter protection is all it asks. The height is about three feet, and the flowers are borne in leafy racemes covering a foot of the stem.

Coral Bells (Heuchera sanguinea) is a lower-growing plant (1 ft.), with a low-spreading growth of leaves as a background for the long nodding panicles of coral-red flowers not unlike the begonia. It requires a rich, deep soil, full sun and plenty of water when in bloom.

Lilies. There are several kinds of lilies that you may meet this month, and they are well worthy of your friendship; first the common tiger lily (Lilium tigrinum), with its red, purple-spotted flowers; then the wonderful gold-banded lily of Japan (Lilium auratum), perhaps the most beautiful of all, bearing flowers that frequently measure eight inches across, the reflexed petals spotted (Continued on page 68)

In the pale pink shades the pyrethrum (Chrysanthemum coccineum) is a splendid perennial.

Nicotiana is a bushy annual in white and red varieties with a delicious fragrance at night.

Make the acquaintance of all the phlox you can find, including this annual variety, P. Drummondii.
The Possibilities in Half-timbered Houses

SOME OF THE MANY WAYS IN WHICH THE DECORATIVE QUALITY OF THE EXTERIOR MAY BE ENHANCED—THE NEED ABOVE ALL ELSE FOR HONEST CONSTRUCTION

HEREDITY has had many a blame and many a credit laid to its charge; fortunately it shoulders are full broad to bear the burden. The weight of responsibility, therefore, will not be overmuch increased if we attribute to its influence the prevalence of certain architectural styles in certain places, and the choice of building materials or modes of construction, in preference to certain other modes and styles that may be intrinsically just as good. “Far-fetched and fanciful” you say? Not necessarily so. Heredity is unquestionably a determining factor in bird’s-nest architecture, so why not in man’s? Besides, for confirmation of this, we need but turn to American history. In New England, where there was a super-abundance of surface stone, often loose and ready to use without quarrying or dressing—so much of it lying around that it was at times a positive nuisance—the people, nevertheless, generally built their houses of wood. In some of the middle and southern states, on the contrary, where stone was not nearly so easily obtainable, and where timber was, if anything, more plentiful than in New England, it was the prevalent custom to build of brick or stone. Why was this? Simply because the people of New England came mostly from the parts of old England where for genera-

tions timber building had been the accepted rule, while the people of the middle and southern colonies came from where brick and stone were commonly used. Call this caprice, heredity, or what you will, the fact remains that a preference (which undoubtedly had a reason, as you will find all preferences have if you seek far enough) for one material in one place and another elsewhere, led to a selection oftentimes wholly inconsistent with the supply most plentifully, readily and, one may add, naturally available.

May not, then, this inherent preference account for the widespread latent fondness among us for the half-timbered house, so dear to many of our English forebears? Be that as it may—we will not force the point—the half-timbered house forms a distinct type of domestic architecture that has much to be said in its favor. The Elizabethan era was the golden age of the English half-timbered house, although not a few such dwellings had been built before the reign of the Virgin Queen, and admirable examples of the type—far finer, some of them, than anything in England—were plentiful in the north of France before the Tudor period. With the economic conditions that made for the popularity of the half-timbered house we have no present concern. It
suffices to observe that the style did then receive a great impetus resulting in numerous beautiful examples that our American architects have not been slow to avail themselves of.

The half-timbered house must be regarded not merely as affording a variety of applied wall surface treatment, but as forming a definite system of construction with fixed characteristics peculiar to itself. In the framework, which really constitutes “the carcass of the house,” the “resistance of the timber, serving in turn as brace, or support, or belting course, is greatly increased by the multiple combinations of the joinery.” Plaster or bricks are used to “pug” or stop up the spaces left between the timbers, so as to present a solid surface. It is unfortunately true that modern half-timbered work has sometimes degenerated into a mere applied surface treatment, and in such cases it is, to put it plainly, nothing but a detestable sham. The way in which brumagin walls of masonry or framework are occasionally slacked over with stucco divided into panels by half-inch pine strips, tacked to the flimsy background and stained to look like weathered hardwood timbers, suggests an incident mentioned by an English writer. Passing down a back street in London, he noticed a card in a grocer’s window bearing the legend, “Fine Jam, good straw-

berrv flavor, 4d. a lb.” He goes on to remark that it is not the “flavor of architecture” we want, but the real thing. Houses with a “half-timber flavor” are just as bad as glucose jam with fruit extract “added to taste,” as the cook-books say.

A real half-timbered house is a source of lasting delight. It is not fireproof, of course, nor is it half a dozen other things that some folk think a house ought to be, but it is picturesque and human and homely, and as to the fire, surely it is not amiss to trust a little bit to Providence and leave the fire insurance companies a chance to exist. Our insistence on fireproofing has become almost a mania to live in fireproof vaults. What we gain in safety we often lose in artistic merit and homeliness, and certainly these features are worth considering as well as more utilitarian merits. Besides, a properly built half-timbered house can be made so slow-burning that there is but little danger of a conflagration, and that is really as much as can be said truthfully of many so-called fireproof structures. Then too, the half-timbered house belongs a remarkable degree of virility and vitality, coupled with a strong element of spontaneity that impresses one with the conviction that this type of dwelling is entirely in harmony with its natural surroundings. We realize also that the builders who perfected this style of architecture fully comprehended the qualities and properties of wood and applied methods appropriate to the material used. Limitations there are, one must admit, but then what kind of dwelling has not its defects? Such a house would be just as uninteresting, as repellent, as cold, as hard as a person without any faults or foibles. We love our friends the better for a reasonable share of shortcomings, and so it is with our houses. If they were absolutely perfect we should doubtless not be really happy in them.

On the score of durability we may point with satisfaction to numerous examples dating from the fifteenth and sixteenth centuries that are still whole and sound and apparently good for centuries to come.

A usual modification of the half-timbered style, in fact an
almost invariable one as far as we are concerned in America, is to build the lower walls of brick, stone or concrete and begin the timber work at the second floor, very often making it project somewhat in an overhang. Owing to essential principles of construction, certain arrangements of lines and habits of development were not only possible but almost inevitable, and devices that were first adopted from motives of expediency were retained because of their artistic worth as well as their practical value. This is notably true in the case of the overhang, which is a characteristic feature of half-timbered structures. Originating in all probability from a desire to gain additional space in the upper floors, it also afforded protection to the foundations and lower walls and at the same time served the purpose of a porch over the doors and a shade over the windows below. Successive overhangs supported on corbels and brackets swelled out story above story, so that some of the old four- or five-story town houses had a remarkably full-blown, ample appearance. In our modern half-timbered country houses, though not running above three floors, and generally not more than two, we can use this device of overhangs to good effect. This scheme is constructionally honest and, indeed, cannot be used with other materials. The flexibility and softening of outline thus attained are important considerations.

Before going on to speak of the external appearance of half-timbered wall surfaces, it is well to say that unless the wall be structurally genuine throughout, its falsity must sooner or later become apparent on the outside. "The big . . . beams, the brackets and the external and visible arrangement of the framework are at the same time a decoration, not accidental, but intentional, not haphazard but desired and aimed at." In other words, the half-timbered house, while constructionally honest is also decorative. Unless, however, stout timbers, fitly joined, perform the function they are ostensibly supposed to perform, they lose their significance and become merely grotesque.

Various methods of dividing up the wall surface by diverse arrangements of timbers may be adopted. The simplest and most primitive uses vertical timbers resting on a sill. They may be placed close together, as in the house at Chiddingtion in Kent, so that there is but little space of plaster left between the uprights, or they may be placed farther apart as in the parts of the wall at the extreme right and left of the house at Essex Fells. The prevailing motive is perpendicularity, broken only by the sill beam carried across the face of the wall under the windows and by another horizontal beam in the front of the gables. This method of treatment, known as post and panel work, is substantial, and by the perpendicularity, which gives the effect of height, it is especially applicable on a very wide surface to reduce the width. The severity of this style may be relieved by crossing the timbers. When the beams are properly halved into each other and held at the ends by mortise and tenon, this treatment strengthens and stiffens the whole structure. The effect of too great height may thus be readily obviated. Horizontal crossbeams have been successfully used in the Port Sunlight houses. On the side a diagonal beam crossing the vertical posts has a relieving effect. In the house at Cedarhurst also, the use of horizontal beams is almost wholly responsible for the pleasant decorative appearance which, with only vertical posts and panels, would

A modern country home near Philadelphia, Oswald C. Hering, architect, where the timbers are really structural, not mere strips nailed on afterwards

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Grow Your Own Fruit

V. THE BUSH AND SOFT-FRUITED BERRIES—THE BEST METHODS OF CULTIVATION TO SECURE FINER FRUIT THAN YOU CAN BUY

by F. F. Rockwell

Photographs by X. R. Graves and Charles Jones

There are two classes of fruit very seldom found of perfect quality in the home garden—the soft-fruited berries and the bush berries. If they are to be seen at all you will find them stuck away along some fence or in some corner, overgrown with a grass sod and covered about their roots inches deep with old leaves, twigs and decayed branches, and all the accumulating debris of years of neglect. All this abuse is simply because they will stand it, and still yield a meagre crop of small, poorly flavored fruit. Raspberries, blackberries or currants, grown under such conditions, are no more like fruit from the same vines or bushes properly cared for, than a wizened, acid, wild crab-apple is like a nice, plump, juicy Winesap.

This neglect can hardly be due to any difficulty in the way of the culture of these small fruits; for the amount of care they require each season, after once established, is much less than that demanded by the vegetable patch. It is simply that we have got into the way of letting them go untended, and taking it for granted that home-grown berries of these sorts must be far inferior to those we see for sale in the markets, when these frequently are the very same varieties simply given proper care. Far from its being impossible to grow good fruit of this sort in the home garden, it is particularly desirable to grow it there, because all the soft berries naturally stand transportation very poorly, and even if carried only a few miles in a wagon, become more or less muddled and crushed from their own weight. The only way to have them at the very best is to grow them in the home garden: and when one knows how very few plants it will take, if properly treated, to produce all one family will need, there is no excuse for not having them.

The soft-fruited berries—raspberries, blackberries and dewberries—are all treated in much the same way. Any situation where they get the full sun, and the soil is well drained, will answer. It may be at the side of the vegetable garden, or a narrow strip along a fence. If there is not room otherwise, they may be trained against the fence. If there is any choice as to soil, use that in which there is considerable clay.

The spot selected should be well enriched with old manure, and dug down to a depth of at least eight inches. The size needed can readily be decided, as the plants will require about four feet in the row and six between rows—some sorts taking a little more and some a little less space than this. The best time for planting is in early spring. Get your plants from a reliable nursery or seedsmen, and have the ground ready to plant them immediately upon arrival. Set them in the soil an inch or so deeper than they have been grown in the nursery, working the earth in carefully and firmly about the roots. At the time of planting, cut the canes back to six or eight inches. These plants will not bear fruit until the following year; but if one wishes fruit the same year, it can be had by ordering extra plants, and setting these between the plants set out for the permanent bed. These extras are cut back only a little, leaving them about two feet high. They will bear fruit the same year as planted, but are not likely to do much the following year, so it is best to pull
them up after the season is over. As the plants cost but a few cents apiece, this is not such an extravagant system as might at first appear.

After setting the plants out, do not neglect the bed, as success will depend very largely upon the thoroughness with which the surface soil is kept stirred to maintain the "dust mulch." At first it will be well to work the soil several inches deep, to loosen it thoroughly after the packing it gets while the plants are being set. After root growth starts, however, it should be loosened only on the surface, not more than two or three inches deep. In very hot seasons, a summer mulch of hay or spent manure will help retain the soil moisture, but weeds must be kept out.

There are three methods of giving the plants support. The one most commonly used is to have a stout stake for each plant, to which the canes are tied up with some soft material—raffia or strips of old sheeting. The second way is to string a stout wire the length of the row and tie the plants to this. An improvement on this method is to string two wires, several inches apart, one on either side of the row.

Another important matter is the pruning of the canes. The cane berries bear fruit on the growth of the season previous, and therefore it is necessary to cut out all old canes that have borne one crop. This should preferably be done just after the fruiting season, but is sometimes left until fall or spring. In the home garden, however, there is no excuse for thus putting it off. The new growth each year must also be cut out, as the plants send up more shoots than are desirable for best results. Cut out to the ground all but four or five of the new canes. The canes left, if they are to be self-supporting, as sometimes grown, should be cut back when three or four feet high. Where support is given, however, they are usually not cut back until the following spring. In the case of those varieties which have fruit on side shoots, as most of the "blackcaps" do, also cut back these side shoots one-third or one-half in the spring.

It will thus be seen that in pruning plants of this class there are three things to keep in mind: (1) Cut out all canes that have fruited. (2) Cut out all but four or five of the new shoots. (3) Cut back both new canes and side shoots one-third to one-half.

Winter protection is usually given in sections where the winters are severe—New York or north of it. The canes are laid down by bending over as flat as possible, and covering the tips with earth. This is not done until just before severe freezing weather. The canes are sometimes covered with rough litter; but bending them down is in itself a great protection, as they will not be so much exposed to wind and sun, and will be covered with snow when there is any. Another method is to cover the entire canes with soil. Whatever mulch is used, it should not be put on until the ground begins to freeze, and should be taken off before any growth starts in the spring.

The Raspberry

The soil most liked by raspberries is clayey. It should be cool and moist, but never wet. The black and red types of raspberry are distinct in flavor, and both

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There is no reason why the wood fence should ever be ugly. Such graceful, simple lines as this one shows give the finishing touches of beauty to the place.

The ingenuity of the Japanese is here well taken advantage of in affording an economical, serviceable and attractive boundary. The posts are of stripped cedar with bamboo between.

SUGGESTIONS FOR WOOD FENCES

The European fence of moss green lath, so fitting with wooded places, might be better known.

Nothing is in better taste with the formal garden than the fence of lattice work. The variety of its forms opens up a limitless field of really good design.

A well designed series of openings along the top of a high board fence will redeem it.

The Colonial house has its special conventions for fence design. Here are two styles which harmonize with the detail.

The sheaf pattern of these fence pickets is duplicated in the balcony rail, thus increasing the unified effect of house and grounds.
The Birds and Butterflies of a Suburban Garden

HOW A DISH OF WATER SET AMONG THE FLOWERS MADE FRIENDS WITH THE BIRDS AND HELPED CAPTURE THE BUTTERFLIES—THE INTERESTING DOUBLE LIFE OF THESE INSECTS

BY ZULMA DE L. STEELE

Photographs by the Author

This pretty yellow butterfly is a matured garden pest

This was once the destructive cabbage worm (Pieris Rapae)

The charm and attraction of a garden, be it large or small, is primarily, of course, the harvest of bloom and beauty which it yields; but aside from that, we have discovered that our little garden has been the means of bringing us many additional interests and pleasures.

It may be surprising, for instance, to learn how many birds and butterflies soon discover the allurement of freshly-worked soil, a drinking pool, and beds of honey-laden blossoms even though they be in the midst of a city.

Our custom has been to keep a large saucer of water in the yard for the birds, and we soon discovered that as there was no fountain in the immediate vicinity, and no open water nearer than the park lake, a quarter of a mile distant, the water proved a great attraction. This suggested the idea of something more ornamental than a dish of water, and a hollow mound of stones was built, which was about three feet in diameter at the base. The center was filled with garden soil and firmly imbedded in the top was placed the largest terra-cotta saucer that could be purchased. Around the edge of the saucer was set out sweet alyssum and a delicate variety of sedum, and lower down among the crevices of the stone, slips of English ivy were planted. The saucer was kept clean and filled with fresh water.

We witnessed many early morning baths in this miniature pool. The robins enjoyed it most often, chasing each other and quarreling to have the first dip, sharing it willingly with the sparrows, but always objecting to the intrusion of their own kind. Sometimes as many as five birds would strut up and down the lawn, impatiently waiting their turn. The English starlings with their sweet boy-like whistle, often the white-throated Peabody birds, the vireoes, the gold finches, and an occasional blue bird, came to drink, if not to bathe, in the little, cool, flower-circled pool. Many other birds were occasional visitors, and later in the season a migrant Louisiana water-thrush stopped for a call; and in November a number of hermit thrushes and juncoes remained for several days feeding and roosting in the arbor. One thrush seemed loath to leave us, and delayed his departure until after Thanksgiving.

When summer came a great many butterflies haunted the garden, and about the middle of August, as a young lad was coming to visit us, we conceived the idea of making a collection of such butterflies as could be found within the limits of a suburban garden.

The Fisherman's landing net was borrowed, and a butterfly net of mosquito bar was substituted for the fish net. At the drug store ten cents' worth of cyanide of potassium was bought, and placed in the bottom of a glass fruit jar. In order to protect it and keep it in place, a little cotton was laid with it, and over the whole was glued a piece of strong white paper, perforated with holes. To cut and fit the paper, we placed the jar upon it and drew a pencil mark around it; then with the same center, but a radius about an inch longer, another circle was marked off. At intervals of about an inch, slits were made from the circumference to the inner circle—as in the diagram on page 29. After making the air holes, the edges of the tabs cut were touched with glue and bent inward, making a platform which, when slipped to the bottom of the jar, prevented the deadly poison from coming in contact with anything. Labelled "Poison," and with the rubber-protected cover screwed tight, all was ready for the first specimen. Into this jar the butterflies were dropped, and in a few moments painlessly killed. We usually left them in the jar for several hours or overnight, to make sure there would be no restora-
The first two specimens (upper row at left) are Basilia australis. Next to them is Grapho Interrogationis with the question mark upon his wings.

tion after they were pinned. A large pasteboard box was lined with corrugated paper, such as is used for mailing photographs; into this pins could easily be fastened, and our amateur collector’s outfit was complete.

The work of collecting, arranging, and classifying really was very exciting. Sometimes most beautiful and brilliant bits of color would be seen floating over the flower beds, stopping here and there to sip a bit of honey from lily or rose, and then slowly and gracefully sailing away over the fence into our neighbor’s territory in a most tantalizing and aggravating way, for it was one of our rules that nothing should be captured outside of the garden. Then the boy, armed with his net, would retire to the shade of the arbor, where he would sit awaiting the return of the vagrant.

Our first prize was the beautiful *Papilio troilus*, or the Spice-bush Swallow-tail. How exquisite he looked in his black velvet robe with the shaded blue border, fastened at the bottom near the swallow-tails with one deep orange gold button, and decorated around the edges with a double row of brass buttons! It seemed as though the proud fellow knew that the pure white phlox upon which he had alighted was just the background to set off his royal costume. He must have wandered from the park where he spent his early life feeding upon the sassafras trees. After reaching maturity he draws the edges of a leaf together, sews them in a firm, strong seam, and lies hidden there, swinging in his dainty green cradle until he feels the stirring of his wings.

Our second captive was the *Anosia plexippus*, who proudly lords it over others of his kind under the common name of the Monarch. Clothés in reddish orange with heavy black veins and a wide black border, he sails high above the flowers with great strength and dignity. The Monarch has a record peculiarly his own. He is the only butterfly known to migrate as the birds do in the fall. It is said that any chrysalids or caterpillars undeveloped at the time of the frost, die, while the butterflies which we see in the spring have returned from their long flight to the

Gulf States. They fly in swarms, and have been seen in such numbers on the east and south coasts of New Jersey, clinging to the dry twigs of leafless trees in October, that the branches have had the appearance of trees in full autumn foliage. These butterflies have been seen as far as five hundred miles out at sea. They belong also to the class of protected insects, which are provided with a secretion which is distasteful to birds and predacious insects. The scent pouch of the Monarch is situated near the center of the lower wing, and is completely hidden by long soft feathers or scales. This odor they are able to emit at will, and in that way drive off insects and birds that might otherwise prey upon them. The caterpillar feeds upon the milkweed.

The garden was full of common little white and yellow butterflies, and we were surprised to find upon examination how great was the variety among them. The innocent-looking little white *Pieris rapae*, or Cabbage Butterfly, has probably been one of our most expensive pleasures, cost-

*Anosia plexippus*, the bold-flying Monarch, who migrates to warmer lands in the fall.

*Papilio asterias*, for all his black and gold and swallow-tails, was once the ugly parsley-worm.

Colias philodice (male and female), the bright-colored and more beautiful form of the clover-worm.
fields from the Atlantic to the Pacific. In our garden the caterpillar fed upon the nasturtiums and mignonette, and in that state was not as attractive as when dancing like a spirit over the flower beds.

His brother, the Colias philodice, brightened our garden from spring to fall. We are all familiar with this little "Friend of the Wayside," or the "Puddle Butterfly" of our childhood. Though apparently all alike the butterflies reveal, upon close examination, great diversities. They are generally found in pairs, the male with a rather severe black border to his wings and two decided black dots on the upper edges, while my lady has a clouded or shaded black border, wider at the tip of the upper wings, and ornamented with irregular spots and dashes of yellow. Two orange-colored eyes are found in the centre of the lower wings. Some varieties have a narrow rose-colored edge and shade into emerald green on the under side of the wings; but beautiful as they are when flying, the

Papilio troilus, the Tiger Swallow-tail, paid a visit from the alders in the park nearby

Papilio troilus might be mistaken for Basilararchia (top of page 30) but for his swallow-tails

V. a nessa A ntiopa or Mourning Cloak has velvety, maroon wings with a cream colored border. He comes with the first warm weather and stays on until winter

nearly all black, and it has much the same peacock blue border to the lower wings; but when you turn it over, you discover where it gets its name of Red-spotted Purple, for here are found numerous orange-red and purplish spots in great variety of shapes forming a continuous border on the lower wings. The caterpillar of this butterfly feeds upon the willow, apple, cherry, or holly, and cuts away the leaf on each side of the mid-rib until it is of the proper width to form a tube-like cradle into which the baby butterfly fits, and where it passes the winter.

Two butterflies interested us very much: the Vanessa antiope and the Pyrameis atalanta. The Antiopa or Mourning Cloak, with its rich velvety, maroon-colored and heavily-feathered body and wings with a broad cream-colored border, is one little green caterpillars, whose natural food is the clover, are among the most destructive of the garden pests.

The Basilararchia astyanax, or Red-spotted Purple, might easily be mistaken for the Papilio troilus, so similar are they in color, unless one observed the absence of the long swallow-tail appendages. The upper color is of the most stately and dignified of our garden visitors. It is rather slow in its movements, as betrays the solemnity of its name, and can easily be picked with the fingers from a bending flower. Vanessa makes its appearance with the first warm March winds, a real harbinger of summer days to come, and stays late. A little family of six were found the last week in November, nestling close together upon a scrap of wooden cloth, trying to keep their feet warm.

It was a sorry specimen of the Pyrameis atalanta or the Red Admiral, that found his way into our garden. He must have seen hard fighting on sea or land, that brave old Admiral, but he still wore gallantly his epaulets of red, and though his under wings were in tatters, and bore the traces of many battles with the winds and waves, he was a gallant fighter, and died hard, leading us a long chase up and down the garden before he was finally captured in the folds of the white net. Perhaps his diet of nettle and hop had tended to make him high-spirited and courageous.

It was a singular coincidence that on the same day when the Admiral came to our net, the Silver-spotted Skipper (Epargyrus ityrus) followed in his wake. Possibly the Skipper and the Admiral had embarked on their long voyage together, never

(Continued on page 52)
Building a House with a Sleeping-porch

A GROUP OF HOMES THAT HAVE BEEN BUILT WITH THIS MODERN AID TO RIGHT LIVING—SOME OF THE STRUCTURAL DETAILS THAT HAVE PROVEN BEST

BY MAURICE M. FEUSTMANN

Illustrations from the work of Scopés & Feustmann and E. T. Coleman, architects

THE reasonableness of the sleeping-porch as a feature in country house planning having been firmly established, it may be assumed that a brief description of a group of moderate cost cottages erected in the village of Saranac Lake, and possessing such porches, may prove of interest to prospective home builders in general. While these cottages were designed primarily to house patients suffering from diseases of the chest and throat, the principles involved are applicable to the planning of any home, the surroundings of which will permit the incorporating of one or more sleeping-porches. Nor are the uses of the latter narrowed down to the purposes just mentioned. As an accessory to the sick-room where the convalescent may spend the greater part of the day and even some of the milder nights, the sleeping-porch must surely appeal strongly to the family physician as a valuable adjunct to medical treatment in a variety of cases. To those who know the pleasures of camp life and of sleeping under canvas or in a lean-to, the sleeping-porch will appear as an easy mode of continuing that health-giving pleasure amidst the home surroundings. To the commuter of long city hours and moderate income, the sleeping-porch offers an investment bringing the large returns in the form of refreshing slumbers and of renewed vigor for the tasks of the next day. When the sleeping-porch assumes more generous proportions, anywhere from ten by sixteen feet and over, then the uses are extended to those of an outdoor sitting-room or children's playroom. Here we have pleasant suggestions of greater privacy and much more freedom from interruption than the usual downstairs piazza can possibly afford.

A sleeping-porch, to give the greatest possible service, should possess as many as possible of the following essentials: accessibility from two bedrooms and, if possible, from the hall; freedom from drafts; least possible shading of room from which it is accessible; greatest possible comfort in the way of accessories; pleasing external appearance.

When the sleeping-porch occupies a free-standing wing as here, sliding sashes should be provided at either end, but ordinarily the whole side may be left without them.
This house and the one upon the opposite corner show an interesting variation in exterior treatment, although both are built from the one set of floor plans adjoining.

Where the main entrance from the house is from the south and only one porch can be indulged in, it would seem the most economical plan is to arrange the porch in both first and second stories in the internal angle of the building, as shown in most of the illustrations herewith; but a slight disadvantage must be noted in this scheme in the somewhat restricted view offered the occupant. This drawback is overcome in a house shown below, where the porches are carried in front of the main line of the house. Not only is the view extended in one more direction, but the amount of light finding its way into the porch is considerably increased. This cottage also has a north sleeping porch—so that the person occupying the southeast bedroom may use either porch at pleasure, according to the season of the year or prevailing weather conditions. When the main entrance from the house is from the north, as in the house at the bottom of page 32 and in the middle of page 33, the best arrangement of the porch is in the form of a wing with a sleeping-porch above the general piazza on the first floor. The more the house takes the form of

The first story of the house to the right is a good example of turning one's back to the north

The plans show an extremely simple and economical arrangement of a small house. A north porch for outdoor dining is provided in addition to the sleeping-porch on the south

One can readily see that the two south porches, one above the other, contribute to the unity of the design by their treatment as a separate gable

Doors to the sleeping-porch from one of the two bedrooms are three feet eight inches wide

Another type of the sleeping-porch home, where the house faces south and has its main first-story porch along the front. The second floor plan indicates also a north sleeping-porch in the eastern angle
the English house of the Elizabethan or Stuart periods, that is, the longer it becomes, the easier it is to harmonize this porch extension with the balance of the structure. The entrance porch, found so largely in Kent—open porch below with an alcove filled with mullion windows above—offers many suggestions whenever it is possible to include both porches in one wing subordinated to the main structure.

The comfort of the occupant being the first requisite of a sleeping-porch, the question of protection from the elements must receive early consideration. Where the sleeping-porch is situated in internal angles, it is sufficient to provide against draughts by simply placing sliding or folding sash in one end of the porch. If the porches form part of a projecting wing, then this matter is disposed of by placing sash in both ends. The writer does not regard it as necessary to provide further protection in the way of sash on the front of the sleeping-porch. If it is to be used as such alone, it should be left quite open, for, if the plate (the horizontal timber supporting the rafters above) be of moderate height, six feet eight inches or seven feet, it is only on rare occasions that snow or rain will beat in, and, in such cases, a folding screen or canvas will be sufficient to protect the bed. Should the use of the sleeping-porch be extended to those of an outdoor living-room or playroom, then there seems to be greater need of enclosing all sides with movable sash. But this is largely a question of individual notions as to comfort. The best results are obtained at the least expense, by the use of horizontal sliding sash; these should be provided at the top with dowels running in grooves, to reduce the friction, and with brass sheaves and track at the bottom. The meeting stiles should be weather-lipped.

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Achieving Character in Remodeling

WHAT MAY BE DONE WITH THE AID OF NEW WOODWORK AND BUILT-IN FURNITURE, GOOD HANGINGS AND WALL COVERINGS, IN PLACE OF COSTLY STRUCTURAL CHANGES

by Katharine Lord

SOME years ago, the rush from the country to the cities left many empty farmhouses, and comfortable homes in towns and villages. Now the reactionary wave, which is taking place especially among the professional classes, who are on all sides going back to country life, is again filling these same houses and restoring them to their former condition.

Writers, painters, sculptors, all kinds of workers who can do their work where they will, are extending the term of their country residence until it covers all but a few months of the year. Many who have been fortunate enough to inherit or acquire places near enough to the city for commuting or weekly visits, make the country their permanent residence.

In every town and village we see the neglected houses of the last generation rejuvenated and adapted to modern needs. Some of these dwellings have long stood empty, more have descended in the social scale, and have been loaned or let for a nominal sum and allowed to go unrepaired and unpainted.

Visit any country district now and you will see these long neglected places taking on new life with a fresh coat of paint, thrusting forth a veranda here, breaking out a door or window there, or adding a chimney elsewhere, all giving token of enlarged life and comfort within.

In the city, too, old houses which had perhaps sunk into slovenliness are constantly being converted into apartments and the simpler...
office buildings, now superseded by skyscrapers, changed into smart studios. And thus to the furnisher as well as to the architect the problem of reconstruction is being constantly presented. And for the decorator it is a most difficult one, for he or she is usually expected to accomplish the task without much structural change.

Let us agree to call the reconstructing decorator she, since it is most often a woman who struggles successfully with the difficult, yet stimulating, task of achieving beauty from unlikely materials. And there is no occupation more interesting than the rehabilitation of an old house that has fallen from its original state of magnificence or comfort. There is the thrill of adventure in seizing upon something out of the past and fitting it to modern needs. When expense need not be too carefully considered and structural changes can be freely made, it is a simple matter and one usually put in the hands of an architect. But often this is not feasible, and the house designer is called in to see what he or she can accomplish by redecorating and furnishing alone.

The house is likely to belong to one of two types, each having the narrow hall and straight flight of stairs, commencing discouragingly near the front door. The more spacious of these houses will have rooms on either side and a narrow back hall at right angles to the front hall and opening on to a side porch, perhaps with service stairs leading from this second hall. The house may have the narrow hall on one side and a transverse wing with its main room, which will be the dining or sitting room, opening directly on to the porch.

The first thought in remodeling such a house is simplification. Every self-respecting house of forty or fifty years ago had its parlor and sitting-room, the former an apartment of state, however small, and in many cases used only on occasions of ceremony. It became often a chamber of horrors, in which no one cared to sit, a place suggestive of wax wreaths and funerals. The family used the sitting-room, or in smaller houses, the kitchen, as its living-room and the parlor was left in deserved abandonment.

If the house were large, the parlor was not closed, but was still used sparingly, while the library on the other side of the hall became the living-room, and mother's bedroom or the dining-room became the romping ground of the children, the nursery being almost an unknown quantity in the early American house. When such a house is given to the architect, he at once begins to knock down walls. Several small rooms are thrown into one, stairs are moved back, generous verandas are added, and a spacious, convenient dwelling is achieved.

It is often given, however, to the house decorator or the housewife herself to make habitable and beautiful, if possible, such a house without the expense involved in structural changes. Can it be done, you may ask?

That it can be, is proved by many pleasant homes and by the work here pictured of at least one woman decorator, Miss Edith Van Boskerck, who has had unusual success in remodeling and simplifying the over-ornamented houses of one or two decades ago. And the means by which she does this are few and
easily used, once they are thought out.

First the house is divested, in imagination at least, of everything it contains. Each room is reduced to four bare walls, a floor and a ceiling; and their proportion, lighting and material are carefully considered. Then comes the study of the use of the room, the things old or new that it must contain, of the personality and occupations of its probable occupants.

With all these elements simmering in her mind, the decorator gradually evolves mental pictures of a room in which color and line produce a harmonious setting for certain articles conveniently placed for use, and for certain human beings using these things in the daily occupations of an actual life.

This method does not produce period rooms, though the designer must be conversant with the periods and able to use this knowledge to the best advantage. But it gives rooms of quiet beauty and distinction that actually invite one to live.

If it is not possible or desirable to take down walls to throw together two small rooms, try the effect of removing the door and filling in the adjacent corners on either side of the door with built-in seats which are to appear as one partitioned into two sections. This door will usually be formed about three or four feet from the end wall, near its windows—just the place for a comfortable seat. This is much simpler of course than taking down the partition, since it involves only cutting through some laths and plaster, disturbing no beams.

It is almost a truism to say that the two rooms should have wall covering and hangings alike and their furnishings of the same character in order to deceive the observer into thinking them one. Perhaps seats may not be desirable, and in any case will not be needed on both sides of the door. The other may be occupied by bookcases in the same way. The cases should be built right up to the door casing, and a molding line of some kind carried around the casing to secure the effect of continuity.

We are just beginning to realize the value of built-in furniture, not only as a convenience but for securing special lines. The housekeeper knows well what degree it helps in keeping a room tidy, and one has only to try it once to appreciate its value in space saving. Its possibilities in correcting bad proportions are as great. For example, a plan used in a studio whose width was inadequate to its length, was the building in of a square cupboard with capacious shelves for candles and all the painter's tools—it would do for a clothes closet in a bedroom—reaching two-thirds of the way to the ceiling, and filling in the remaining space with a seat. This entire arrangement was built quite separate—attached and could be easily moved and re-adjusted to another room.

The dining-room on pages 34 and 35 was the result almost entirely of a process of simplification. In a house built some twenty years ago, it had a plate-rail loaded with different objects, dish cupboards and sets of shelves without number and the typical bay-window with window-seat—a useless arrangement, usually, for no one sits in a dining-room except at meals. The plate-rail was removed and replaced by a simple scheme of moldings, with an occasional Dutch poster set in to give color and life to the walls.

The custom of having only a few pictures and those fine ones is rapidly growing. A heterogeneous collection of pictures, differently framed is always difficult to arrange. To have all the frames alike on paintings, photographs or prints of whatever subject is still worse and suggests that you have bought up the over

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In addition to the cretonne-covered furniture of willow or wicker that has come to be well and favorably known for summer use, there are now many new forms of cretonne-covered storage cases, screens, shoe-boxes and other ingenious and attractive pieces obtainable.

**Summer Furnishing With Cretonne**

BY SARAH LEYBURN COE

CRETONNE has always been more or less in evidence for summer furnishings, and even when not particularly fashionable it can be had in a number of different designs, for it is a material that is quite too effective to be slighted, although it may be put into the background temporarily.

For the last two or three years, however, there has been an increasing revival of its popularity, and it is used not only for draperies and hangings, but for covering furniture, or rather for making furniture in a style especially suitable for summer bedrooms. Chairs and sofas upholstered in cretonne and screens covered with it are as familiar as the time-honored curtains and draperies, but the new use of this material is a radically different one.

The cretonne-covered cabinet or set of boxes is designed with special reference to the size and shape of various articles of one's wardrobe, and is so arranged that no space is wasted and each section or box can be filled to the best advantage. The idea for the construction of these cabinets doubtless grew out of the cretonne-covered shirt-waist box that proved its usefulness long ago. It was found that instead of one deep box, several shallow ones would prove more serviceable for holding clothes, especially light garments that crush readily, and, rather than an unwieldy pile of boxes, a light wooden frame with a separate support for each box would be much more convenient.

From this general plan a number of cabinets of different size and shape have been evolved, until there is now cretonne box furniture to meet all the requirements of an ordinary wardrobe. The frames which are substantial but quite light are of white enameled wood, and the boxes are of extra heavy pasteboard covered with cretonne to match the draperies of the room. The boxes fit into the frames just as the drawers fit into a bureau and they are pulled out by means of tabs made of the cretonne and fastened to the bottom of the boxes, one at either side. A few of the smaller and more elaborate cabinets covered with cretonne

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An octagonal shoe-box with upholstered lid is a new departure

These seats with cretonne-covered boxes on shelves below come in several sizes

A work-table of enameled wood with a cretonne bag set in the open top
The Essentials of the Modern Kitchen

by JAMES EARLE MILLER

Illustrations by the Author

"A Fat Kitchen Makes a Lean Will."—

THERE is a growing and altogether proper tendency to treat the kitchen as an integral part of the house, which was almost entirely absent in English and American houses of early times; in fact, until within the last twenty-five years very little thought was attached to it. A century ago it was regarded advisable to have the kitchen occupy a separate building somewhat removed from the main building or located at a great distance from the dining or living-rooms, oftentimes the whole length of the house. The principal reason for this was the primitive methods used in cooking and preparing foods which were very objectionable at close range. Odors, noises and unsanitary appliances made the kitchen a place to be abhorred and to be kept as far away as possible. The present-day intelligent methods of dealing with the kitchen, particularly in America, have effected a complete transformation in this old idea. Our modern successful architect of the home attaches great importance to the planning of the kitchen, with its adjoining pantries, closets, storage rooms, etc.; and rightfully he should, as it goes more towards making for the convenience, help and comfort of the up-to-date household than possibly any other feature of the home.

The modern English kitchen with its relation to the dining-room is interesting for comparison with those here in America, chiefly because the early English settlers constitute the original source from which we obtain our start in house-building. The English kitchen's adjuncts practically comprise separate departments, such as the scullery, larder, wood, ashes, knives and boots, fuel, etc. This condition naturally requires the employment of considerable help even in the smaller homes. On the other hand, the compactness so noticeable in American homes—requiring perhaps one-half the space, thus reducing the necessary help to a minimum and obtaining the maximum of convenience—has brought our kitchen to a standard, nearly, if not entirely, approaching the ideal. The American architect has based his idea for this compactness upon the same reasoning as is exercised in fitting up a convenient workshop, for truly a kitchen is the workshop of the house. Again, the peculiar custom of medieval times in placing the kitchen a considerable distance from the dining-room still survives in the English homes, while in American homes a marked difference has long prevailed. The kitchen here is usually placed as near as possible to

The refrigerator is built-in, filled from outside. A sliding door to pantry is a space saver; cross draught, with four windows

A compact and orderly arrangement securing two doors between the kitchen and living quarters at both points of contact

For a small house, without pantry, only one stairway is needed

The kitchen end of a double house, where light and air can come from but two sides. The rear hall is lighted by a glazed door

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the dining-room, only separated, if at all, by a china-closet, pantry, or butler’s room.

Convenience, cleanliness and ventilation are three essentials that must be paramount in arranging the up-to-date kitchen and its accessories.

While there may be differences as to minor details, the principal features to be obtained in establishing a modern kitchen may be found in the various suggestions herein contained:

1st. The Kitchen should be roomy but not excessively large. This applies to any size of house, as too large a kitchen is maintained at the expense of convenience and labor. An ideal size for a kitchen in a house measuring 25 x 50 (containing living-room, reception room, dining-room and pantry on first floor) would be 12 x 15 feet.

2nd. The general construction of the interior is of the utmost importance. The floor may be of hard Georgia pine, oiled, or covered with linoleum or oilcloth. As a covering, linoleum of a good inlaid pattern, while more expensive than oilcloth, proves the best and most economical in length of service. In a house where comfort is demanded regardless of cost, an interlocking rubber tiling is suggested. This flooring absolutely avoids noises and slipping and is comfortable to the feet, as well as being of an exceptional durability. Other floors of a well-merited character are unglazed tile, brick, or one of the many patented compositions consisting chiefly of cement, which is also fireproof.

The wainscoting, if adopted for the kitchen, can be of tile, enameled brick, or matched and V-jointed boards, varnished or painted; but in any event should be connected with the floor in a manner to avoid cracks for collecting dust or dirt. This is accomplished (when a wooden wainscot is used) by means of a plain rounded molding which is set in the rightangle formed by the junction of the floor with the wainscot. While seldom seen, because of the expense, a kitchen completely tiled or bricked on walls, floor and ceiling is indeed a thing of beauty and necessarily an ideally sanitary room.

The doors, window frames, dressers and other necessary woodwork should be plain, made of medium wood and painted some light color or enameled white; or finished in the natural state with a transparent varnish.

The walls and ceiling, if not tiled or bricked, should be finished with a hard smooth plaster and painted three or four coats of some light color — light yellow, green, or blue making a very agreeable color to the eye. This manner of treatment permits the walls to be washed and kept free from dust and dirt, which latter is a disagreeable feature in the use of wall papers.

3rd. The proper installation of the various furnishings of the kitchen is worthy of much thought and consideration. Of all these, nothing is of more vital importance nor appeals more strongly to the household than the range. The size of the range is largely governed by the size of the house or the number of persons it is intended to serve. However, it is advisable to have a range not less than three feet square for a seven or eight-room house. It should be of a thoroughly modern style, with a hood over it, either built in or of sheet iron, an excellent provision for drawing away the steam and fumes of cooking. And, by all means, the range should be placed so that direct daylight falls upon it. Most present-day houses also have either gas or electric ranges installed in them and these should be near the coal range so as to confine all cooking to one part of the kitchen; and further, especially in winter when large gatherings are entertained, they furnish a combined service. Some large establishments, in addition to the range, are especially equipped with “warmers.”

The sink, being so closely allied in its usefulness to the range, should be placed near the latter and under, between or near windows, but never where the person using it would have his back to the light. It may be of

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Mr. Bloodgood's house is so situated that no side of it is hidden. The service yard is at the far end, screened by a lattice.

The house has the typical central hall, extending through the house. Upstairs, all bedrooms but one immediately adjoin baths.

Like its New England prototypes, the service end of the house is worked out as a low wing.

The entrance is on the north side, the particularly graceful porch being flanked with large rhododendrons.

THE HOME OF MR. W. D. BLOODGOOD, HEWLETT, L. I.—J. Acker Hays, architect
The owner's bedroom—a room 17 x 23 feet in size, with white woodwork relieved by cool chintzes.

The wall paper in the living-room is a dull yellow in a tiny lozenge pattern, much brighter than in the picture.

The hall from the veranda end, showing the faithful detail of steps and balusters.

In the dining-room a dull gray foliage paper makes a splendid background for the old mahogany.

The hall from the front door. The arch is particularly graceful in its lines and delicate detail.

The sun room opens from the living room and has its own fireplace, flanking which are two ivy vines growing in boxes.

**THE HOME OF MR. W. D. BLOODGOOD, HEWLETT, L. I.—J. Acker Hays, architect**
Curtains Made of Japanese Toweling

Very attractive curtains for a bungalow or country house may be made out of Japanese toweling.

Japanese toweling, unlike that we use, is made of cotton, and is only twelve inches wide, of more artistic value than economic use. However, it is with the artistic value we are dealing, and the Japanese have not failed to make these homely articles of everyday use, things of beauty. Almost all of the Japanese toweling comes in blue, with the design left white, or a white background with a design in blue of one or more shades. Morning-glories, leaves of trailing design, chrysanthemums, pine trees, bamboo, waves, and birds and flowers of many varieties, are the designs usually employed on these narrow strips of goods.

Where a full curtain is required, from two to four widths can be joined, either by “whipping” the widths together, or by joining them with a little braid of unobtrusive design.

The towels seem to have been printed in double lengths of about a yard each, the top of each design coming together where the double length is unfolded. For this reason where a bird is the motive used in the design, each towel length will have to be cut and reversed, joining them together with a neat seam or with braid, otherwise every other heron or crow, as the case may be, would be standing on his head.

Where the design is a trailing one of flowers or vines, this difficulty does not arise, for the up-and-down of the design will not make any difference.

If merely a valance and over curtains of the toweling are to be used, one width of the goods at either side of the window will suffice. If the design permits of it, one running width may be used for the valance. As a rule, however, each repeat of the design will have to be cut and the lengths joined, a hem being made at the top and bottom of the valance.

These very effective curtains are particularly appropriate for a dining-room or bedroom. As the color is almost invariable blue, they have to be used where the color scheme of the room is blue.

I have one very charming pair of yellow curtains made from Japanese toweling, but it is most unusual to find any but the blue goods. The design of these yellow curtains was made in a most unusual way, and it is worth describing, as it show the great ingenuity of the Japanese.

At regular intervals on the twelve-inch cotton strip a little stone was tied, bound tightly around with cord. The whole length of cloth was then put to soak in a brook in which there was a deposit of iron. The material was left for some time, and when taken out and dried was a beautiful yellow tone. The cords were then untied and the stones taken out. The very tight wrapping of the cord prevented the water from permeating under the string and an irregular wheel-shaped design of white on the yellow background was the result. Between these wheel-like designs were then pressed fresh maple leaves and pine needles, which were left until they had stained their shape in brown on the yellow background. An ingenious method of designing, I am sure you will say! The little Japanese from whom I bought this toweling told me it was made in a northern province of Japan.

Where curtains of Japanese toweling are used, the same material may be used for the other draperies and furnishings of the room. Bedroom, bureau and dressing-table covers may be made, or a pin-cushion and pillows for the couch, and if it does not introduce too much of the same kind of design a bedspread and shams may be made of the same toweling by joining several widths together in an effective design. Be sure before starting your furnishing with this toweling to know just how much you will need, and have it in the house. Otherwise you will run short and will be unable to procure more toweling of the same design. It comes in pieces of various lengths, and costs from fifteen to twenty-five cents a yard.

Where Japanese toweling is used for the hangings and furnishings of a bedroom, I would suggest the furniture be white or stained cottage furniture of simple design. Some willow furniture may be introduced. A Japanese matting, preferably a plain color, will be pretty on the floor. An imitation of grass-cloth paper of tan, blue or gray, depending upon the color of the furniture and matting, will be appropriate as a background for the simple water colors or inexpensive prints that should be used in this simply furnished bedroom. Select a plain paper, as the design in the towelling will be ample ornamentation, and other design introduced in the paper or floor covering will give an overcrowded and confusing effect to the room.
To Prolong the Life of Leather

Leather furnishings from which the "life" has departed—in other words from which the gloss and firm texture has disappeared—will require special care to prolong their usefulness. The broad comfortable leather couches, that have become more attractive as they have aged, to the householder who considers comfort only, may become very objectionable to the particular housewife who deplores their growing dilapidation. A little understanding in the way of care may give them a new lease of life without interfering with their comfort-dispensing qualities. The couches and the big roomy leather chairs that are in constant use, need not be allowed to grow shabby. Their trimmings may have a persistent way of separating themselves from wood, but the practical housewife will find that they may be securely fastened by means of a paste made of melted India rubber mixed with shellac varnish.

The leather can be kept from drying out and cracking, can be made to look almost like new, and can have its durability greatly increased, by being washed occasionally with warm milk. A soft cloth wrung from a little warm milk—only a small portion will be required—should be rubbed thoroughly over every part of the couch or chair, covered with leather; and also over its trimmings. Then rub briskly with a dry cloth. This treatment will keep all leather furnishings pliable and durable.

Practical Bedroom Suggestions

Fabrics for summer bedroom furnishings and trimmings need not necessarily be cretonne or the popular colored cambrics. Some of the newer ideas display attractive and inexpensive jute tapestries and durable fabrics of striped cotton. These are not only used for window hangings and for bedspreads, and furniture coverings, as the cretonnes are used, but they are also mounted as screens, and for covering foot-stools and shirt-waist boxes.

A foot-stool in the bedroom is a convenience seldom found even in the well-equipped summer cottage. It is not only convenient as a foot rest, when taking one's ease on the Sleepy Hollow bedroom chair, but it soon becomes a necessity when tested for every day use, in putting on and taking off one's shoes. Then it is also decidedly convenient for moving about the room, and standing upon it for reaching high places in the daily dusting, for adjusting window shades and hangings, etc., etc. The best form is the little bench-shaped footstool about twelve inches high and twenty-four long. With the top board brought out flush with the end supports, and a narrow wooden strip of two-inch width, extending along the edge on both sides. The stool may be daintily and durably ornamented with the jute tapestry stretched over the top, and drawn down to cover the wooden strips, with a very narrow moulding to finish it at the edge.

A home-made shirt-waist box—prettier than the average canvas or wicker-covered ones bought at the novelty stores—may be made of a narrow dry-goods box of convenient dimensions. Have the lid securely hinged, and after placing castors at the four corners, cover the woodwork with the jute tapestry to match the foot-stool covering every portion of the wood on top, ends, and sides, and finishing with the little strip of moulding on all the edges. The first essential in furnishing the little cottage bedrooms is to choose the furniture in proportion to the size and style of the room; to have only the necessary pieces for practical convenience, and to have the entire furnishing pretty and harmonious.

A Banister Polish

A dull, grimy-looking banister railing, and nicks and scars along the lower sections of the banisters, will quickly give the appearance of neglect in caring for the woodwork of the house. A careless maid will soon get the banisters in an unsightly condition in the weekly sweeping and dusting of the stair, unless the practical housewife instructs her as to easy methods of keeping them attractive. After each sweeping it takes no longer than the usual dusting to wipe off the railing with a soft cloth wrung from hot suds; and at least once a month, both railing and banisters should be wiped with a flannel dipped in a polish made of two parts linseed oil and one part turpentine.
July

JULY, as far as the garden is concerned, is supposed to be one of the least important months. In many ways it is a crucial one, not that you can do much planting or sowing, but it is the turning point; either you grow lax in the uninteresting fight against heat and drought and dust and insects, and the grounds and flower-beds and garden patch begin to get weedy and dry up, or else you strive your hardest, with both hose and hoe, to keep moisture enough in the soil to keep things growing; you fight off the insects repeatedly until they finally give up in despair; and you see to it that weeds are pulled or cut out while they are still small and die quickly in the hot sun.

July is the season's turning point. If you follow the first course mentioned above, the chances are ninety-nine to one that it is the beginning of the end of your garden's beauty and usefulness for the present year. By the middle of August things will be abandoned when there should be at least six weeks more good pleasure and profit in store for you. Keep the garden fight up through July, and have as sightly and useful flower-beds and vegetable rows in September as you had in June.

Hardy Ornamental Grasses

FOR our northern climate, the free use of the hardy grasses is the nearest approach we can have to the tropical beauty the palms give the warmer places. They can be used with good effect in so many ways that they should appeal to those interested in making the home grounds beautiful and attractive. There is such a variety of them that they adapt themselves to any situation, either the small home grounds or the more pretentious show gardens.

We use them in a mixed border 100 feet long and varying in width from 7 to 10 feet; at irregular intervals we have eight or ten clumps of Eualia Gracillima (sometimes called Japan Rush) and Japanica Zebrina. I think I like the former best; it has narrow, bright green foliage, with a silver mid-rib and an exceedingly graceful, drooping habit. It grows about five feet in height. Zebrina is six feet and is more striking and showy; the leaves are long and broader than Gracillima, and are banded across with half-inch bands of yellow. The coloring of Zebrina makes a pleasing contrast when combined with the prevailing green of other shrubs.

In the background of the border we use the various Spireas, Lilies, Altheas, Golden-Leaved Elder, Lilac, Syringas and the Hardy Hibiscus. Grouped in front of the shrubs and grasses are Phlox, Delphiniums, Columbine and Peonies. Each of these, in its season of bloom, furnishes the bit of color that is never lacking, from the appearance of the Snow Drop and Crocus till killing frosts in the fall. The colors relieve and bring out the delicate green of the grasses which in turn add the one touch of near tropical effect.

The grasses are perfectly hardy and, as they are late in starting, we use, close around the roots, masses of white and yellow Tulips, both early and late sorts, that the pale blue Delphinium and the double white Columbine, with the Phlox season following closely in their wake. As the season goes on, the delicate green of the grasses fills all the bare places that in early spring were white and yellow with Tulips and Narcissus.

After the first of June, we edge the border with Cobeus, Salleroy, Centaurea or Alteranthus, alternating so that it is different each year. This edging is all the annual planting that is done in the border, except an occasional Salvia Speldens for late color, the rest remaining from year to year.

From the time the grasses are well up, they grow better and better till very late in the fall the plumes appear, and in some years remain in fairly good condition all winter. We leave the tops on the grasses until time to uncover the beds and borders in the spring, as the old tops protect the roots and make a break in the monotony of bare shrubs that otherwise fill the borders in winter.

There are a number of annual grasses (Pennisetum) that are very ornamental for edging Canna beds or shrubbery groups; they do not grow so tall as the hardy sorts and feather out earlier; they are quite effective in ornamental bedding with scarlet geraniums; their light and delicate green foliage very pleasingly veils the strong color and makes a good combination. Some of the many good varieties should find a place in every garden; the taller ones, 12 to 20 feet in height, make ideal central figures for large groups in spacious grounds.

The varieties should be carefully selected for the positions they are to occupy; our place is small, and six feet is as high as we can well use in our border. If the hardy grasses are once tried, I feel sure they will find a permanent home and be better liked as the years go on and they become fully established.

G. ReS.

A Two Year Garden

Perhaps it may help those who despair of making a satisfactory garden to know that I have succeeded in a small space and with few natural advantages. I am not strong and the desire to
get the advantage of outdoor life, coupled with the inspiration of some beautiful pictures in House & Garden, determined me to see what I could do. The lot we own is 75 x 150 ft., facing east, with the house set well toward the front, thus leaving a modest back yard of 55 x 40 ft. This was my field for experiment and now, after two years, it contains about a hundred and twenty-five varieties of hardy shrubs and plants all in healthy and vigorous growth. Besides, it has been a source of constant pleasure, and a means of regaining my health. I never allow a man to do any work in it except the heavy spading and fertilizing in the fall. The rest I have done myself.

For the contents of this little garden I mention first the stately hollyhocks. I have them around the edges, south, west and north. When a few scattered ones come up over the beds I leave one here and there, for it seems to me that a stray one is always pretty and artistic, even though out of line. One portion of the garden I call "my park." It is full of hardy shrubs such as lilacs, hydrangeas, elders, sumac, altheas, snowball, japonica, hibiscus and spirea. In the beds there are many of the well known hardy plants, but I always sow some annuals or find some have come up from the previous season where they have sowed themselves. Thus blossoms are there all the season—from the time the bulbs are in flower until the last chrysanthemum is captured by the frost.

Hardy phlox is my favorite with its showy blossoms and it occupies an important position for the garden stars. The beds I edge with sweet alyssum, and take pleasure in making it bloom steadily until the fall by careful trimming. Petunias, too, are constant bloomers in the borders. For the rest, the zinnias, marigolds, verbenas and larkspurs add the charm of the old-fashioned garden to part of our yard.

One thing that gives success in the small garden is constant cutting of the flowers. It makes the bloom twice as vigorous and much more brilliant.

Even with all this there is room for a little vegetable gardening which is quite sufficient to supply us fresh vegetables for the whole season. On the lawn in front there is no planting, but instead vines are trained on the porch and ferns and palms in porch boxes help to decorate.

D. P. S.

The Garden Water Supply

The matter of an adequate water supply seems to be more and more important every year. Either the seasons are actually changing, or we are at the dry point in the weather orbit. But even in seasons of ordinary rainfall, there are many times when the lawn, flower-beds and garden would be greatly benefited by a more copious drenching than can possibly be given with the lawn sprinkler or watering can. In the East, the matter of irrigating is barely beginning to be understood and its importance to be realized.

Market-gardeners and others who work on a commercial scale have in isolated cases installed irrigating systems, and in every instance that has come under my notice, with great success. In a small way the home gardener will have to follow suit. We will not in most instances, of course, have enough watering to do to justify his buying a steam-pump or a gasoline engine and an elaborate sprinkling system; but he will find room for ingenuity in analyzing and solving his particular problem, and will earn rich rewards by taking the pains to do it. For the benefit of those who have not before thought of the importance of this matter, I make just a few suggestions to start them thinking, and enable them to get at least a starting point in devising a home irrigating system.

There are four factors which go to the making of such a system,—the water supply, the power with which to force it where it is needed, the means of conducting it and the means of distributing it. In places supplied with city water, there is usually body and force enough to supply it to the grounds directly. It will usually be found better, however, to apply it through an inch or inch-and-a-half hose, than to use the common three-quarter inch size. Let the water run out, if possible, as a stream forced out under pressure is almost sure to work some damage among

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An Oven Convenience

A N accident was the mother of invention of this instance. The oven door of the kitchen range, was originally fitted with one of the big circular thermometers, now found in the majority of modern ranges. The glass enclosing this thermometer was accidentally broken, and on examining it for the purpose of replacing the glass, it was found that the entire thermometer case could be readily unscrewed from the inside of the oven door. On removing the big circle, with the idea of taking it to a repair man, to be fitted with glass, it was noticed that the open circle in the center of the door gave a very good view of the entire oven.

Immediately the thought occurred that it would be an excellent plan to have the opening simply enclosed with glass instead of replacing the thermometer. It would then be possible to watch the progress of food baking in the oven, without allowing the cold air to enter. This convenience would also avoid the necessity of jarring, in closing the oven door, after examination of the baking—the jarring which so often proves fatal to delicate cakes, soufflés and other dishes.

The home-made invention has proven a great convenience, and has made baking day a delight. A tinsmith made the little case for the glass, so that it would fit snugly into the opening originally occupied by the thermometer; it was then screwed into the door, and the thermometer was still found useful, as it was arranged on the side of the oven interior, near the door, where it is possible to note the temperature of the oven while watching the process of the baking.

Since arranging this handy contrivance, it has been learned that it is not a strictly new idea, as some of the modern ranges of today have been fitted with glass-paneled oven doors. But the home-made contrivance can be made to meet the requirements of the great majority of housewives. Not all can afford to install the new range for the sake of the glass doors, but any one can set in a glass panel, or a glass circle, who possesses the very common convenience of the thermometer-fitted oven door.

P. W. H.

A Roofing Suggestion

I T is well known how much heat a metal roof radiates in the summertime, and this heat often proves very annoying to the occupants of the dwelling, especially those who have bedrooms whose windows open on the roof. It is of course necessary to have roofs of metal in many instances, and the following simple and effective method was devised to overcome in a large measure the heat radiated. A layer of sheathing paper was placed upon the roof and covered with a layer of tar paper. Then the metal roof was laid. The results exceeded all expectations; and the cost was very little for the great benefit derived. C. F.

"Knock-Down" Picture Frames

T HE use of a new patented moulding, cut in a variety of practicable lengths and correctly mitered so that any two pieces of the same width will fit together, will enable anyone to frame pictures at home without the aid of tools other than a small hammer. The photograph reproduced here represents a picture framed under a glass 6½ x 8½ in. Below are shown the reverse sides of the sections of moulding, and the manner in which they are fastened together by staples. For this frame were used two lengths of ¾ in. moulding, size 6½ in., and two lengths, size 8½ in. The entire cost of the frame, including the glass, was forty-five cents. The lengths vary from 3¼ to 30 inches. E. F. A.

The materials and the finished picture frame.

Four staples like that shown, hold the moulding strips firmly together

To Hold China in Place

I T is sometimes a problem to know how to make plates stand upon a slippery surface. Plate rails and some other chafettes are provided with a little groove for holding the china in place—be it plates, or bowls and cups with the decorations inside, which you wish to show.

A clever idea is to make a small semicircle with sealing-wax wherever you wish a piece of china to stand. This will prevent the plate or bowl from rolling from side to side, as well as making it stand in place.

If the piece of furniture on which you wish to arrange some china be dark or light wood you can match its color with the sealing-wax so that the little support will not be perceptible; white for white finished woodwork, dark brown or green for weathered oak, brown for golden or fumed oak, and so on.

When you wish to change the position of the china it will be easy to scratch the wax off with a pen-knife. The wax will be so brittle that it can be removed without the least damage to the wood.

H. R. M.

A Home-made Polisher

A MONG the recent novelties in household inventions and time-savers, there is a polishing cloth softer and thinner than chamois, guaranteed to be very durable and especially recommended for polishing silverware. It is claimed that the fine silver plated ware and the solid silver can be kept bright and shining by its daily use, without scratching, and without the periodical polishing which gradually injures the plated knives, forks and spoons when used in the form of powder-polishers.

Silver polishings cloths are supposed to be a new invention; but in reality old-time housekeepers, in the long ago, thoroughly understood their usefulness. They prepared their own polishing cloths, as testified by some of the old Colonial recipes for caring for the numerous silver articles, in Southern homes famed for their hospitality.

The old recipe for making these time-savers in the form of silver polishing cloths was to boil strong soft rags in a mixture of new milk and hartshorn powder, in the proportion of one ounce of powder to a pint of milk. They were boiled for five minutes, and as soon as they were taken out of the hot mixture they were passed quicky through cold water, so that they could be wrung out immediately. The were squeezed only partially dry and then dried before the fire.

It will be possible for any housewife to prepare her own polishing cloths by following this good old rule; and the writer knows from experience that they are a great convenience for many uses in the kitchen and dining room. After washing and drying the silverware, it is briskly rubbed with one of these polishers; and there's never a spot or blemish that demands a special day set aside for polishing with powder. The bright polish is beautiful and lasting, and it is specially desirable for the large silver pieces. The tea pots, the silver water-pitchers, the old-fashioned urns and fruit dishes, with their elaborate ornamentation, and many treasured heirlooms, may be kept bright and shining with little labor; and the cloths are easily renewed.

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**Sun-dials and How to Make Them**

(Continued from page 17)

estate of the late Spencer Trask is engraved to better purpose with two variations, by Henry Van Dyke, of the Latin motto, “Lux et umbra vicissim, sed semper umbra”—“Light and shadow take turns, but love is always permanent.”

One is:

Hours fly,
Flowers die,
New Days,
New Ways—
Pass by:
Love stays.

The other:

Time is
Too slow for those who wait,
Too swift for those who fear,
Too long for those who grieve,
Too short for those who rejoice,
But for those who love,
Time is eternity.

The much-used *Non numero horas nisi serenas*—“I count only sunny hours”—heart-rending, for it echoes a sanguine sentiment that is peculiarly suitable to the sun-dial. Another old-fashioned line that lays its stress on the serenity of time’s march rather than the speed of its flight is the simple “So flies Time away.” There are many apt sayings to fit the dial, and the individual can find something pleasing in the delightful book, “Sun-dials and Roses of Yesterday,” by Alice Morse Earle.

As the office of the dial is such a dignified and lasting one, it seems out of place to see it upon a slender wooden pillar which quivers or moves at the least footstep. It wants something solid to be practical. A brick or stone foundation extending below the frost line should be made to fit the base and placed upon this a simple column. The large millstone is sometimes well used as a foundation. Ornate and much carved stone seems to detract from the dial itself, and it has enough beauty to look well without decorations, often the expression of artificiality. Sometimes a milestone or boundary post which has outlived other utility can be found to make a very suitable pedestal. The odds and ends of a mason’s shop or monument maker’s yield stone newel-posts or balusters sometimes of excellent design for this purpose, and if the hunt is fruitless, or the cost of having a pillar made, too high, concrete again makes your dial possible. If you mould it yourself, there is the further pleasure of handcraft to be gained. In many cases, however, the garden supply shops or terra cotta works have much that is reasonable and attractive. Sometimes a tree stump leveled off, or a large boulder, will be just the thing for the garden sun-dial and, if this is right at hand saves the trouble of looking farther. Whatever the style or material, however, simplicity and utility should be the first consideration.

With the design and construction com-
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completed, there are some things to be attended to in the setting up of the dial. The stability has already been spoken of, and the next thing to do is to see that the dial is absolutely level or parallel with the plane of the earth. A good spirit-level will inform you of the slightest deviation from the true line and the dial should not become permanent until this is accomplished. The gnomon should then be exactly at right angles to the dial face. When set in place, the twelve o’clock line should run in a vertical north and south plane, with the point of the gnomon farthest from the dial-face, pointing true north, not at the magnetic north. A compass will serve to set the dial if the magnetic declination for the locality is known.

If these conditions are complied with, the dial becomes a fairly accurate time keeper, but it is not absolute, for on only four days of the year, April 15th, June 15th, September 2nd and December 24th, the sun time agrees with the clock time or mean time. The time equation, the mean between clock and sun time, found in the nautical almanac, can be used to correct the dial, and a scale of minutes to add and subtract made and attached to some part of the dial pedestal. As a time keeper for the garden, it serves its purpose well enough, for the greatest difference it is capable of is sixteen minutes, and when one considers that it goes for life without winding or setting, it may be considered just as true as many clocks and pardoned for the variation.

A word on the location of the dial may be pertinent here. We often think of it as situated in the formal garden, but its use is by no means limited to that, although it fits so well there. Often the junction of two paths seems to fit it well. Whether in formal surroundings or in the ordinary garden, a background of dark foliage, rhododendrons or cedars, makes a beautiful situation for it and reflects its beauty and stateliness. When placed in the lawn, where it often appears to advantage, low-growing plants sometimes look well at its base and seem to unite it and the surroundings. If a stone or tree stump is used for support, planting is necessary and pleasing. No vines or shrubs should be used to climb over the dial or render its approach and reading difficult. There always ought to be some favorite nook in the garden with a bench for rest or reading and an air of seclusion about it. The best loved flowers should be here, and here the sun-dial should preside. The thoughts that are associated with it, the sage advice of its motto and the sentiments it connotes should make such a retreat ideal when one wishes to withdraw into the spirit of the garden.

The dial has become part of the garden and the vines have grown about it and it seems to be as old as the time it marks, then will it be truly appreciated. Then the criticism that the use of sundials is a return to obsolete and supplanted objects, cannot hold. Besides, where is the clock that stands wind and weather
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How the Japanese Arrange Flowers (Continued from page 19)

opening the shogi, or rice paper translu-ency, he looked into the garden to note that the morning-glories were all removed. Disappointed, he closed the shogi doors again. Rikiu, who had watched his action with a gentle smile, pointed to a tiny vase in the corner of an alcove. It contained a single, rarely beautiful morn-ing-glory. Said the master of the tea ceremony: "This flower is all that is needed for external adornment. Now concentrate your attention upon the tea."

The feeling for simplicity and restraint that inhibits vulgar display and garishness in all the domestic arts of Japan is nowhere better illustrated than in this anecdote of Rikiu, the great promulgator of ikebana. Schools of varying practices and methods have sprung up since his day, but all are true to the essential principles that beauty should not be submerged in profusion.

There are other principles in which all the sects of ikebana agree. They unite in teaching their followers to avoid what are called "the seven diseases of flower arrangement," prohibitions which forbid the crossing of stems, the protrusion of blooms in front of calyces, and other technicalities of arrangement.

On the constructive side every student of ikebana learns to employ variations of the ten-chi-jin, a triangular scheme with symbolic meanings implicit in the arrangement. In seeking to make flowers or foliage conform to this plan every Japanese understands that the apex of the triangle (ten) symbolizes heaven, the protruding point (jin), humanity, and the point at which the vertical base of the triangle is bisected (chi), the earth. Contours should, if possible, be so disposed that earth will seem to look toward man and heaven toward heaven. The ten-chi-jin motive is repeated in almost countless ways wherever Japanese folk come together, and sometimes when some fair or manly follower of a cult of flower arrangement has been particularly successful in a novel application of the ancient convention you may see a whole group of people bow down reverently before the creation.

The lesson for Americans in this artistic and scientific expression of the Japanese passion for floral decoration is, of course, one of suggestion rather than adaptation. The importance attributed in Japan to an art that we do not recognize
as even a minor art can hardly be comprehended here. Yet not on that account is it less vitally significant among the people who practice it. The causes of the glorious flowering forth of all the arts in Japan during many centuries, and with surprisingly few periods of decadence, are to be sought in the truth that basically all life is art and that this keenly sensitive people endeavor to make the simplest, most ordinary arts of living an expression of fine art.

Possibilities in Half-timbered Houses

(Continued from page 25)

have been monotonous and weak looking. As it is, it seems to be well locked together. The horizontal beams on a line with the window sills, carried across the face of the building, and the horizontal beam a little below the overhang in the central gable, make a number of small square, or nearly square, panels forming an agreeable checkered motive.

Diagonal timbers crossing and halved into vertical posts are both pleasing and useful. Sometimes diagonals running in opposite directions cross saltire-wise and make an elongated St. Andrew's cross. This device, of course, adds strength and materially helps the decoration. In several bays of the Port Sunlight houses, parallel diagonal timbers, convergent towards the central vertical and horizontal beams, have been happily used and give the whole bay a lozenge-shaped look. Alternate bays of diagonals interchange with post and panel work extending across the face of the building prevent monotony and destroy all danger of hardness of lines. A still further method of securing variety is by the use of a number of smaller panels under windows. In the Essex Fells house the spaces under a number of the windows have been filled by small panels in which two divergent diagonals and a short upright beam spring-fan-wise from a common base. In the gables of the Stanley house in Chester, on each side of the vertical post running from the sill of the overhang to the peak of the gables, are parallel flamboyant curved beams springing from the central post and from the sill. The effect is airy and wavy. Too many decorative motives in timber work should not be brought together in the same house or the whole appearance becomes macaronic.

Attention must be called to the pins and bolts that fasten the timbers together. It is ever the little things that make the big things, and we cannot be too careful in a nice adjustment of the smallest details if we would have the ensemble wholly successful. The treatment of the pins and bolts on the Port Sunlight houses well exemplifies the importance of heeding this small matter.

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A logical and legitimate field for ornamentation in the shape of carving is found in the beam ends, corbels and brackets. This ornamentation may be simple as in the beam ends forming the corbels to support the central bay and the brackets supporting the gable in the house at Abington, or it may be very elaborate as in the Stanley house in Chester where corbels, brackets, console beams and pilasters are all richly carved as they also are in the shop buildings shown in St. Werburg's Street. Good taste alone can set limits to the amount of carving to be indulged in. Certainly a reasonable amount of it is desirable.

The "pugging" to stop up the spaces between the timbers offers a chance to display originality in its use both as regards material and color. In the cottage at Lingfield, Surrey, the panels are "pugged" with brick laid in herring-bone pattern. Other patterns in brick may be effectively used also. Then there is almost no end to the variety to be had from different kinds of plaster and stucco and even tiles may be requisitioned. In some instances the plaster has been roughly frescoed. Nearly as much opportunity for decorative invention is opened up by the pugging as by the timber treatment. One caution, however, must be heeded if you would avoid disastrous results. See that the pugging is most carefully placed and due precautions taken to prevent an embarrassing and unsightly shrinkage. To compass this end the plasterer must know his business thoroughly.

The Birds and Butterflies of a Suburban Garden

(Continued from page 31)

dreaming that it should end so disastrously for both. The Skipper is a saucy, pert little fellow with up-turned wings, dodging here and there in a tipsy, zigzag flight which makes it almost impossible to catch him. Like the Admiral he wears epauletts of orange and his somber brown uniform bears a little else in the way of ornament; but he is decorated with a silver medal, no doubt awarded to some far away ancestor for bravery and cherished and proudly displayed by every descendant. He does not intend that it shall escape your notice for he never fails to carry his wings upright to display it in the best manner. The wistaria and the locust furnish his food in the early stages of his existence.

One of the most interesting of all the butterflies, especially to our visitor and his friends, was the Grapta interrogationis, or the Question-sign Butterfly. A subtle comradeship seemed to be established between this little rover, who bore upon his under wings the silver question mark, and the lads who were struggling with the rules of grammar. He wore a full orange
and brown coat, under which his seal brown waistcoat appeared, and the cut of his garments suggested the curving blade of a sickle. The elm tree boughs are his swinging cradle, though he sometimes indulges in nettle or hop, as a bit of a relish. 

About midsummer the parsley had become the prey of some brilliant green caterpillars, crossed with bars of jet black and gold; gorgeous creatures and beautiful, if one could forget his natural antipathy to crawling things. However, as the parsley was rapidly disappearing under the voracious appetites of the invaders, they were disposed of as quickly as possible. Some, however, must have escaped, for we found one specimen of the Papilio asterias, or common Eastern swallow-tail, and were obliged to confess that he was much more attractive in his winged form than when gorging himself upon our parsley. All black with a double row of yellow spots edging both wings, and a touch of dull blue and orange near the swallow-tails, he was one of the most conspicuous of the flower visitors.

The Papilio turnus was our next captive, rightfully called the Lordly Turnus, or the Tiger Swallow-tail. His large size and his brilliant yellow color, with tiger-like markings of black, make him a commanding figure in the butterfly kingdom. He must have found his way to our garden from the park, where alders and willows, which are his food, fringe the edge of the lake.

One of the most difficult butterflies to classify was the little Batesi phyciodes, or Bates Crescent-spot. There are so many of these butterflies with nearly the same markings that we found it a difficult matter to determine where he belonged. We found only this one specimen in our garden, and concluded it must be a rare one, since the early stages were said to be unknown.

Of the tortoise-shell butterflies we found only one, the Vanessa minerve, with his brown shell-like coat and orange-red band. A little fellow, resembling somewhat the red Admiral, and living upon the same sharp food, the nettle.

With the late fall, when leaves were brown and squirrels and partridges were out, came the Hunter's butterfly, (Pyrameis huntera) not with gun and shot, but sailling upon softly tinted wings of mottled orange above, but underneath holding a surprise in the soft grays of leafless woods and bare branches, and the dull pinks of faded leaves—a brave little Hunter finding only here and there a flower-cup of nectar to quench his thirst, but facing the inevitable cold and frost of winter with dancing wings.

There were many other tiny winged creatures that were caught and studied, during that summer vacation; the dragon flies and cicadas and katydids and the moths that flew only at night. Only one, perhaps, is worthy of mention, the beautiful Ida Underwing, whose outer wings so closely resemble the bark of the tree,
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upon which it hides during the day; but whose under wings are of the richest salmon pink with two broad bands of black. If it is true, as the Japanese say, that "the gods see everywhere," we hope that this beautiful color is not unobserved, though hidden from the sight of the daylight stroller.

When our visitor's summer vacation finally drew to a close we found that our little pool had provided a full season of entertainment and instruction. We all enjoyed the visits of birds and butterflies with their brilliant colorings, and learned something of their delightful history. Truly our garden ornament was a satisfactory experiment.

Grow Your Own Fruit
(Continued from page 27)

be more comfortable. The blackcaps (and a few of the reds, like Cuthbert) throw out fruiting side branches, which should be cut back in spring one-half to two-thirds their length.

Of raspberry enemies, the most troublesome is the "orange rust." It attacks the blackberry also. No effective remedy has yet been found. Pull up and burn at once all affected plants. On newly set beds, our old friend the cutworm may prove destructive. Search for him in the dirt at the foot of the cut-off canes, and serve him wheat bran mash with Paris green (a teaspoonful in a quart of water with the bran mixed in). In some sections the raspberry borer—the lava of a small, flattish, red-necked beetle—does considerable damage. He bores in the canes in summer, causing "galls" on the briars, and finally killing them. Cut and burn.

The varieties of the raspberry are numerous, but the following include the best. Of the blackcaps, Palmer (very early), Gregg, McCormick, Munger, Cumberland, Columbian and Eureka (latest). Of the reds, King (early), Cuthbert, Turner, Reliance, Cardinal (new), and London (late). Yellow, Golden Queen.

THE BLACKBERRY

If there is any variation in the soil picked out for the berry patch, give the driest place to the blackberries, as lack of moisture effects raspberries more seriously. Blackberries do not need the soil quite so thoroughly enriched as do raspberries, and a surplus of plant-food, especially of nitrogen, may keep the vines from ripening up thoroughly in the fall, which is essential for good crops. If growing too rankly, they should be pinched back in late August. When tying the vines up to support them, do not cut back the main canes to four or five feet, and the laterals to not more than a foot and a half.

The enemies of the blackberry are not often serious; if the plants are well cared

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for. The most dangerous is the rust or blight, for which there is no cure but carefully pulling and burning the plants as fast as infested. Another is the blackberry-bush borer, whose presence is indicated by wilting, and a change in color in the canes which should at once be cut and burned. Another pest which has appeared but recently is the bramble flea-louse, which resembles the green aphid, except that it is a brisk jumper like the flea beetle of potato vines and turnips. The leaves of infested plants twist and curl up in summer, affording protection to the enemy, and do not drop off in the fall. Early on cold mornings, or in wet weather, when the insects are sluggish, cut out all shoots upon which any are to be found, collect them in a tight bottomed box, and burn.

As with other small fruits, so many varieties of the blackberry are being introduced that it is difficult to give a list of the best. Any selection from the following, however, will prove satisfactory for home use, as they are all tried and true.—Early King, Early Harvest, Wilson Junior, Kittatenny, Rathburn, Snyder and Eric.

The Dewberry is really a blackberry, that can be trained and requires the same culture. As the vines are naturally slender and trailing, in garden culture it must be supported. The canes may be staked or wired up, as with blackberries, or a wooden barrel-hoop, held by two stakes, makes a good support. The dewberry ripens ten days or more before the blackberry, and for that reason at least a few plants should be included in the berry patch. The varieties are few, Premo being the earliest and Lucretia the best known.

CURRENTS AND GOOSEBERRIES.
The two most important of the bush fruits, the currant and the gooseberry, are very similar in their requirements of soil and culture. A deep rich moist soil—approaching a clayey loam—is the best. There is no danger of overfeeding them, although where manure is used it should be well rotted up.

The long-suffering currant will stand probably more abuse than any plant in the home garden—and is frequently the most neglected. Although the currant is so hardy, no fruit will respond more quickly to good care. Plenty of room, plenty of air, plenty of mixture,—secured when necessary by a mulch of soil or other material in hot, dry weather—are all essential to getting the best from the currant bush.

Four or five feet each way is not too much space to give the currant. The soil should be manured liberally, and well worked before planting. Do not think that you can dig out a little hole just big enough for the roots, leaving the rest of the ground untturned and unenriched, and get good results. Keep the soil between the bushes well cultivated. As the hot, dry season comes on, mulch the soil if you would be certain of a full-sized, full fla-

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vored crop. Two bushes well cared for will yield more than a dozen half neglected ones. The currant suffers from excessive heat and dryness, but with proper attention a full crop should be secured every year.

As with the other small fruits, a most important factor in growing currants is proper pruning. The most convenient and satisfactory way is to keep it in bush form. Set the plants singly, at the distance previously mentioned, and so cut all thin growth, which is produced generously by the currant, as to retain a uniform bush shape, preferably somewhat open in the center. Another thing to keep in mind when pruning is that the fruit is borne on wood two or more years old, so all wood should be removed either when very small, or not until four or five years old. All that is allowed to grow out one two or years and then removed, is just that much of the plant's energy wasted. Therefore, in pruning currants, take out (1) superfluous young growth; (2) old, hard wood (as new wood will produce better fruit); (3) all weak, broken, dead or diseased shoots; (4) during late summer, keep the tips of the new growth pinched off, which will cause them to ripen up better, resulting in more fruit when they bear; (5) maintain a good bush form, go over the whole plant lightly in the fall, trimming the desired shape—but do not cut back more than one-third.

Under some special circumstances, as where space is limited and they must be grown close against a wall, it may be advisable to train to one or two a few main stems. This, however, increases the danger of loss from the currant borer. The black currant is entirely different from the red and white currants. It is used almost exclusively for culinary purposes, or preserving. The plants are much larger, and should be put five or six feet apart. Some of the fruit is borne on one-year-old wood, so the new shoots should not be cut back. The old wood also, bears as good fruit as does the new growth, so there is no need to cut it out until the plant is getting crowded. As the wood is much heavier and stronger than that of the other currants, it is advisable gradually to develop the black currants in the tree form.

The common green currant worm is the worst pest encountered in growing currants. Its appearance will be indicated by holes eaten in the lower leaves early in spring—generally before the plants bloom. Spray at once with Paris green in water (1 lb. to 50 gals.) or with arsenate of lead (2 lbs. to 50 gal. water). If a second lot appear after the fruit sets, dust with white hellebore. By the time the fruit ripens, it will probably have been washed off by the rains; if not, wipe from the fruit. For the currant borer, cut out and burn every infested shoot. Examine the bushes carefully late in the fall; those in which the borers are at work will usually have a wilted look, and be of a brownish color, readily distinguished.

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**THE GOOSEBERRY.**

The gooseberry required practically the same treatment as the currant received. It is even more important that the coolest, airiest location available be given to it, and the most moist soil. Even a partially shaded location will serve, but in this case extra care must be used in guarding against that often fatal enemy of the gooseberry—the mildew. Summer mulching, to retain moisture, is, of course, of special benefit.

In pruning the gooseberry, as with the black currant, it is best to cut out to a very few or even to a single stem. Keep the head open to allow the air to circulate freely and reach every twig and branch. The extent of pruning, besides being a precaution against the mildew, will also determine largely the size of the fruit; if berries of the largest size are wanted, prune out severely. All branches drooping to the ground, and all which cross or grow together, should be removed.

The enemies of the gooseberry are the currant worm, borer and mildew. The first two are treated as already described. The gooseberry mildew is a dirty, whitish fungous growth covering both fruit and leaves. It is especially destructive of the foreign varieties, the cultivation of which, until the advent of the potassium sulphide spray, had in many localities been practically abandoned. For this spray, use 1 oz. of potassium sulphide (liver of sulphur) to 2 gals. of water, and mix just before using. Spray three or four times a month, from the opening of the blossoms until the fruit is ripe.

The native gooseberries are the hardiest. Of these Downing and Houghton's Seedling are the best. Industry is an English variety which does well here. Golden Prolific, Champion and Columbus are other good foreign sorts—if care is taken to successfully fight off the mildew.

The gooseberry completes the list of the common small fruits. If your garden has heretofore been devoid of them, do not fail another season to try them all. They are all easily obtained, none of them cost more than a few cents apiece, and a very small number will keep the family table well supplied with healthy delicacies; and you can grow them better at home than you can buy them. While the work may at present be unfamiliar to you, do not be deterred by that. The various operations of setting out, pruning and spraying, will soon be as familiar to you as those in the vegetable have become. They are really much less complicated than the latter. There is no reason why every home garden should not have its few rows of small fruits, yielding their delicious harvests in abundance.

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A Copy Awaits Your Request.
Garden Suggestions

(Continued from page 45)

the growing plants. If the water has to be carried any distance from the faucets, it will be both cheaper and better to use iron pipe (the same size as the faucet) to carry it where it is needed, using only a short length of hose to distribute with. The pipe is simply laid along the surface of the ground or sunk a few inches under walks or roads. Second-hand three-quarter inch iron pipe can be bought for two or three cents per foot, and anyone can put it together with a couple of pipe wrenches. Good hose costs from fifteen to twenty cents a foot. The pipe should be connected to the faucet by a short piece of hose, which can be quickly uncoupled and the lengths screwed and stored under cover in winter.

Where the source of supply is a well or spring, the problem is not such a simple one. A good hand pump—if a good hand pumper is to be had with it—will throw a large enough stream for properly watering the average home garden or grounds, but it means double work and tedious work. Where the water may, whether by gravity or force, be given an elevation of several feet above the grounds, a tank of some sort will enable the storing of enough water for irrigation purposes on a small scale. A good wooden, stone or metal tank can be had for $25 to $40; but it is by no means necessary to go to this expense if one cannot afford it. Good tight pork or pickle barrels can be had for about thirty-five cents each, or empty liquor barrels for a dollar and a half. A number of such barrels—to 12 or 18 of a large amount of water—is necessary—can easily be connected together near the bottoms with three-quarter inch iron or lead pipe. If using the iron pipe, “latch nuts” will be necessary to get good tight joints; if lead, fit the connecting pieces in as tightly as possible and protruding about half an inch inside each barrel; then with a cone shaped piece of wood ram the ends out and hammer them down flat. In this way, for a few dollars and a few hours’ work, one may have a practical tank of a very considerable capacity. If a barn or shed is available, the barrels can easily be placed in a loft or on a scaffold out of the way and out of sight. Such a contrivance will pay for itself in one season, even on a small place.

Those not familiar with watering in the garden on a large scale are apt to make the mistake of applying a “shower” each day, while the proper way is to give a thorough soaking, in which case once a week, even in very dry weather, will work wonders. The water is best applied on a cloudy day, or in the afternoon, so that there will be as little loss as possible from surface evaporation. Where water can be supplied only in small quantities, do not sprinkle it over the surface; with a round pointed stick an inch or so in diameter, make a hole near each plant several inches deep. By pouring even a tea-
cup full of water into this, and covering the hole, which can be done rapidly with the foot, a crop will be helped along wonderfully.

In connection with the question of applying water artificially, the practice of surface cultivation to reserve moisture already in the soil should not be lost sight of. After irrigating, or after every shower, go over the flower-beds or garden with hoe or wheel-hoe and loosen the surface.

**ABOUT THE GROUNDS**

In keeping up the general appearance of the place nothing is more important than to keep the lawn from getting rusty and brown in spots. Such a watering system as suggested above will go a long way toward keeping the lawn even and green, but beside water it must have food. A top dressing of nitrate of soda about this time—if possible applied just before or just after a rain—will make a very marked difference in the appearance of things. Better than the nitrate alone, however, will be an application of nitrate bone (or acid phosphate if the odor of bone is objectionable) and muriate of potash, in the proportion three parts soda, two bone and one potash. Sown broadcast in the ratio of about three hundred pounds to the acre, this will induce a strong and continued growth. Another practice in keeping the lawn in first class condition that in this country is too little known, is that of rolling. English lawns are famous the world over, and their perfection, while due, of course, to a favorable climate, owes much nevertheless to frequent and heavy rolling.

**IN THE FLOWER GARDEN**

There is one error that most non-professional gardeners make with many of the annuals sown from seed. They sow them carefully, tend them faithfully, and guard them with the greatest diligence from any stray dog or other intruder which might perchance break one off. As a matter of fact, such a breaking, or rather cutting back, is just what they need. Otherwise, almost all the strength is thrown into the first main stalk which produces one large flower or cluster of flowers, and thereafter is practically worthless. If carefully cut back in time—when six inches to a foot high, according to variety—these plants would have thrown out strong flowering side shoots and remained in full vigor much longer than when growing up to a single main stem. This cutting back does for the plant above ground what transplanting does for the root system.

Top dressing or liquid manuring of the flower-beds to maintain good growth throughout the season is another good practice seldom resorted to. The average home gardener gives his flowers one big gorger in the spring—if indeed he does not neglect to give them anything—and never thinks of their requiring anything else to eat during the remainder of the year. For this mid-summer manuring, whether used

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A physician and his wife, in California, wrote to us that they would go abroad on one of the foreign tours, and that the task of getting the necessary subscriptions would be an easy one.

A minister of a large church in Illinois expects also to go on this tour, through the efforts of a committee which his wife has organized. Among the church members and various friends it is expected that 100 subscriptions can be readily secured, as each member of the committee can easily get a few subscriptions, which in the aggregate would make up the required number.

Other people are adopting our suggestion of mailing the page announcement of the tours which we send them, to their friends, requesting subscriptions, and in other cases we are sending sample copies of Travel and House & Garden direct to the friends of our subscriber, who was planning to follow these people up personally. It is expected that a large number of our subscribers will avail themselves of this unprecedented opportunity.

WILL YOU HELP OUR INVITATION

to go on a trip abroad, all expenses paid by us; or to Yellowstone Park, and by this way, to Nova Scotia, Prince Edward Island and the land of Evangeline; or to Bermuda, or down the St. Lawrence, visiting Montreal and Quebec; or up to the Maritime Provinces! All we ask you to do is to merely cooperate with us in a little summer plan we have devised to extend the subscription lists of Travel and House & Garden. The whole thing may mean but a few hours' work to you. If you have a large circle of friends you can easily accomplish it by mail. The following are the trips offered and the number of subscriptions you have only to send us to secure them.

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(Continued from page 60)
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Detail section through sleeping-porch, show-
ing sliding sash arrangement and drainage of
floor

(Continued on page 64)

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Kennedy Square

(Continued from page 62)

tempt to give the sleeping-porch an expression of its own in the general composition by a forced change in the roofing scheme, would only lead to difficulties in the way of lack of unity, particularly in small houses. Considering the sleeping-porch merely as an outdoor bedroom, living-room or playroom, which assumption is perfectly justifiable by reason of the uses to which it is put, then the porch will sufficiently reveal its presence by the character and treatment of its openings.

As the love of outdoor life grows throughout the country, so will the demand for the sleeping-porch increase—least so far as the city house, especially to that type tenanted by those who must endure the heat of summer save for a respite for a fortnight at most, and to whom outdoor sleeping, especially during the heated term, would prove of incalculable benefit. We mean that type of house built row after row in most of our cities and which has been greatly improved, at least as far as its livableness is concerned, during the past quarter century, by the addition of the front porch. Of course the handling of the sleeping-porch in these houses of limited dimensions will prove difficult enough, but that will make the problem all the more interesting to the architectural profession.

Achieving Character in Remodeling

(Continued from page 36)

production of a molding shop. The choice of some particular kind of pictorial form for each room is a happy solution of the difficulty. When pictures are set in rather than hung, they become really a part of the decoration of the room.

Japanese prints lend themselves to this use most delightfully. Photographs of foreign lands, places, of great pictures or statues or works of art we love and like to have where we can see them and live with them can be made a most suggestive decoration for a library, a "den" or small writing-room.

One of the greatest trials of the house furnisher is the straight stair, springing directly from the front door. The first thought of a convenient way to get rid of this is by turning the stair—thus pushing back the lower steps and getting rid of the long unbroken line. But many times this cannot be done on account of the expense involved in an alteration of so fundamental a kind. If the hall is of sufficient width to admit of it, the widening of the three or four lower steps, with the consequent curving of the baluster, will accomplish much and costs comparatively little.

Perhaps the most difficult task set the redecorator is the use of old furniture.

(Continued on page 66)
Many times we can redecorate but not re-furnish. Good, substantial pieces cannot be sacrificed, and the decorator faces the problem of making his rooms fit the furniture rather than the furniture the rooms. If this happens to be of good design and harmonious, even if not all of the same character, it will not be so difficult, but, again, it may be too ornate or of widely differing woods or designs.

The use of paint on old furniture has not yet been given a general trial, but it accomplishes surprising results. Much of the over-ornate furniture of twenty years ago has for its most objectionable feature the ornamentation of sawed-out figures glued on. This can quite easily be removed and it often leaves a plain piece of furniture with fairly good lines, which may be painted and left plain, or, with a quaint decoration of flowers and fruits stenciled on it, makes charming furniture for bedrooms, where light colors are desired. Or if the furniture be of walnut or oak or other handsome wood, removal of varnish and the application of a good wax finish makes a different looking article of the piece once so objectionable or inharmonious.

The daintiness of white furniture is acknowledged by everyone. And what is more appropriate for a young girl’s room than furniture of pink or blue or lavender? For a boy’s room, paint the furniture black and have plenty of brilliant colors about, and you will have a room full of character and yet pleasing to the eye. One boy’s room was made very striking by painting the furniture—in the orange red enamel paint, the color that one sees in Japanese prints, the whole being held down with gray woodwork, lighter gray walls and Russian crash hangings. In this room there was not much honorable furniture—an iron bed, a few chairs, an old study table and a high, small dressing-stair, the chiffonier being built in and consequently of the color of the woodwork. No two pieces in this room were of the same kind or style originally, yet the few cans of paint made them surprisingly homogeneous in effect. While the bright red would be too striking for most tastes, it exactly suited the room of this particular boy.

The only large space of the red was the table top, which was mostly covered with a crash runner and a gray blotter, and racks of books at either end.

With the growth of outdoor life the house becomes not less but more important. The more we live in the open, the more we demand of light and air in our houses. The remodeled house, like the newly built one, has fewer rooms and has them larger, spends more on large windows, well glazed and screened, and less on elaborate woodwork or ornamentation of any kind, and in the made-over house the process of elimination is more important and often more costly as well than the subsequent decoration,
The Essentials of the Modern Kitchen.

(Continued from page 39) galvanized iron, copper, soapstone or enameled porcelain, and provided with an ample draining-board; two being much preferred. If there is a special sink for vegetables required, it would be immediately adjoining the draining-board to insure compactness and convenience as well as economy in plumbing. The draining-board may be of hard wood or of wood covered with copper or zinc. The best are made of enameled ware similar to the sinks. Draining-boards of copper or zinc should be given only a slight slope to prevent the possibility of dishes slipping therefrom.

The refrigerator should be built in or placed against an outside wall in order that the ice can be put in easily from without through either a small opening or window. If it can be avoided, the refrigerator should not be placed immediately in the kitchen, but rather in the entry, pantry or enclosed porch.

The kitchen of the small house which sometimes has no communicating pantry should have built therein dressers of such proportions as will accommodate all the necessary dishes, pots, vessels, bins for flour, sugar, etc., cutlery, and other things essential for obtaining the best results under the circumstances. A dresser of commodious size is always a blessing. The top portion, of plain shelves, should be enclosed either with doors or sliding glass fronts; the lower portion, first lined with zinc and enclosed with solid wooden doors so constructed to fit nearly if not airtight. If an exclusive pot closet is desired, it should be handy to the range and at the same time be under cover for sanitary reasons.

Frequently in a small kitchen a counter or drop leaves against the wall are substituted for a table, but in most kitchens a good-sized substantial table, preferably in the center of the room, is found indispensable. The table should have a smooth top that can be easily kept clean. Although costly, a heavy plate glass fitted perfectly with rounded edges makes a splendid top for the table.

The service part of the house, of which the kitchen is the central room, should fit together just as parts of a machine and form a unit in themselves. The pantries, store rooms, etc., should be placed so as to afford easy access one to the other.

In a house, which has two or more servants, a dining-room or alcove should be provided for their use. This may be a part of the kitchen or immediately adjoining, and merely large enough to comfortably seat the servants around a table.

The cook's pantry should contain cupboards in which are all the necessary paraphernalia for preparing pastries, puddings, etc., such as bins, bakeboards, crockery, pans and supplies, and should be lighted by at least one window.

The butler's pantry, or china-closet as

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it is often called—generally located and affording direct communication between the kitchen and the dining-room—is essentially a serving-room and should contain a sink with draining-boards, cupboards and shelves to accommodate the fine china, glassware and other requisites for the table. With such a plan the door between the pantry and kitchen may be either sliding or double-swinging, but between the pantry and the dining-room, a noiseless double-swinging door. A slide, with small shelves or counters on either side, between the kitchen and pantry, for the passing of food and dishes, saves time and steps. It is well to have the communication rather indirect through the pantry to prevent in a measure the passage of odors or a direct view of the kitchen by those entering the dining-room or seated at the table. This can be partly accomplished by not having the communicating doors directly opposite each other.

The outside entrance to the kitchen should be so placed as to facilitate the delivery of provisions, preferably through an entry or an enclosed porch.

The laundry in many houses is combined with the kitchen or immediately adjoining, in which latter case it often serves as an entry and a place to store certain articles, such as bath, basins, and possibly the refrigerator. The very best plan is to have the laundry in the basement, with separate outside stairs. In such a case, a chute for sending soiled linen, etc., should run from the kitchen or pantry to the laundry. The kitchen should above all be well ventilated and have plenty of daylight. The necessary fumes and heat arising from the cooking should be taken care of in such a way that none of it is carried to the dining-room or to other parts of the house. This can partly be accomplished by the hood over the range, but plenty of fresh air is required. Generally in country homes, the living-rooms are given the southern exposure, so the kitchen usually faces the north. The best location is either the northern or eastern exposure, as the cooling breezes in the summer generally come from that direction, especially in this part of the country, and combined with the morning sun, make the kitchen cheerful and cool. If possible, there should be exposure on at least two sides, opposite, affording cross ventilation as well as an abundance of light. All windows should be well fitted with screens in summer to keep out flies and other insects attracted by the odors of cooking.

The best artificial lighting is obtained by a reflector in the center of the kitchen, possibly with side brackets where necessary, as at the sink or at the range. In a large house the service portion may be situated in a separate wing and if so the stairs should be in a small hall, centrally located and near the kitchen, especially the stairs to the cellar. This hall may contain a closet for brooms and a lavatory for the use of the servants. It is well not to have the stairway ascending.

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ty of the single varieties as compared with the modern doubles.

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BLANKET FLOWER (*Gaillardia* *G. aristata*).—Another old-fashioned favorite that is widely known. The brilliant red and yellow daisy-like flowers bloom until after frost if the seed-pods are not allowed to foliage. To replace the flowers are not particularly attractive excepting in a few of the mowed varieties, such as the tall-yellow Kelway's King. There is also an annual sort, *G. pulchella*, in yellow and rose purple.

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AGERATUM (*A. conyzoides*).—Learn to know this best blue hardy annual for edging; its bloom extends over three months.

SWEET ALCYSSUM (*A. maritimum*) surely needs no introduction. Make a note of the fact that by cutting back the plants you may induce bloom from July until after frost.

AFRICAN DAISY (*Arctotis grandis*) may be readily distinguished from among the many other members of the daisy family by its steel-blue centre surrounded by a narrow gold edging inside of the white petals.

BALSAM (*Impatiens balsamina*) will be known by its habit of bearing its red, white or yellow flowers in the axils of the leaves along the stalk.

POT MARIGOLD (*Calendula officinalis*) is the old-fashioned herb that our grandmothers used for flavoring soups. The orange and yellow flowers appear over a long period.

CANDYTUFT (*Iberis amara*).—In addition to sweet alcyssum and ageratum, you should know this less showy edging plant. It is found in wood and white, blooming through a great degree of drought until after frost. There is also a perennial candytuft, *I. sempervirens*, excellent for edging or for the rockery, but it blooms in June, July, and August.

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Canna (C. Indica hybrids).—This tropical-looking plant probably needs no introduction, though its frequent appearance as the central feature of a circular bed in the center of a lawn may have persuaded you that closer acquaintance was undesired. Properly used, the new hybrids in red, yellow and nearly white, are well worth cultivating. The plant is a tender bulbous one, requiring winter storage in the cellar.

Calliopsis or Tickseed (Coreopsis tinctoria) is one of the best annuals for cutting. The daisy-like flowers have yellow rays with a dark maroon base. Learn to know also the perennial Coreopsis lanceolata, blooming next month.

Dahlia (D. variabilis) is a tuberous plant that surely is too well known to need a formal introduction. By all means learn to know all the new improved varieties you can find, beginning late this month and continuing through October. The man who once starts making acquaintances among the dahlias is bound to become a collector.

Gladiolus (G. Gandavensis, Childii; Lemoinei, etc.), the sword lily—one of the southwest of the summer-blooming bulbs—whose pink, red, white, yellow and mixed flowers appear in heavy spikes. Make a note to plant the bulbs five inches deep—they are usually set too shallow and the weight of the stalk topples them over.

Globe Amaranth (Gomphrena globosa).—A pink button-like flower of the everlasting type that, with so many others, is often given the name bachelor's button.

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Mignonette, Nasturium, Petunia and Verbena are surely too well known to need comment.

Nicotiana (N. Tabacum) has very long red or white flowers that are not otherwise showy, among the large leaves on four-foot stalks.

Portulaca (P. grandiflora) is a low-growing plant with brilliant flowers in white, red and magenta, found at its best in dry places.

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Summer Furnishing with Cretonne

(Continued from page 37)

French cretonne and finished at the edges with gilt braid have little glass knobs, but the more practical pieces are fitted with the tabs of cretonne.

The newest piece of cretonne furniture is the seat with boxes underneath that is intended to stand in a window or at the foot of a bed. It comes in several different lengths and has an upholstered cushion, kept in place by a little ornamental railing of wood around three sides, while the space under the seat is filled with boxes. The shorter seats have two shelves underneath with a box on each, and the longer ones have two boxes on each shelf with a partition in the middle. As pieces of furniture they are decidedly ornamental, and the idea of utilizing the lower part as a place for storing things is an ingenious one, to say the least.

Another new piece of cretonne-covered furniture, while not of the cabinet variety, is pretty and equally useful, and may be had in cretonne of any desired pattern. This is a case for slippers in the shape of a rather high stool, with an upholstered top that makes quite a comfortable seat. The stool is octagonal, with a lining of heavy material in a dark color, and fastened to this lining are pockets made of the same material, each large enough to hold a pair of slippers.

Even work-tables are made in a combination of wooden frame and cretonne-covered box, and follow out the idea of many of the old-fashioned models by having a deep pocket of the cretonne at the bottom of the box, which is set into a white enameled frame on four slender legs. The table is so effective, besides being light and easily handled, that even though there may be no cretonne to correspond in the furnishings, it is quite suitable and does not seem out of place in a bedroom of any description.

For a room in which these cabinets and other cretonne pieces are used, the most suitable chairs are of willow, painted or enameled in white, with cushions that match the furniture and hangings. The color and design are a matter of one's individual taste, as the furniture may be had to order as well as in stock patterns. Large-figured cretonnes that are correct reproductions of English chintz of the 18th century period are more or less of a novelty and quite popular, but however appropriate they may be for curtains and draperies, they are hardly suitable for the box furniture. Small patterns in floral effects are more tasteful, and a design new this season, that is largely used for the cabinets made up in sets seems to have just the right proportion of white background and colored figures. It is decidedly conventional, showing clusters of leaves intertwined with a heavy cord and tassel design, and comes in a number of attractive colorings suitable for bedrooms and boudoirs.

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J. Dryden and A. G. Lunn, in a circular of the Oregon Experiment Station, state that ventilation can best be fur-
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little fellow, say, smaller than a fox terrier, reduce this prescribed dose by half. The skin is the surest indication of the dog's condition, and if it feels burning and feverish the above method of treatment should be resorted to. If the normal condition does not return you must look for the symptoms of some of the summer complaints to which the dog is subject.

Indigestible food, tainted water, too much green food, dirty kennels or a number of allied causes may result in diarrhoea. Prevention is the safest and best cure and works in keeping garbage, decayed animal matter and spoiled or stale food out of the dog's way. Small doses of castor oil will give relief. If the animal appears to be in pain give very small doses of laudanum.

If fleas or any other parasites attack, be quick to give the dog your assistance, as he suffers cruelly in this weather. If you are partial to a powder remedy be sure to use it out on the lawn, as it often simply drives the flies away from the animal without killing them, and they are unwelcome visitors.

Fits or convulsions, the bane of the puppy's life in summer, are often blamable to the master. Teasing, mauling and fondling during excessive heat are provocative of attacks. But fits are not necessarily fatal, and they certainly do not require shooting. Rest and quiet will do more to cure your dog than anything nostrums. Handle him as little and as gently a manner as possible. Simply see that he does not hurt himself. Keep him in a cool, darkened room and when he has ceased to tremble and is relaxed, dose with from 2 to 20 grains of potassium bromide in camphor water. Keep this up for a few days and give a very light diet—some say a milk food only.

We can supply different foods for ourselves when the thermometer registeres, but the dog must take what he gets. His diet demands a change in summer as well as his master's. Don't keep on giving fat and heating foods and expect your dog to be healthy. After experimenting at a well-known kennel, a diet the main part of which was rice proved the most efficacious for hot weather. The rice was well cooked in a double boiler and mixed with either milk, buttermilk, soup or soup meat. It must be thoroughly cooked or skin troubles result. In the latter part of August cooked rolled oats mixed with equal parts of rice and hominy worked well, as the small amount of corn meal seems very beneficial if perfectly cooked. Give these things a little of your attention; see that the dog's meat is sweet and clean and his food properly cooked or you don't deserve to own him.

In general then, give a little care to your dog during the summer; he deserves it. Don't let him be mauled and hauled or made to run and play when he is hot. Give him a vacation too, he'll repay you in the cool weather, when he can romp and play without any of the ill effects.

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The Home of Mr. H. D. Corey, Newton, Mass.
Chapman & Frazer, architects

Henry H. Saylor, Editor.

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When one considers the beauty and refreshing suggestion of coolness that a water feature gives to a country or suburban home, it is amazing to find how few people take advantages of their opportunities along these lines. You may perhaps be cramped for sufficient room to make a swimming pool, but there is no place too small for a lily-pool or a bird-bath.
Water Features on the Country Place

THE DESIRABILITY OF SOME SORT OF A POOL IN THE GARDEN OF SMALL SIZE AS WELL AS ON THE GREAT ESTATE—PRACTICAL DETAILS OF INSTALLATION AND CARE

by Grace Tabor

Photographs by N. R. Graves, M. H. Northend and others

TAKE it whichever way we may—seriously or as a plaything—water, in the intimacy of the garden, is a constant delight. Yonder by the rambler as I write a big, sleek catbird is drinking at the concrete basin—a basin of crudest home construction, made from some “left-over” building materials that would otherwise have been thrown away. And here, breathless from the vain pursuit around the lawn of a distracting big butterfly, comes the dog, to stand up and lap greedily. How they all enjoy it! And how pleasant it is to see things enjoyed. Hardly five minutes of the day passes without a swift flutter of wings toward the bath, a busy hopping about on the stones which give the water its varying depths, and a glad dipping deep of little bills and a lifting high of little heads, with lingering appreciation. And in the early morning, what a gathering for ablutions; what splashing and sparkling in the sunlight—all for fifty cents worth of cement, a little ingenuity and a daily pail of water brought out and poured in.

It is a far cry from a bird-bath of this kind to the great water garden—but there are possibilities for all tastes, situations and resources at every step, all along the way. And “water, water everywhere” almost for no effort at all. Even a fairly large pool is perfectly feasible without either supply or drain pipes, if the work of pumping it out is not too much to undertake, when occasion demands; for a hose will fill it and keep it at the required level all summer, goldfish will prevent mosquitoes from breeding in it, and sub-aquatic plants like the giant water weed (Anacharis Canadensis) or eel grass (Valisneria spiralis) will aerate the water and keep it sweet, and its own overflow will water the iris that naturally will be nearby.

There are three things which make or mar the success of any pool. These are its location; its form and immediate surroundings; and the plants which occupy it, if plants do occupy it. A pool too thickly planted is like no pool at all, so far as effect is concerned, for the water is invisible. Never less than two-thirds of the total water surface should be exposed.

For this reason a very small pool should either not be planted at all, save on its margin with grass or iris perhaps; or else it should be planted with only one small water plant—a water lily like Nymphaea pygmaea—or stocked with a floating plant which may be kept within bounds very easily by simply taking some out whenever it is necessary. The water chestnut or water caltrops Trapa natans, which bears white flowers, is one of these; water hyacinth—(Eichhornia crassipes—E. speciosa according to some dealers)—is another. This, by the way, is the famous “million dollar weed” of the St. Johns river in Florida, where it obstructs navigation. It has blue hyacinth-like flowers. Still another attractive floating plant—attractive in foliage though it has no flowers—is Salvinia Brasiliensis. All three of these are annuals, but a clump may be carried over indoors during the winter, in an aquarium or a jardinière.

The form and immediate surroundings of an artificial pool will depend of course upon the plan of the garden which it is to
occupy. Under some circumstances in even a small garden the most delightful results may follow a cunningly contrived naturalness, but these circumstances are not common. Where they do exist, however, it is decidedly well to take advantage of them, for the unusualness of the garden then becomes one of its great charms. Pockets among rocks, suggestive of the pools which springs form, are perhaps the most successful arrangement along natural lines which can be undertaken on a small place—but this should never be undertaken unless the rock formation is natural to start with. A receptacle for water may be made, where it is, of concrete worked in among the stones according to the requirements of their positions. All signs of this, however, must of course be hidden by naturally arranged stones which shall cover its margins—and little pockets of earth among these should furnish foothold for moisture-loving, rock-loving plants.

Such a pool is of course not suitable for water lilies, for its natural location is at least part in shadow, while all-water plants demand the fullest exposure to the sun. But it forms a charming focusing point for a garden walk, and the birds and beasts will enjoy it to the full. Indeed it seems the natural accompaniment to the true rockery. The inside of such a pool, by the way, should correspond to the stony forms around it and not be a plainly rounded basin. Rocks and stones laid on the bottom will carry out the illusion if they vary sufficiently in size and shape, and the bottom itself may be worked by hand into a perfect simulation of natural formation.

But where a pool is desired on what would otherwise be an open lawn, it must be a part of some definite, formal design. Otherwise it is far better not to have it at all. It is obviously artificial—and anything that is obviously artificial must have in itself sufficient beauty of form and line to be its own excuse for being. The artificial things which have not are the abominations of the earth. This is not to say that such a design need be elaborate, however, but it must be definite.

The form of such a pool will of course depend upon the general garden design, and upon its place in it; and the design itself will in turn depend upon the area which it is to be given over to it—so it is not possible to more than generalize when it comes to the matter of form for basins. Generally speaking, however, the form that seems to lend itself all situations most readily, and to afford at the same time the most advantageous planting area, is the lengthened quadrangle with half-circle ends, this half-circle being described with a radius which is a little less than half the width of the quadrangle. This requires ordinarily a general garden plan which is longer one way than the other. Such a plan is usually possible, and always advisable when possible.

For the square garden the square pool, the round pool and the modified square, with its sides incurved, are practically the only available shapes. Very often the design for such a space, however, may be laid out along one axis in a way that will suggest the oblong; where this is done the pool need not necessarily be limited to these forms, but may be a crescent form, the half of a circle, or any simple shape that lends itself to the lines of the design.

In the water garden illustrated at the top of the page the shape of the pools is determined by the design absolutely, just as the shape of the beds in a formal garden would be determined; and rarely
is anything more beautiful than this form of garden to be found. The location of a pool is, after all, the crucial thing which must determine its form and everything about it. If its place is to be among natural conditions, make it natural; but unless it can be absolutely natural in every respect—in its surroundings as well as in itself and its planting—treat it formally and as a part of a composition. Every body of water should be dealt with often helps to this end very successfully. Where such an area exists, excavation may be all that is needed to turn it into a pool. But where there is neither a stream nor a bog, artificial construction with water piped from the nearest source may of course be resorted to. Here, and here alone, is the “natural” form permissible in artificial construction on a large scale, because here all the surrounding conditions are naturalistic. But to be a suc-

The distinctly formal garden can hardly be counted complete without its pool and fountain. In the garden of Bellefontaine at Lenox, Mass. Carrere & Hastings, architects

according to this standard, from the smallest pool occupying a dooryard-garden up to the most pretentious. Never place even a tiny basin aimlessly in the midst of open lawn, for located thus its meaning is lost completely, whereas as the central feature—the leading note—of a garden composition, the tiniest pool takes on dignity and interest.

Attempts to make the form and appearance of a pool of this kind anything but formal are doomed to dismal failure, the result of such attempts being merely a meaningless irregularity that is a blatant discord in the harmony of outdoors—and that deceives no one. For irregularity, alone and by itself, is not nature by any means—and in any event the natural form belongs only to the natural environment. Where the garden affords this, the natural pool, artificially made on a fairly large scale, is of course delightful.

The simplest of these is acquired by the damming of a stream or brook, and this treatment of a watercourse, especially one that tends to dry out during summer, is always desirable. Where there is no watercourse, however, it is not so easy to indulge a fancy for a “natural” body of water, though a low, bog spot
light and the consequent sense of cheer—all the brightness that a smile implies; reflecting shadow it doubles and intensifies it, bringing the gloom which shadows symbolize—which frowns indicate.

The mechanical essentials of all pools are of course that they be watertight and frost proof—two things not difficult to attain, though many do seem to fall short of them when they undertake to construct a water basin. Puddled clay is recommended by many, but it is not likely to be any cheaper than cement and concrete—and it is not easy to find someone who can handle it properly. Unless it is very thoroughly and carefully “puddled,” away it will go some day—and away goes the water, too.

The construction of a cement pool is practically the same under all circumstances, whatever the size and form determined upon. The two things which insure its stability and resistance are its floor below the frost line and its walls sloping out on the inside, as they rise. Two and a half feet down is the accepted depth of frost according to many builders, but for surety three feet is a better standard. This means an excavation three and a half feet deep, the size and shape of the proposed pool. A footing six inches in depth and as wide as the wall is to be at its base, of cement and broken stone, is first put down. Onto this the wall of brick, laid in cement, is placed, starting with a width of 8 to 12 inches at the bottom and sloping out, on the inside, to a width of from 4 to 6 inches at the top.

Pack the bottom with broken stone and cement to a depth of six inches, then plaster bottom and sides with at least one inch of Portland cement mortar, nicely smoothed down. Use one part of cement to three of sand. Dip or pump the water out in the fall and fill with leaves, trampling them down—and cover with boards or a coldframe sash. It is well, in severe climates, to bank over the margin also with the leaves, though this is hardly necessary unless it projects high above the ground.

Water lilies should always be planted in tubs or boxes and sunk into such a pool. Then they are easily removed in the winter or at any time, if necessary, and the water is kept very much cleaner than it can be when the earth is free on the bottom, to be stirred up whenever anything disturbs it. If there is an outlet pipe, cover it with screening to keep the fish in as well as to prevent its being clogged. Two or three fish are sufficient for a pool the size of an ordinary tub, and this number may be increased proportionately. The fish spawn in June usually, and I have known a pair to stock a pond in a season. Some say that the old fish will eat the little ones, however, and recommend bringing the roots and stalks to which the eggs are attached, into the aquarium or a tub, and giving the little chaps a better chance for their lives by letting them grow to good size before putting them into the pool with the old fellows.

The soil for water lilies should be a compost of heavy loam mixed with one-third thoroughly decayed cow manure. Cover with an inch of good heavy sand. The boxes for them may be a foot deep and from one to three feet square, according to the size of the pool. In natural ponds larger boxes, four feet square and a foot and a half deep, are better; or the lilies may be planted in the natural mud bed.

Dormant rhizomes should be covered with only two or three inches of water until they have made their first floating leaf; then gradually increase the depth of the water as the plants grow, by lowering the box deeper into the pool. Water should always stand some time in the spring before the lilies are put into it, to warm up—and water for lilies must be still and of even temperature.

After the style of water garden has been decided upon, and the means of water supply chosen, there is still the important consideration of keeping the water fresh—not that the water has to be changed so very often, but a fresh supply should be constantly added to prevent stagnation. The various unpleasant forms of plant life which grow so quickly will be avoided in this way. Insect life, mosquitoes especially, find breeding places in stagnant water and often make this form of garden more of a nuisance than a pleasure. Fish are one’s best allies in destroying these pests.
The Decorative Possibilities in Roofing

THE CANONS OF FORM AND DESIGN—THE DETERMINING FORCE OF STYLE IN MATERIALS, TEXTURE AND CONSTRUCTION

BY HAROLD DONALDSON EBERLEIN

Photographs by T. W. Sears, H. H. S. and others

WHEN one considers it roads are, after all, nothing else than house hats. Smile at the conceit, if you will, but if windows are comparable to eyes and the surface of the walls to skin, surely there is no great impropriety in likening the covering of buildings to human headgear. There is just as much character, too, in roofs as there is in hats, only we are so accustomed to taking roofs as a matter of fact, from their very permanence, that we never think about it. And like hats, also, roofs by their pattern can either adorn or mar what is beneath them. A good roof may go far towards redeeming an otherwise indifferent structure, while a bad roof can spoil a building in other respects beyond all cavil. The roof may impart dignity and an aspect of substantial comfort and repose, or it may make everything look perky and obtrusive and contentious.

Of course a roof's first business is to afford shelter and protection to the dwellers within the house, but for aesthetic reasons—considerations every whit as necessary to civilized man's happiness as the more obviously material—it is equally as important that its outward appearance should comport with the walls that bear it and the manners of the people it covers. It may be childish and because of residuary barbarism in our make-up, but, nevertheless, we do somewhat gauge a person's station by his headclothes. The distinguishing mark may be the prosperous banker's pot hat, the painted savage chieftain's eagle feathers braided in his hair, or the bishop's mitre, but a distinguishing mark it is, and we so regard it. Likewise, consciously or unconsciously, we judge a house's worth largely by its roof. The roof is recognized by architects as unquestionably one of the principal features in country house designing. It can and should be just as expressive of the character and purpose of the dwelling as any of its other component parts. Furthermore it has its own definite province in the ensemble that should be jealously guarded and not encroached upon by the other parts of the building.

By its texture and harmonious lines the roof is usually the most effectual medium of welding the house into the landscape. If it is a bald and staring roof with an uncompromising sky-line, we may be pretty sure that the house will always seem detached from its surroundings—in other words, a thing apart that
The irregularity of the many additions to the English half-timbered houses breaks up the mass of the roof but does not destroy its unity.

will never look as though it really "belonged." Line and texture are the two factors of paramount importance in determining the architectural excellence of a roof, and it is only by closely heeding these that a successful result can be achieved.

No hard and fast rules can be laid down governing the planning of roofs, but adherence to certain general principles will avoid serious miscarriages and will ordinarily secure a satisfactory outcome. There may be a dozen different ways of solving the same problem and all of them thoroughly good. One of the chief privileges of the architect's profession lies in the large liberty of choice and the diversity of right ways for gaining the same end. Some peculiarity of local conditions may even cause the architect to cast general principles overboard and fly square in the face of all accepted traditions, and yet the outcome will be highly pleasing, all of which only goes to justify Sir Joshua Reynolds' dictum that art comes "by a kind of felicity and not by rule." Good taste, and a sense of proportion and architectural propriety must be the ultimate arbiters in all cases. This applies as well to the layman as the professional. Architecture is not a thing of individual or private concern but a matter of social and public moment; to the force of educated lay taste and discrimination we must look for artistic betterment in our building and in no respect is this truer than with regard to roofs. The urging to lay selection, however, does not contemplate license, after the owner's wishes have been clearly stated, to hector and hamper the architect with all manner of whimsical restrictions and suggestions. It is worth while to select a competent architect, explain your wishes and then trust him.

In planning our roofs the prime characteristics to be aimed at are simplicity, congruity and due proportion. Observance of the general principles implied in the effort for these qualities, and such others as they connote, will at least safeguard us from "groping experiments and detached eclecticism." Combined with purity of line nothing can be more convincing than absolute simplicity. The simplest form of roof (next to the flat and lean-to) is the span or ridge, falling away on each side of the ridgepole, the pitch of the sides being determined by taste or convenience.

A striking example of the beauty of this style of roof intelligently used is shown in the first illustration. The slope is entirely unbroken by dormers and has a note of finality and staunchness and withal a Johnsonian downrightness that silences any oppos-
Slates of graduated size and thickness, varying in color, give unlimited possibilities for obtaining distinctive character in the appearance of the roof

ing criticism before it can make itself heard. That roof is there for an unmistakable purpose. It shelters a household with a "rooftree broad and high." More than that, it breathes a sense of homeliness and is a tangible evidence that the good old word "roof" is synonymous with home and hospitality. In its breadth and sweep there seems to be the motherliness of a brooding hen with wings outspread over her young. Severe simplicity gives not a suggestion of austerity and the proportions are so well balanced that the bearing walls appear quite sufficiently evident. From every point of view the house is dignified, restful and satisfying. And here just a word of practicality. The rather unusual height of the ridge gives ample air space and assures a minimum temperature in summer in the sleeping rooms. There is room, too, for both an attic and a cockloft, which latter old Dr. Johnson defines as "the room above the attic" quite forgetting that he has already committed himself to the statement that the attic "is the topmost room in the house."

While speaking of the height of ridges, a word of caution will not be amiss about the angles of roofs that they be neither too steep nor too squat for the structures they are meant to surmount. A nice sense of congruity must direct the designer in this matter. What would be highly suitable in one case would be egregiously hideous in another, showing plainly that the roof as well as the other parts of a building must be carefully planned to meet the requirements of each individual case. A roof suitable to one

The charm of the English cottage roofs is due to their unbroken surface. Note the difference between the lines of the slate and thatch

house cannot be adapted to another house of similar style without doing violence to the principles of proportion, while the divorcing of a roof from the architectural type to which it belongs, and clapping it on another with which it has no connection, is almost too reprehensible for words. Each type has been evolved in the course of years under its own peculiar conditions and along with it, as an integral part, has grown up its particular kind of roof. A great collection of gables on a Colonial mansion would be as incongruous as Julius Caesar in a tunic and toga with a beaver tile on his head, and a mansard on an old Dutch farmhouse would be manifestly absurd. And yet we sometimes see such things. In remodeling and alterations architects often accomplish some of their best work by changing the angles and shapes of roofs and reconciling previous incongruities. Unfortunately, too, it must be admitted that the inexpert sometimes work their

(Continued on page 120)
Getting Acquainted With the August Flowers and Shrubs

INTRODUCING THE BEGINNER TO THE MORE IMPORTANT OF THE ANNUALS, PERENNIALS AND SHRUBS BEGINNING TO BLOOM THIS MONTH

BY HENRY H. SAYLOR

I n the July issue I undertook to show that the shortest road to a successful garden of flowers lies not through the alluring pages of the seedmen's catalogues, but rather through the amateur's own note book, compiled this summer. The man who postpones making the acquaintance of the more important garden favorites until next February when the spring seed catalogues begin to arrive has lost a year. With nothing but confusing names and a few illustrations to guide his choice, the resulting order list will necessarily be an envious document indeed. And the bloom in his next year's garden will surely be a disappointment, excepting to the true optimist. Most of the annuals he selects will produce results, of course, providing his enthusiasm and his hoe does not lag, but the color combinations and the arrangement according to height will surely reveal the evanescent character of his gardening knowledge. And, worst of all, there will be no perennials, in all likelihood, to carry forward the garden's existence into another year. On the other hand, if the novice will systematically undertake to familiarize himself with the garden's elements this summer, when he may see the various plants and shrubs in bloom, noting their character of growth, height, color, flowering period, whether they prefer sun or shade, or a little of both, planting time for seeds, bulbs or roots and so on, he will save at least one and probably two full years in his gardening apprenticeship.

Occasional visits to neighboring gardens and if possible to a nearby nursery will bring a working basis of knowledge concern-

ing many of the plants that brighten with bloom the months of June and July, and are only now fading, as well as concerning other plants that have last month or just now come into flower.

Many of these—the most dependable for the garden's enduring character—the beginner will find to be perennial in habit, reappearing year after year from the roots. These may in most cases be started from seed this month. Many of them germinate slowly and then only under favorable conditions where they may be carefully attended. A seed-bed, either in the open garden or in a cold frame, where the soil has been prepared with a surface as fine and smooth as persistent raking can make it, and where the seedlings may be sheltered from a too hot sun by a cheesecloth screen or raised whitewashed sash, will be necessary if you aspire to raise your own plants.

Or, many of the perennials you want may be obtained already grown and set out this fall or after their blooming season, in time to become well established in their new situations before cold weather sends them to their winter's sleep. In the event of your raising a successful crop of seedlings these too must be transplanted to their permanent places in time to make a good root growth before hard frosts.

If you will do either of these things your next year's garden will need no apology for lack of bloom or bare spots where "things didn't come up."

Space will permit of the briefest mention of most of those plants that come into bloom this month in the latitude of New

(90)
York. It must be remembered that the blooming period varies by about a week with each one hundred miles, earlier south, later north.

**Perennials**

BEE BALM, Oswego Tea, Indian Plumes (*Monarda didyma*) is one of the best red-flowering herbs. In damp localities, such as beside a brook, you will be most likely to find its fragrant foliage, growing to a height of two and a half feet.

MOLDAVIAN BALM (*Dracocephalum Moldavicum*) is another moisture-loving plant, with small, short-lived blue flowers. It will be found thriving in a shaded, sandy loam, moderately rich.

HARDY BEGONIA (*B. Evansiana*) is a tuberous-rooted plant producing rose pink flowers very freely. Not widely known but worthy of a more general cultivation.

**Golden Glow** (*Rudbeckia laciniata*) is common enough to need little searching for. It grows to a height of six feet and produces a wealth of clear yellow flowers (see illustration). Once established, it spreads by offsets of the root with amazing rapidity. A colony of it may be had for the asking from any of your gardening neighbors, and the roots may be divided and transplanted at any time. The red plant louse attacks it, but this pest may be kept in check by spraying the plants with soapy water.

**Perennial Pea** (*Lathyrus latifolius*) is another tuberous-rooted plant—a rampant vine, with many flowers of a rosy magenta appearing in clusters. Improved varieties are obtainable in white, striped and deep purple.

**Pilos (P. paniculata)** was mentioned in last month’s list, as the earliest varieties appear late in July. Through this month and next do not fail to make the acquaintance of all the varieties you

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*You probably know these everlasting or straw flowers (*Helichrysum bracteatum*) of our grandmothers’ gardens*

*And surely you know the sunflower, but do you know the perennial variety as well as the common annual?*

*Veronica or Speedwell is a dominant feature of the New Zealand landscape—long spikes of flowers in an intense blue*

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can find, noting the superiority of the pure whites, deep reds and salmon pinks. Phlox does best when the clumps are divided every third year.

Iceland poppy (Papaver nudicaule). As a perennial this splendid low-growing plant blooms in April, but as it is frequently treated as an annual the seed sown last spring will just now be producing its characteristic crinkled petals in yellow, orange and white.

Showy sedum (S. spectabile) is a splendid hardy succulent plant growing two feet high, with flowers rose to crimson, three or four inches across. It prefers a moist soil.

Snap dragon (Antirrhinum majus) probably needs no introduction. Its curious trap-like flowers in red, purple and white appear in great abundance and keep well when cut.

Double perennial sunflower (Helianthus multitorus, var. plenus) is another old standby that everyone should know. Lower in growth than the more common annual sunflower, it is one of the best large double-flowering plants for the beginner's garden.

Veronica (V. longifolia, var. subsecta) has a long season of bloom in this month and next, producing the longest spikes of any autumn flower, purple in color. Give it a deep, rich soil and full sun.

Native Plants

New England asters (A. Novae-angliae). No one who lives in Connecticut or the states adjoining it can possibly have remained in ignorance of this magnificent violet and purple flower of the late summer fields and roadsides. Particularly in combination with golden rod it is one of the grandest native flowers we have, and it is much improved under cultivation. Give it a moist place in your garden—you may transplant it from the wild even when in bloom.

Swamp rose mallow (Hibiscus Moscheutos), with rose or white flowers four inches across, is one of the best native plants for moist situations. It grows from three to seven feet in height.

Sneezeweed (Helenium autumnale) is another moisture-loving native, growing a foot or two tall with the large yellow daisy-like flowers which blooms late in the summer.

Annuals

Cosmos (C. bipinnatus) is the best of the tall late-flowering annuals. If not sown early its white, pink or red daisy-like flowers do not develop in time to make a showing before frost.

Everlasting (Helichrysum bracteatum), as nearly everyone knows, are the curious semi-double flowers of our grandmothers' gardens in yellow, dull crimson and white, that last indefinitely when cut and dried.

Annual larkspur (Delphinium Ajacis) will be found in many colors from white through pink to blue. It is lower in growth than the perennial sort, usually about eighteen inches high, and should be sown indoors in the fall for earlier bloom the following summer.

African marigold (Tagetes erecta) needs no introduction, for its rich orange globular flowers and the pungent odor of its foliage are widely known. The French marigold is of lower growth (one foot) with darker foliage and yellowish to reddish brown flowers that are very useful for edging a border.

Bulbs and Tuber

Dahlia (D. variabilis), mentioned last month, is probably the most important and varied of the summer-flowering tubers. Make the acquaintance of all the wonderful types and colors you can discover.

Autumn lily (Lilium speciosum), one of the most dependable and easily grown of the glorious lily family. L. rubrum is the favorite form, a red lily (Continued on page 124).

Golden glow is as luxuriant and easy to grow as a weed. Its six-foot height and double yellow flowers are very striking.

Stokes' aster or Stokesia is a foot-high perennial herb with blue flowers. The blooms are often over three inches across.
The Trend of Modern Furniture

INTERESTING QUALITIES REVEALED BY A STUDY OF RECENT DESIGNS IN AMERICAN PRODUCTIONS—THE MODERN TURN TOWARD FURNITURE DESIGNS THAT COMBINES USEFULNESS, COMFORT AND ELEGANCE

by Waldo Campbell Hibbs

The woman who was willing to put up with ugly furniture if it was restful and especially if it was supplemented by that one touch of "swellness," a gilt chair, should not have been laughed at. She was vaguely striving for comfort and elegance. The two are not incompatible, but her knowledge of good furnishing was vague.

There may be among us still little of that culture which permits admiration of a thing for its intrinsic value as an art or craft production, instead of for sentiment connected with it or the amount of gilt on it; and perhaps little knowledge of real assembling. However, as an ever-increasing offset against the desire of many for possessions that are considered to indicate only social standing, and are too often measured in quality by cost, there is the laudable ambition to have a thing worth having in furnishings if it be without question suitable to its environment.

In furniture each pure fashioning has its peculiar qualities which should be understood as an aid to proper assembling. Choice of furniture for the home should be influenced by more than one's own liking. Without analysis, we may assume that the requisite of practicality is most important and the element of simplicity desirable.

We are no longer hampered by the egotism that evolved the monstrosities of what might be designated the "American" period in furniture. We still produce monstrosities. Yet, with a knowledge gained from true study and an earnest desire to produce furniture suited to the essentials of the American life of today, we have passed the beginning of a new period in which it might be said that American designers and makers of furniture rank among the best.

A number of conditions have contributed to practicability and simplicity in modern furniture and furnishing of a high class. Among these are the revolt from the burden of over-ornamented and too many household things, the evolution of the living-room as a place of rest and recreation, the application of good quality, and the wish for a modern type of American furniture.

The so-called mission style has probably influenced this new phase in furniture, principally in the qualities of simplicity and strength which it advocates against the little-used "parlor," and the growth of art influence in America, which has taken place during the last decade.

And it is just at this psychological moment, so to speak, that there appears in the furniture world a new phase, shown by the best American manufacturers, and already winning an assured position among purchasers of high-grade and artistic furniture.

The so-called mission style (in evolution considerably removed from its progenitors, the old California pieces), has probably influenced this phase, principally in the qualities of simplicity and strength. But important in it is an application of old principles of practicality that made for the quaintness, distinction and beauty as shown in examples of the Hepplewhite-Shearer manner of the eighteenth century.

Mission and Hepplewhite-Shearer were the prototypes of this modern style, which is not only a reaction against the Victorian age, but also a return to the real "American" furniture of the eighteenth century.
Here is a rocker happily exemplifying one of the varieties of the new phase. Note the use of curves and the comfortable, loose cushion.

white-Shearer in their best specimens are structural and logical. While not without ornamentation, there is in the latter no interference with line or strength; the best phase of the mission would seem to be without ornament. They are essentially straight-line styles.

The new phase, however, has none of the vagaries of the evolution of the mission and its contemporaries, or the inconsistencies of the conglomerates and "adaptations" of eighteenth century designs foisted upon the American home-maker as "colonial." Its designing and construction are the result of thought and skill. It has the certain firmness of the mission, as well as much of the grace of the Hepplewhite-Shearer.

Furniture has seldom borne so close a relation to interior architecture as the purist would desire. In America in our day this is particularly the case. But comparatively few American interiors have architectural quality. One reason is that the architect was for long an unknown quantity in the designing of interiors, and the upholsterer took his place. The result has been the reduction to neutrality of modern interiors; not to speak of the effeminization of the general rooms of the house. This is now being remedied in buildings of importance, and effort is being made to change conditions in dwellings of moderate cost.

Successful furniture, however, is not architectural in the sense generally understood by the layman, but structural. Corinthian columns are not suitable as legs of sofas, nor broken pediments for the backs of chairs. It is not enough to stick a few pressed-wood bowknots on a piece of furniture to make it fit a French period of architecture. True harmony in spirit and structure must there be to effect a proper relationship. Architectural quality may be secured in pieces by reliance not upon motives of decoration, but upon proportion. Such furniture has been successfully designed by architects simultaneously with the construction of buildings for corporation use, notably banks, and for mansions. But the latter for the most part are furnished with reproductions and genuine old pieces; often, it is to be regretted, with too great freedom in the use of styles, but often, also, with great charm, where the scheme is carried out to the smallest detail.

Many of those who care greatly for it, do not advisedly become collectors of old furniture, if they are true to what they care for. One great difficulty in furnishing with the historic styles is that many require an environment in perfect sympathy with their design and construction in order to be successfully placed. The majority of those styles are non-suited, as being too individually marked, to the interiors of today. In truth they have no relation to the life of today, often, indeed, they may be classed among curiosities of a past age. They are therefore undesirable to hosts of lovers of good furniture.

Great numbers of Americans live in apartments or narrow city houses—so they would better have furniture which, while large enough for comfort, is yet compact in design and without protuberances in shape or excrescences in carving. Modern carving on anything but the highest class of productions is a delusion. Whatever one pays for in furnishing that is not either useful or at least truly decorative is apt to be wasted.

The new phase fulfills the requirements above indicated. The wood chosen is of handsomely figured mahogany, soft-finished in the best work. The pieces are individuals, with much handwork upon them, and excellent upholstery. The latter is often of the loose-cushion kind, with or without springs. It has long been un-

Beautiful in proportions, this sofa is deep-seated and high-backed. Some of these pieces have companion chairs. Only the best upholstery should be used.

This delightful chair, the square-legged variety of the new phase, fits snugly into a space that a smaller curve-line chair would overlap.
Suites of furniture, except when based on French formal assembling, are not frequently seen outside of hotel drawing-rooms, assembly-halls and official reception-rooms. The average householder is still under the influence of the supposedly artistic, no-two-pieces-of-a-style obsession, and photographs of interiors of better-class houses often show cabriole-legged Chippendale, spindle-legged Windsor, and modern willow, all gathered in helpless incongruity, in a strongly accentuated architectural setting. The furniture we have now become acquainted with, after inspection of its chief characteristics, and variants, seems to present itself as adaptable to many interiors, dignifying those of the humbler sort, admirably fitting those in which finely proportioned and refined and simple designing has been made an important factor. The surroundings should in no instance be fussy. The possessors of those creators of atmosphere—old china, old plate, and old prints—need not hesitate to

(Continued on page 121)

Bringing Wild Flowers Into the Garden

THE VALUE OF WILD FLOWERS DOMESTICATED—WHAT VARIETIES TAKE WELL TO CULTIVATION—SOME SUGGESTIONS FOR THE NATURE LOVER'S GARDEN

BY FLORENCE BECKWITH

THERE is great danger that a large number of our native plants will, before many years, become entirely exterminated. In fact, in the vicinity of our large cities, many species have already become extinct. This is partly because of the destruction of our woods and forests which is constantly going on, and partly in consequence of the rapacity of those who wander into the country to gather flowers, and who not only pick every one they see but often pull the plants up by the roots.

True lovers of nature like to seek the wild flowers in their natural habitats, where those which we have known for years greet us like old friends whom we are always glad to see. But year by year we have to travel farther to find them, and often we cannot take the time to do this especially with the uncertainty of being able to find them after all our trouble; and, if we cannot go at just the right time, we miss them for the whole year.

Many species of wild flowers, however, take kindly to cultivation, and will abundantly repay the trouble of transplanting them. In this way we not only save them from the danger of absolute extinction, but we can also have them close at hand to enjoy.

In nearly every yard or garden there is some nook in which the wild flowers will grow, and we have only to study them a little in their native haunts to determine which species will succeed best in the locations which we are able to give them. It is often a great surprise to find how readily many species will adapt themselves to seemingly adverse conditions, thriving luxuriantly and blossoming abundantly.

The hepaticas take very kindly to cultivation, growing just as readily and vigorously in the garden as in the woods, and blooming just as freely. In fact, they seem to try to repay one for the trouble of cultivation by growing larger and sometimes doubling the number of their petals. In sunny spots the hepaticas will begin to bloom almost as soon as the snow goes off, and the blossoms are quite as attractive in their way as those of the trailing ar-
butts, which will not bear transplanting. The flowers vary in color from pure white to pink, purple and blue. The whole plant is charming, from the dainty blossoms to the downy new leaves, so carefully folded. The bunches increase in size and vigor as the years go on, and no wild plant better repays the trouble of transplanting.

Following closely upon the hepaticas, in fact often blooming at the same time in warm, sunny locations, come the trilliums. The large white blossoms of the grandiflorum are very beautiful, and, as the flowers grow older, their gradual change to various shades of pink makes an interesting study. The deep red blossoms of Trillium erectum make a fine contrast to the pure white flowers of T. grandiflorum.

All of the trilliums thrive under cultivation; the clumps grow larger every year and the blossoms also. The writer has a clump which has been growing in a garden for several years. It has increased from a single root to a large bunch and often bears over thirty blossoms at a time. When they are all open the plant is the pride of the garden, as much admired as the showiest cultivated flowers.

Mitella diphylia, miterwort, or bishop's cap, is a dainty little white flower which will flourish almost anywhere. Its cousin, Tiarella cordifolia, the false miterwort, is one of the prettiest of our early spring flowers. The sprays of foam-like blossoms are airy and graceful and its leaves are particularly beautiful. It will grow contentedly in the garden year after year.

The bloodroot, Sanguinaria canadensis, is well adapted to garden cultivation, and nothing can be more attractive than its pure white blossoms which come out in the earliest spring days. The veiny leaf is closely wrapped around the flower bud when it first appears, as if to protect it from the cold. The bloodroot increases rapidly and soon forms fine large clumps.

Nearly all species of violets will do well under cultivation, and nothing can be prettier in their place. They like a cool, shady location and if it be also a moist one, they will thank you and make the most barren spots beautiful with their clean, green leaves and cheerful flowers. Our most common blue violet, Viola cucullata, is one of the prettiest of all. A comparatively rare kind, a white form of Viola sororia, is splendidly adapted for growing in shady places; its glossy green leaves completely cover the ground and its pure white blossoms are very attractive.

The wild ginger, Asarum canadense, has beautiful softly pubescent leaves and curious dark brown flowers which lie close to the ground and often escape observation. It thrives vigorously under almost any conditions and well repays for transplanting.

One of the most graceful of our wild flowers is the columbine. It grows naturally in all sorts of places, sometimes clinging to the sides of steep cliffs dripping with water, and again flourishing among rocks and stones. The whole plant has a striking individuality and grace, and its brilliant coloring makes it a beautiful object in the garden. It requires little in the way of attention and care, and if the seedpods are kept cut off, it will blossom nearly all summer.

Uvularias, or bellworts, do extremely well under cultivation. The clumps increase in size every year.
and throw up more and more stems of the pale yellow, gracefully drooping blossoms. The flowers seem to increase in size by cultivation and the plant becomes very ornamental.

The cypripediums, or ladies' slippers, make regal ornaments of the wild garden. *C. specabile*, the showy lady slipper with its large pink and white blossoms is the most beautiful of the family. It is most often found in swamps, but it also grows on sandy hillsides and it will flourish in the garden as well as in its natural habitat if watered enough to prevent the soil from drying on top. *Cypripedium pubescens*, the large yellow lady slipper, also does well under cultivation, even without particular care, and clumps of *C. parviflorum*, the smaller-flowered species, increase in size as they become established.

The blue flag, *Iris versicolor*, naturally grows in wet places, but it accommodates itself to circumstances nobly and will flourish in the wild garden and bloom for a month, if it only has occasional watering.

For vivid coloring no other wild flower can compare with the cardinal flower, *Lobelia cardinalis*. It usually grows along streams, but it will flourish in the garden, especially if it be planted where a dash of water can be frequently given. The cardinal flower begins to bloom in July, and the long spikes of brilliant blossoms will continue opening to the very tip, lasting until the latter part of August. Numerous side shoots spring out from the main stalk, thus lengthening the time of flowering.

The various species of wild asters accommodate themselves to garden privileges with no reluctance whatever; many of them are very graceful and pretty and they adorn the waste places where nothing else will flourish. Coming as they do late in the fall, they lengthen the season of bloom in the garden and are useful for decoration. Under the name of Michaelmas daisies, many of our native asters are cultivated in England and are often imported from that country for our gardens. But many of the same species can be picked up along our country roads without trouble and are quite as beautiful as their imported brethren. No prettier adornment can be found for the fall garden, and once introduced there they will take care of themselves.

The goldenrods will flourish in the town garden, but, for some reason, they do not seem to fit in with their surroundings quite as well as many other wild flowers. Possibly they need the environment of green fields to show them off to advantage. If you like the goldenrods, however, there is no reason why you should not have a large collection of them, for they have no objection whatever to being cultivated.

*Rudbeckia hirta*, the purple coneflower, perhaps more generally known as Black-eyed Susan, is one of the gayest ornaments of the field, a universal favorite with old and young. Transplanted to the garden, it philosophically accepts the situation and responds to cultivation with cheerfulness and an apparent desire to improve its opportunities. The leaves of the plant become smoother and a brighter shade of green and the blossoms become larger. Once introduced into the garden it will perpetuate itself and become more plentiful and more ornamental every year.

Most of the wild flowers will do well if taken up when in bloom. This is fortunate, for some of them die down after blooming and it is almost (Continued on page 129)
Fighting the Drought in the Small Garden

**HOW TO CONDUCT A SUCCESSFUL CAMPAIGN AGAINST THE DRY SPELL—**
**THE BEST MEANS OF COMBINING CULTIVATION AND IRRIGATION**

**NOTWITHSTANDING** all the damage done to our gardens, small and large, by insects and by plant diseases, there is another enemy whose devastations far surpass the ravages of all of these added together. Not that the actual destruction is more, for it is not—and for that reason the tremendous extent of the losses due to partial drought are seldom realized. To illustrate: if one sets out a hundred little cabbage plants, and the cutworms get ten of them, and a clever, fat wood-chuck ten more, and the cabbage maggots still another ten, and the green caterpillars ruin an additional ten, one certainly would be justified in raising a cry about garden pests, for the total loss would be forty per cent. But the fact remains that the sixty plants spared, in a season of plentiful rain, would give a bigger crop than a full hundred plants in a dry season in which each plant attained only half its normal weight. (In this connection it must be remembered that a head of cabbage, or a melon or a squash, six inches in diameter, will weigh eight times as much as one three inches in diameter.)

There is not one season in fifty that plants in the open garden get all the water they could use to advantage; and every day they go thirsty, even though it is not enough to “check” them, means a loss in crops at the end of the season. As this loss is not a visible one, it passes unnoticed, and we go on trusting to luck and the weather to send us the right conditions for growing big crops, and in the meantime have to use twice as much garden space, seed and time as would be necessary if we could give our plants all the water they could use.

Another reason why the importance of the water question is not realized is that few people understand that plants not only need drink, but that all their food must be taken up while held in solution in water. Thus it makes no difference how rich we may have made the soil, nor what tempting forms of plant-food we may have put into it, so long as there is not enough moisture in the ground to carry them up through the peculiar feeding system of the plant.

Important indeed is the part that water plays in the growing of plants, and where it is withheld to too great an extent the result is plainly apparent. But it is by the half-water-starved condition of the garden soil, in which the plants look well enough but do not seem to come on as they ought, that the extensive and tremendous damage is done.

What then can we do to fight the great invasion—drought? Such measures as we may take are, of course, of two kinds—preventative and remedial; and they are, respectively: cultivation, special cultivation with drought fighting in mind, and irrigation.

Now the matter of proper cultivation has much more to do with keeping moisture in the soil than most people imagine. There is not space here to go into the science of the matter in any great detail, but a hasty common-sense view will tell us that the water that falls passes from the soil in three ways; (1) part of it soaks or seeps through the open surface soil either down through a porous (sandy or gravelly) subsoil, or to a hard subsoil along which it runs to lower levels; (2) part of it runs off the surface, especially on sloping areas; and (3) part—and a large part—is drawn up from the soil into the air again by capillary attraction and evaporation. It therefore becomes evident that in our cultivation we must aim (1) to make the soil as deep and as sponge-like, or moisture-holding, as possible in order that its storage capacity may be as great as possible; (2) that we must try to keep a mellow surface, into which rain will soak quickly where it falls; and (3) that we must keep the water which does soak into the ground from rising again to the surface where sun and winds evaporate it with tremendous rapidity.

The first of these conditions is attained by frequent, thorough and deep plowing. The majority of garden soils cannot be plowed too deeply. (The few exceptions are light, sandy soils, lying on open sandy or gravelly subsoils, through which water runs quickly; such soils it is well to plow always at a uniform depth, and keep the subsoil as compact as possible.)

It will, however, not do to try to plow ten or twelve inches deep on soil that has formerly been turned over to a depth of six or eight inches. If it is attempted, the top layer of the garden will be largely the cold, undisintegrated subsoil turned up from below and not favorable to luxuriant plant growth. A better way, if the time can be afforded, is to plow an inch or two deeper every time the piece is turned over. This leaves only a small amount of poorer soil mixed with the rich surface soil, which will be, if anything, a benefit, and it contains usually generous amounts of plant-foods (nitrogen, phosphoric acid and potash) in forms which will become gradually available. By this method, and plowing both spring and fall, two seasons will suffice to bring most any field to the desired depth.

If it is required to increase the depth of the soil at one plowing, the best way will be to plow as deep as possible—a strong team being necessary—and then add the manure and “cross plow” lightly, so that the newly upturned subsoil is thoroughly mixed through the upper four or five inches of soil. If this deep plowing leaves a remaining subsoil of a clayey nature, follow the regular plow with a “subsoil plow,” which turns a small furrow in the bottom of the regular furrow, but does not lift any soil to the surface, simply breaks it up where it lies so that the water may
percolate down into it, and remain there, as in a vast shallow cistern, to be drawn upon when needed in the hot drought days.

All this may seem like a lot of detailed technical information, useless to the man with only a small vegetable garden, and a quarter of an acre of potatoes.

In proportion to the extent of his operations, it is just as important to him as to the man who raises crops by the acre. He will find it much less tiresome and expensive to insist on having his small garden properly plowed and prepared, and also much more effective, than to be driven to the necessity of lugging pails of water, evening after evening, and to sprinkling it about the surface of his garden, when there should be barrelful stored at the bottom of it.

So much for the first step in preparing for the fight against drought. The second is deep harrowing. Too often the only thing accomplished in harrowing is to get the surface of the soil level and smooth enough to run the seed-drill in. The condition of the surface should not be thought of until the upper four or five inches of soil is thoroughly fined—pulverized until you can stick your hand down in it anywhere without encountering lumps. Generally speaking, the disk-harrow is best for this purpose. On certain soils, the “spading,” “spike-tooth” or “spring tooth” types of harrow may be preferable—but the man who hires his work of this kind done for him is not likely to have much choice in the way of special implements. Whatever sort of harrow is used, the ground should be gone over until there are no lumps or clods, and all is fine and mellow. The importance of this work, as far as drought-fighting is concerned, is that there shall not be crevices and air pockets left to aid in drying out the upper layer of soil, and to prevent the formation of the important “dust-mule-hill” of which more is said later on.

The third step, of course, is the fining of the surface, for which some form of smoothing-harrow, or a brush drag, is used. The surface should be left as near the condition of ashes as possible,—the finer the better, provided the ground is not gone over so frequently as to pack it down hard, for we have already seen the importance of having a soil through which water will soak quickly. The finishing touches are usually given with the garden rake. (It is of importance that the piece be planted as soon as this final working-over is given, and while the surface is still fresh and moist.)

That answers for the preparation of the land—deep plowing, deep harrowing and fine finishing. But the condition of the land has also a great deal to do with the matter. It should be in that shape which tillers of the soil are wont to term “in good heart,” that is, besides being rich, it must contain an abundance of humus,—a condition which to the uninitiated may perhaps best be illustrated by the difference between a piece of silk and a piece of flannel, as regards their capacity for absorbing water. Soil containing plenty of humus will absorb water like a sponge; soil deficient in humus will pack and get muddy, and then get lumpy and bake. Thus all important humus is furnished mostly by decayed vegetable matter, either directly by rotted roots and sod, or indirectly by stable manure.

Where land is kept constantly under cultivation, as in the market gardens near large cities, stable manure is an absolute necessity, not only for the plant-food it furnishes, but for additional humus to the over-worked soil. In farm work, and in the home garden that can occasionally be shifted from one place to another, fertilizers may be substituted for manures, at least to a large extent. Another source of humus, too infrequently used in the small garden, is “green manuring” or the turning under of some green crop such as rye, buckwheat, or fodder corn. Very often a strip of the garden is left to barrenness or weeds, harmful and unsightly, where a half-hour’s work and practically no expense would have made an even, pretty patch of green, to be turned under after a few weeks’ growth.

With soil in the proper condition, deeply plowed and carefully harrowed, we have made every provision for storing all the water we can. The second equation in the problem is to save it.

In the first part of this article I spoke of three ways in which the rainfall was lost,—by running off either on the subsoil or the surface, and by being drawn to the surface and there evaporated. It is the third of these that does the damage, for most of the water lost in the first two ways is merely a surplus that we cannot use. The evaporation, however, continues day after day, week after week, wasting the reserve supply that is so vitally necessary to plant growth. Spill a dipper of water on the surface of your garden some hot or windy day, and note how soon it vanishes—all into the air, for examination will show that it did not soak down. Now if that quantity of water

(Continued on page 102)
Utilizing the Waste Spaces of a House

AN EXAMPLE OF ECONOMICAL PLANNING AND THE EMPLOYMENT OF SPACE FOR CLOSETS BUILT IN DRAWERS AND SUCH CONVENIENCES—AN INSTRUCTIVE OBJECT LESSON IN CLOSET BUILDING

A SMALL house at Syracuse, N. Y., recently designed by Alfred T. Taylor, architect, might be regarded as a practical treatise on the art of closet building. Every inch of what is usually waste space in a house is utilized for ingenious cupboards or for built-in furniture.

Dressers, seats and bookcases are fitted into the walls or attached to them, and the architect has seized the opportunity to carry his scheme to completion, building furniture reduced to the simplest terms of good proportion and efficiency, but made to harmonize with other architectural detail.

The Colonial character of the living-room, with its fireplace flanked by pillared recesses, is accentuated by a small cupboard of quaint design, one of those convenient cupboards that promote order in a room by holding magazines and music. In the bookroom the walls are lined by shelves put up by the house carpenter, made of whitewood stained a soft brown. A desk breaks the bookcase line, fitting into its place more perfectly than would the most expensive factory product.

A problem confronting every housewife is the proper disposal of her table linen, a problem usually treated in inadequate fashion, since ordinary shelves or drawers are unsatisfactory, especially for small pieces. The rack for doilies shown in our illustration is a new and feasible invention that proves extremely practical. Movable trays with thumb holes rest on grooved cleats. Each tray holds a set of doilies or napkins, and is easily carried with its contents to the serving-table. Other space in this carefully planned linen closet is filled with shelves for table cloths, etc., and a rack for table leaves.

In the culinary department, cupboards are designed with due regard to the revolution that has come about of late years in housekeeping quarters, now so much more compact and sanitary than they used to be. The butler's pantry is a model of hygiene and convenience. High casement windows flood it with light. In the ledge beneath are two sinks with reversible faucets. Space for glass and china in the opposite wall is divided into low, high and medium-high compartments, so that dishes in everyday use are easily handled without exposing others to dust. Narrow cup shelves placed midway between ordinary
ones are among the features utilizing space to the utmost. The kettle cupboard, opening from the kitchen, is furnished with hooks for saucepans and racks for their covers, as well as with shelves housing the shining aluminum and enamel ware that takes the place of our mothers' iron and tin utensils. A kitchen wall cabinet is another item in the architect's scheme, and has miniature flour bins and cunningly devised compartments for spices. Altogether the kitchen is calculated, through its cupboards alone, to cause a house mistress to long for the usually dreaded hiatus between cooks.

On the kitchen porch is a ledge containing trap doors lifted by sunken rings. Beneath is a shelf holding garbage and paper cans, often in unsightly nearness to a kitchen doorway. Access is had to the cans by service men through a latticed cellar entrance at one side.

The saving of floor space, more precious in a small house than in a large one, is carried to a fine point in the sleeping-rooms. Roof spaces around dormer windows, neglected ordinarily or furnished with low cupboards into which the owner must dive head-first to find anything, are in this case filled with chests of drawers varying in depth according to the pitch of the roof. Here the clothing of the family is stored, and since there is ample room for both summer and winter wear a seasonal overhauling of wardrobe space is avoided. In the children's rooms these built-in cabinets that make chiffoniers or dressers an unknown quantity are especially useful, since they hold

One of the great objections to the gambrel-roof house is the necessity for sloping ceilings in the bedrooms, but these may be turned to an advantage as has been done here.

The treatment of the living-room across the fireplace end is rather interesting, leaving the flanking windows in small bays.
In the linen closet sliding shelves have been built rather close together to hold napkins and doilies.

A very small portion of the dining-room china closet was taken to form a music closet and architectural feature in the living-room.

The Arrangement of Cut Flowers

THE PART PLAYED IN THE DECORATIVE SCHEME BY COMBINATIONS OF CUT FLOWERS—THE ELEMENTS WHICH GO TOWARD PRODUCING THE BEST EFFECTS

By Laura Balch Carpenter

Photographs by the Author

SOME time ago, a beautiful flower arrangement of hardy hydrangea and clematis, *paniculata*, remarkably well placed, excited my admiration. It set me thinking how seldom we see different flowers put together, and what chance there is to enlarge on the roses and heliotrope, and daisies and buttercups of our dear grandmothers.

The governing factor in selecting one flower to be shown with another, is contrast of growth. Contrast of color often plays a part, but not an essential part. For example, in the hydrangea and clematis arrangement before mentioned, the prettiness of the combination consisted in the contrast between the large close packed racemes of the hydrangea, and the loose, airily constructed, finer clematis. Difference of color had nothing to do with it for both were white—the hydrangea was picked before any pink tint showed.

The photograph of white petunia and achillea affords another illustration of two plants of different growth and the same color placed together. It is necessary that one flower be more massive than the other so that the secondary flower is a kind of foil for the heavier one. There is more latitude when just foliage is chosen to put with a flower, but even then we instinctively choose a growth which contrasts pleasantly with the blossom's own leaves.

Poppies and candytuft, salvia and wild carrot, honeysuckle and white phlox, roses and pansies, are merely a few of the successful combinations that can be made. Wild carrot is charming with many garden plants that bloom at the same time. It is also usually easily obtained and can be made a garden feature. In a very large garden last summer at Lake George I saw a strip of it being cultivated for its own lacelike beauty.

In an arrangement of two or three different varieties of flowers, after a decision has been reached as to what subordinate will best show off the primary, there is a question of the disposal in the vase. Study the growth of the plants for your directions. A flower chosen for the secondary one, that is of low growth,
should maintain the same relation to the primary in the flower arrangement as it does naturally. The same is true of combinations of leaves from varieties of trees. In the photograph of autumn leaves and cedar, the maple which grows to greater height than the cedar is so placed in the vase.

Flowers which seem attractive together are best arranged with an eye for combinations of those of the same height, as in the picture of salvia and wild carrot. Here there is a contrast of color as well as the contrast of growth. When a vine forms one member of an arrangement the effect is prettiest if the extra length is allowed below, rather than above the other flower. This was accomplished in the arrangement of the morning glory and mignonette.

In all combinations consider the most massive and boldest flower the primary, arranging secondaries above and below as their growth suggests.

After primary and secondaries are assigned to their respective positions, it seems to me there are two distinct ways of placing flowers in receptacles, either by massing many of the same kind together, depending for effect on color only, or so disposing a few flowers that flower, leaf and stem each plays a part in the design. By the former method all individuality of growth is lost, but for a large decoration to be seen at a distance, it often seems the only practicable way. Imperfect flowers also can be used in this manner with good effect. Although some combinations of flowers may mass successfully, they are apt to be spotty or so blended that the original color weakens too much. As a rule more artistic results are obtained by sticking to one kind only when there is enough of it.

The second method requires few but perfect flowers, and the larger the space to be decorated, the bolder the flower must be. There is more room here for the originality and personality of the arranger to expand. Again study the growth of your plants for suggestions. Present their most graceful sides to view, show a beautiful curve of stem when there is one, and so place the sprays in the vases as to preserve a look of vitality at the base from which they spring, assuming that the surface of the water is this base. Prevent having too much crossing of the stems at this point as it tends to destroy the look of life, which is so desirable. Then balance the masses of blossoms and foliage against the spaces between them; for there must be spaces to show off the flowers and leaves properly. Confusion and overcrowding is best overcome sometimes by discreet clipping here and there.

One of the great principals of the art of design is to make masses and spaces balance each other properly. Why not consider your arrangement a kind of irregular design, as it were, and see that your masses of color and green, and spaces, balance each other, so there are no unpleasant holes anywhere and one part of your arrangement is not too heavy for the other part. “Balance and harmony without repetition, is the governing principle in flower arrangements as well as other Japanese Arts” says Josiah Condor and it is very helpful to keep this phrase in mind.

If we wish we may let our fancy play, and express considerable sentiment when planning combinations of flowers. “There is rosemary, that’s for remembrance, and pansies, that’s for thoughts,” says Shakespeare. Lilies stand for purity, ivy for friendship. Grasses and wild flowers suggest the country, seaweed the sea and so on. Many pleasant times spent together and feelings of...
hospitality and friendship might be expressed by a combination of oak leaves and heliotrope. A friend of mine was sent a beautiful arrangement of roses, pansies, and grasses. The roses and pansies typified the love and thoughts of the giver, and the grasses suggested in one of our pictures is good for general use, as it is very suggestive of the straight growth of the stems.

There are a few general directions too for keeping flowers in water which may not come amiss here. Change the water every day, clipping off a tiny bit of stem. Several competent authorities suggest plunging wooded stems, and stems having a sticky, milky juice into boiling water after clipping. This method opens up the cells and induces a better circulation of sap. Poinsettia for instance responds well to this treatment. With most flowers tepid water is better than very cold. Having as few leaves as possible under water, also helps to prolong life. Indeed the Japanese consider any foliage under water a menace to the cut blossoms' health, and vigorously strip all stems to the height of the vase.

If opaque receptacles only are used, and so far as I know the Japanese always do use them, it is well for us to follow their lead; but transparent vases demand a different treatment of the stems inside them. We have too many kinds of beautiful glass holders, and enjoy them too much, to set them aside and confine ourselves, solely to the opaque. It is better to compromise by discreetly clipping out extra leaves, retaining a little foliage to show through the glass.

As a usual thing in this country we do not consider one flower arrangement in relation to the whole room as the Japanese do, and again as they do, make it the principle point of decoration. We select one little spot, like a table, piano, corner or window, to display our cut flowers, nor is it practicable to do otherwise as our homes are planned and furnished. But it is readily seen how close is the relation between the chosen

The governing factor in selecting flowers is contrast in growth. Marigolds and snow-on-the-mound to the recipient the lovely country home to which she had been asked as a guest.

Many contrivances are on the market for holding flowers in the positions desired. Japan furnishes turtles with cellular backs, crabs, and other devices. There are glass shapes with holes in them, to hold stems, and heavy enough to stay in place in the bottom of a vase. Wire gauze covers for vases, with different sized interstices are liked by some people. A German idea has been improved upon by one of our own Arts and Crafts shops, and the result is a serpentine arrangement of soft metal, which may be bent at will into curves for larger or smaller stems.

Personally I have found this the most useful of any of these articles. Where opaque vessels are employed, bits of stiff envelopes stuffed in between the stems and below the top of the vase, answer admirably. In shallow china, or very heavy glass receptacles, little stones and pretty pebbles furnish a satisfactory and attractive method of holding stems in position.

The Japanese make a short slit in a bit of bamboo of a suitable length for a chosen vase, and cut a little notch in one side. Sufficient spring is thus insured for the bamboo to snap into place between the sides of the vase. Stems of the flowers slipped through the slit maintain upright positions.

Twigs cut from willow act successfully in straight sided vases. There is also much to be gained in flower combinations by choosing proper accessories, just as much as there is when arranging plants separately. One's choice of a vase should be, both in shape and decoration, of a kind to set off the flowers, rather than to display itself too prominently. The shape may be suggested by the flower itself possibly, or the stem or leaf may assist in the choice of the receptacle. The plain cylindrical shaped vase spot, the vase, and plants in it, and how much thought may be put on the reciprocal relations. In short, the whole thing should be a sort of picture which its very completeness forces a little ahead of the objects around it, immediately delighting the eye and at once impressing the beholder as a part of the decorative scheme.
The Four Best Evergreens

THE EVERGREENS TO CHOOSE FOR VIGOR AND PERMANENCE—THE SUPERIORITY OF NATIVE SPECIES FOR LOCAL CONDITIONS

BY ARTHUR HERRINGTON

Photographs by Nathan R. Graves and others

The best evergreen trees for eastern gardens are natives of the eastern states and yet it is exceptional to find them as prominent and permanent feature in the planting scheme of the average country home. We need them and should plant them freely, not merely for the warmth and shelter they impart, but especially for their cheery effectiveness in the winter landscape.

It is strange that our native evergreen trees have been so neglected in this regard, but by sheer force of circumstances we will soon be compelled to turn to them and find them the only solution for the difficulties of planting evergreens that endure and grow successfully.

Experience teaches, and some of us have learned a recent lesson that cannot lightly be disregarded. The death roll among evergreens in gardens and nurseries as revealed to us this spring was appalling and certainly most discouraging to many who have tried to make the home more attractive with choice plantings. The loss has not been confined to recent plantings but many specimens of large size and groups of many years' standing have succumbed to conditions, not to extreme cold; they have withstood many colder winters, but cold drying winds plus a prolonged drought proved a combination of conditions that will not have happened in vain if we heed the lesson taught. The advent of spring made this plainly apparent. Cheapness and availability must hereafter be subordinated to other important essentials that have not in the past been considered of primary importance. What has happened once can, and does, happen again, and there should in consequence there be a careful revision of our planting lists, if the art of good garden planning and planting is to be permanently progressive. The prevailing conditions of the fall, winter and spring of 1910-11 have unquestionably demonstrated that certain evergreens easily raised and quickly grown into adaptable stock are, in spite of their natural attractiveness, lacking one all important essential—that of permanent stability.

The losses so manifest this spring may tend to add to the dislike of, or prejudice against evergreens one sometimes encounters, unless it can be clearly shown that unsatisfactory results in...
evergreen planting generally arise from the misuse and inappropriate planting of unsuitable types from Europe, Asia or the Pacific coast. To cite one common example that of the Norway spruce. It would have been better for American gardens had this tree never been introduced to the country, yet nurseries continue to raise it in prodigious quantity and planters are annually found to take and plant the product.

*Picea alba* or *Canadensis*, our native white spruce, is an infinitely better tree. Why should it be so generally ignored except it be on account of its being indigenous to our country? It is naturally distributed throughout northern territory from Labrador to Behring Straits and is especially abundant in Maine and contiguous north eastern states. It is unquestionably a good permanent tree for gardens and greatly to be preferred to its Norwegian relative. In infancy it does not grow quite as rapidly as the Norway but this is an additional recommendation to its use for gardens of limited area, as it makes a beautiful specimen individually. If planted for the purpose of a screen or shelterbelt it may be a little longer in furnishing the objective but its permanence is undoubted and its density will be retained. It is especially bright and cheerful in its leaf coloring and shows marked variation in this respect from deep green to a decided silvery hue holding its color good throughout the entire winter. It can stand exposure in any situation without loss of verdure or virility, except that hot summers in New York and southwards, sometimes bring attacks of red spider which discolors the foliage, but this is only an occasional and temporary drawback. Another strong point in its favor is that it is a good evergreen for gardens on the seacoast. Sea air and saline winds it has long been accustomed to along the rocky shores of Maine.

In spite of all this merited praise of the white spruce those who would purchase it for planting in quantity will find the available supply exceedingly small, but only because the public has become used to buying Norway spruce and the nurseryman is not to be blamed for growing most of what is in largest demand. Let the facts regarding the white spruce be known and an insistent demand arise, someone will meet it, for seed in abundance can be collected in the national northern forest home of this tree.

*Tsuga Canadensis*, the hemlock spruce, should be with us a full equivalent for the yew tree of European gardens, yet, what scant attention it receives from garden planters? It is easily our most graceful evergreen tree, yields nothing in this respect to the commonly planted Retinispora which apparently has no future with us, whereas the hemlock spruce will endure beyond our time, its beauty increasing with age and stature. When planted as an isolated or individual tree it is sometimes a little slow growing and seems to be retarded or stunted by exposure, but this can be offset or corrected by giving it extra treatment in a well prepared planting site with an abundance of good soil. An unhealthy or impoverished tree not only...
arouses no enthusiasm but it brings about an undeserved disrepute. Undoubtedly the hemlock spruce has failed in hundreds of gardens because it was merely stuck in the ground, not planted intelligently with due consideration for its needs. A tapering pyramid of dense, luxurious yet graceful leafage such as it displays must have the wherewithal to grow from and be sustained and this is to be found in a liberal apportionment of good moisture-holding soil. Given this, no matter what the site and exposure, the tree will not dry up and die, for in the forest and on the exposed mountain side we find noble specimens braving all vicissitudes because the fundamental root needs are right.

Great forests of hemlock spruce once covered our hills where now not a tree of the species remains. In our gardens and about our homes we should, as far as we can, endeavor to restore the lost beauty of this tree whose native primal beauty has been so sacrificed to commercial need that one has to go far from the haunts of men to see it in native surroundings. The world can offer us no better evergreen tree—no substitute; in fact none half so good for American gardens. It is worthy of our best efforts to establish it permanently as a tribute to its merit; not alone for the assured self satisfaction, but for the future permanency that those who succeed us will rightfully appreciate. It has one other good point wherein it resembles the yew of Europe and that is its adaptability to restricted growth. Given right conditions at the root, the hemlock spruce is certainly our best evergreen hedge plant and can be grown into a dense and most effectual screen.

*Juniperus virginiana,* the red cedar, is coming into its own at last, as we have come to realize its distinctiveness and adaptability for special use. In some respects it occupies a unique position among evergreens as by and with it we can reproduce effects that have made us envious of some of the gardens of Italy with their tall columnar cypresses. Our native red cedar is truly the hardy counterpart of the south European cypress and a most dependable tree if properly transplanted. This operation, however, is one not to be lightly undertaken and carelessly performed or the percentage of success will be very small. The density of our cedar, the amount of leafage and consequent transpiration seem so excessively disproportionate to its root system that transplanting this tree needs to be done with special regard to its peculiarities. It was thought to be a difficult and intractable tree because collectors dug up wild trees in a more or less haphazard manner and met with scant success. Now with proper appliances one can go to the wild cedar groves and successfully remove trees of any age and height. It is strange that for years we seemed blind to the merit and varied uses of a tree so widely distributed unless it was contempt born of the fact of its commonness. All kinds of exotic evergreens have been tried in gardens for creating certain formal or architectural effects but the very best tree for this special work in American gardens is the red cedar. Its variable form too, gives it a wide range of usefulness. There are columnar types advisable for formal planting or to give a picturesque skyline and break up the flatness of other planting. Some types grow broad and dense and make a perfect screen planting. In every respect where it can be suitably planted the red cedar is an important tree and nothing that we can import from other countries excels it in character and endurance.

*Pinus strobus,* the white pine, is certainly the one best pine for gardens and grounds in the eastern states. It is also the largest of our evergreen trees, which should be borne in mind when planting it so that it may have room to develop and throw far and wide its spreading branches. It is a rapid grower too, but if allowed plenty of room will retain its lower branches for many years. It can if so desired be kept as a dense compact lawn specimen by taking off the tips of the young growing shoots in June, but a group or grove of white pines in free, unrestricted growth is a telling feature in all stages of its growth. Its long flexible branches and long silvery leaves combine to make it exceedingly graceful; a feature the more ap-

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WHEN a man has built a house his first duty to himself and his heirs is that he should plant trees; when the trees are planted, if he is the right sort of man, on his first holiday he will lay out a flower garden.

Rockgirt is a place built on a rocky hilltop, where what to plant and when to plant it becomes a serious study. When the property came into our keeping the trees were a magnificent monument to the builders' forethought, but we had to look twice to find the garden. A few uncared-for years had brought desolation. They do always do. That is the pathos that strikes deep to the heart of everyone who loves a garden, I have always had the care of a little plot of ground in a town, and in idle moments I have wondered if I should go away and let the plant-battle wage unrestricted, which plants among them all would own the garden.

Here is a garden which the maker loved and cherished. He set it snugly in a hollow of the hill, open to the south sun shining across the meadow. He hauled loads of loamy dirt to make it fertile. He sheltered it by clumps of pine trees planted to the north, northeast and west. Southwest a projecting rise in the hill ascends to the house, from which place one can look down into the garden and from no other point is it visible. As I have come to know the garden, its placing is its chief charm. To be perfect a garden must be solitary.

The first summer that we lived at Rockgirt I left the garden alone and watched it carefully, that I might answer this question of the survival of the fittest in the war of the flowers. I knew the garden was laid out nearly twenty-five years ago. I felt sure all the good old-fashioned flowers had grown there. It had been neglected for ten years. The question of what survived was sufficiently interesting to make me delay digging until everything growing there had had a chance to bloom.

The garden is fifty-five feet square. The paths were easily traced because the beds had been raised high above them, though now a thick sod of wild grasses covered everything. There had been a round center bed some eight feet in diameter with a path circling about. Eight beds, coming from the center one in a star shape, filled the remaining space. The paths had been about three feet wide. As is the case with many old English gardens, a shrub had been planted in the center of each bed. These were all alive, though a fire which swept across the meadow burned them so badly that many of them had to be cut back to the ground. The shrubs proved to be one white

by Flora Lewis Marble
Photographs by the Author
snow ball, *vitex opulus sterilis*; three varieties of spirea-blooming in May; a pink honeysuckle, *lonicer a tatarica*; a fringe tree, *chionanthus virginicus*; a double deutzia, *deutzia crenata*, and a mock orange, *Philadelphus grandiflorus* — blooming in June.

About the base of the mock orange, which stood over twelve feet high, grew a tangled mass of Sweet William of all colors. By the end of the summer I knew that the Sweet William owned the place. Self-sown all these
years, it grew in thick mats defying even the wild grass. It had spread through the meadow and was growing along the wood road. Being a hardy perennial which seeds freely it had everything in its favor. A yellow day lily had thrived as well. It was holding undisputed possession of one bed, but its habits of seldom maturing seed forbade colonization. Besides these an occasional frail petunia bloomed here and there in the grass, and that was all.

Early the next Spring the man with the hoe was set to work in the garden. With a heavy grubbing hoe he removed huge clumps of sod, shaking the dirt from the roots before he put them into his wheel-barrow. These sods were drawn into the meadow where they were piled to rot and be used again in the garden when they become good soil. This hand labor was a slow way to get the beds into shape, but ploughing was impossible without injuring the shrubs. It took one man ten days to clear the grass out of the paths and beds, and work the soil until it was mellow. He also dug about each bush and put manure into the ground at the roots. He collected the clumps of Sweet William and planted them in one solid bed and made a border about another bed. He was paid at the rate of $1.75 a day, making the cost of reclaiming the garden only $17.50.

At this time I took up the garden work. The man with the hoe has been called out to clean the paths every other week, which task has taken half a day each time. The planting and care of the beds I have done alone with a wheel hoe. I anticipated that this summer would be little but a battle with weedseeds in the soil, or grass roots that seemed to appear from nowhere. With this thought in mind hardly, sturdy growing plants were sown in rows far enough apart to allow of cultivation with the wheel hoe. Poppies, zinnias, marigolds, asters, heliotrope, flowering tobacco, (Continued on page 125)
Summer Ferns for Indoors

WHAT SPECIES AND VARIETIES BEAR TRANSPLANTING — THE CARE AND TREATMENT NECESSARY FOR GROWTH INSIDE THE HOUSE

by G. A. Woolson

Photos by H. H. Swift, M. D.

The most serviceable of summer ferns belong to the genus Aspidium. Of these, A. spinulosum intermedium is most satisfactory spirit whenever he longs for sylvan retreats and tinkling brooks which he cannot reach. Aside from acknowledged beauty and grace, the only attributes visible to the lay mind, the restful charm of environment which ferns suggest is greater by far to the genuine nature lover. They are restful also to the eye. There is, however, a practical side to be considered regardless of the sentiment which the presence of ferns induces.

Comparatively few of our native ferns adapt themselves to indoor life, being physically unable to withstand the transition from the great out-doors to the dryer air and dewless nights inside. Therefore, intelligent selection of species is imperative for successful decorative efforts with these shy wildlings.

Among other facts demonstrated by long experience is the uselessness of potting immature specimens of the larger ferns; they are apt to become distorted in the half-light of shaded houses; therefore, it is better to wait until the fronds are strong enough to withstand the disturbance of transplanting and have assumed a normal pose. The reverse is true of certain delicate species. Longer service may be expected if fructification is not advanced.

Aside from the selection of serviceable species a knowledge of the manner of root-growth is necessary for successful transplanting either out-of-doors or in. It is worth while to sacrifice a few plants with this idea in view, that others may be taken from native haunts without retarding the growth of the entire plant or injury to the fronds already developed. Ferns from the genus Aspidium that grow from a central crown are often uprooted with the hand alone, others require some cutting. Ferns that spring from an underground branching rootstock that sends up but one frond in a place are likely to be disturbed unless a section of turf is carefully cut and lifted. To this class belong the Phegopteris and Adiantum pedatum.

Unsuccessful attempts to grow ferns indoors or out, after proper lifting, are often due to over-zealous efforts. The inexperienced culturist is sure to plant too deep. No arbitrary rules can be given, but nature’s methods are safe to follow, and these she varies for dif-

THE fern lover who gathers a wild garden outside his door is sure to take a fraction of the woods inside his home for the summer months, that he may travel there in

ferent genera, so each species should be observed before planting.

The most serviceable summer ferns for indoor use belong to the genus Aspidium. Of these, A. spinulosum var. intermedium is by far the most satisfactory. It is easily uprooted, rarely wilts and thrives anywhere if fairly treated; it excels other species in its indifference to change of light. It is a lovely fern, delicately cut but of firm texture, but it is no small feat to get a large plant out of a wooded swamp unbroken. There is only one way: tuck the roots under one’s arm, holding the fronds back with the elbow, and then go ahead no matter how thick the underbrush may be. Superb specimens may thus be secured in perfect condition.

The type of shield fern (A. spinulosum) is beautiful but requires stronger light, as it grows more in the open than the variety described. This is equally true of its more imposing var. dilatatum, which is big and plummy, very effective in the right place.

For second choice we have the maidenhair (Adiantum pedatum). Many people consider this the most beautiful of all known ferns, far exceeding that of A. spinulosum var. intermedium, but as they are of distinct types, comparisons should not be made. The beauty of the maidenhair is architectural, the most graceful thing in fern creation. The texture, although delicately membranous, is very elastic and therefore holds its freshness for a longer time than most ferns out of doors or in. If taken up properly it grows on with little interruption.

As an excellent foil for other ferns the Christmas fern (Polystichum acrostichoides) has no rival, deep green and glossy, too well known to need much comment. The endurance of this species depends largely upon whether the roots were disturbed in

The maidenhair, by many considered the most beautiful of ferns, grows steadily and holds its freshness for a long time

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transplanting or in the advance of fructification. I never yet knew a matured specimen with heavily fruited tips to be of much service indoors, but young, sterile plants often remain in presentable condition for six or even eight months.

The narrow-leaved spleenwort (*Asplenium angustifolium*), a clear-cut, delicately made-up fern, combines well with the maidenhair; there is nothing in the fern kingdom that looks so cool and refreshing on a hot day as a mass of this choice species which we sometimes find growing at the base of a lofty cliff. It is worth while to try it without the cliff and it is warranted to reduce the mental temperature of over-heated callers who are responsive to nature’s lightest touch.

Although the regal ostrich fern (*Onoclea Struthiopteris*) cannot be recommended for general house culture it is, under right conditions, a great success. Isolated specimens subjected to high winds outside or strong draughts indoors quickly present an untidy study in ferns.

If we wish to drape our walls *Cystopteris bulbifera*, the most filmy and graceful of native ferns, adapts itself to our purpose. It is equally beautiful in shaded ravines, in the wild garden, or spreading its long, lacy fronds against delicately tinted walls. This species, if taken up early in the season—May or June—will last the entire summer. The root growth is singularly light and requires but a little soil to sustain life. Fronds may die but others unfurl to take their places.

Fern growth in the open is governed somewhat by environment; therefore it is comparatively an easy matter to select plants to fit the place assigned. Ferns hanging over a bank or growing over a log or other obstruction are often the right shape for bracket or mantel decoration. One-sided development is preferable always for a corner situation, while an upright symmetrical growth should be used only for a centerpiece of some kind.

Ferns which naturally grow in swampy lowlands resent stagnant water and sour soil, therefore good drainage is an important factor in summer fern culture. Broken crocks or other porous matter will answer in punctured flower-pots, but sphagnum or other waste moss should be used above this matter in all other receptacles, to take up the moisture that cannot be drained out without breaking the fern itself. Light porous soil only should be used; oftentimes enough is taken up with the ferns to sustain life itself for many months. To prevent too rapid evaporation and to give a neat finish mosses of various kinds may be pinned down over the soil. Over-watering is to be avoided. On still nights, where it is possible, potted ferns may be put out to freshen

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The main entrance and service entrance are at the rear, giving to the southern exposure a long terrace commanding the view. All the main rooms of the first story are upon this side.

The introduction of the front corner wings not only gives two important rooms where needed, but permits a particularly harmonious roofing scheme.

Three of the four large bedrooms have adjoining baths, and the fourth has a sleeping-porch. Only the service stairway extends to the third floor rooms.

Looking across the south front from the billiard-room corner. The wide brick-paved path is equivalent to a second terrace.

On the north side at the rear corner is a small covered piazza with a pergola adjoining. A plastered wall encloses the kitchen yard.

THE HOME OF MR. H. D. COREY, NEWTON, MASS. Chapman & Frazer, architects
The central hall is of generous width and at the far end contains a coat closet on one side and wash-room on the other.

Looking across the living-room. At the far corner of the room, on the right, are the glazed doors to the billiard-room.

The glazed porch opening from the dining-room is symmetrical with the billiard-room opposite. Dark-stained lattice work covers the side walls.

One whole side of the dining-room has been treated in an interesting way by building in two sideboards flanking the central fireplace.

The bedrooms are particularly large, and two of them have fireplaces. The closet doors have the full-length mirror panels.

A corner of the northwest bedroom, which, like the others, has been decorated and furnished in accordance with Colonial ideas.

THE HOME OF MR. H. D. COREY, NEWTON, MASS. Chapman & Frazer, architects
Electric Helps

PROTECTION from fire may be secured by purchasing one or more (according to the size of your house) of the electric thermostats, which cost fifty cents apiece. It is not difficult to connect them with an electric bell, and most householders can do so in a very short time. A number may be connected in such a manner that only one bell and battery will be needed. There are also adjustable ones, which may be set to operate at varying degrees of temperature, and which are very essential for anyone who has an incubator or greenhouse, as they will sound an alarm in case the temperature changes to a dangerous degree. They cost something more than the fire alarm kind, because of this adjustable feature, but they often save the wages of the man who would be necessary merely for the warning which this apparatus gives.

It has been found best by the writer to specify a floor push button for the dining-room electric bell system instead of the "pear" push which is connected with flexible wires from the leg of the table to a socket in the floor, because with the flexible wire arrangement it is necessary to cut a hole in the rug or carpet with which the floor of the dining-room is covered. Do not allow such a style to be used. It is more expensive to start with, and there is no difficulty in using the other kind, which readily operates from a gentle foot pressure through the carpet or rug which covers it.

Another attachment can now be procured at a small cost which allows the street electricity to be used to ring all the electric bells in the house, thus dispensing with batteries which are so expensive and troublesome to maintain. These devices will soon pay for themselves.

A Ten Cent Jardinière

THOSE who must needs furnish on a small sum will do well to make pilgrimages to the five-and-ten-cent stores, for there treasures in the way of accessories for the home often may be found.

The jardinière shown in the illustration was bought for ten cents. It is pleasing in appearance and practical in its usefulness. The color of the jardinière is the terracotta of the ordinary flower pot, but a light pinkish buff that harmonizes effectively with the green of the trailing asparagus that fills it. The bowl is drained, by three little holes, into the saucer, so that any excess of water soon evaporates. When the jardinière was purchased there were no wires or chains by which to hang it, but greatest bargains are not kept regularly. However, those who will keep in close touch with the changing stock should be amply repaid for frequent visits by the treasures so often to be found.

Some Suggestions for Old Jars

A RAID of tidiness amongst odd cupboards and top shelves is almost sure to result in a great collection of old bottles and jars. Of course a certain number of these will be wanted, and can be put aside for holding home-made preserves and wines. It is not unlikely, however, that there will still remain a surplus stock which requires to be disposed of in one way or another. Instead of consigning these at once to the dust bin, it is worth while to turn some of them at least to good account after the manner here described.

One does not readily become overstocked with flower holders, and though it may seem rather a far cry from a homely jam-pot to a vase, yet by the use of a simple process or two it is surprising what effective results can be evolved.

Of course it is not possible entirely to reconstruct the character of a jar or bottle or indeed to vary it to any great extent. For this reason the vessels chosen for treatment should be principally selected from those which have the best outlines.

The articles being only roughly moulded, it will also be needful to see that they are free from flaws, either on the surface or in regularity of shape.

Stone jars may be colored or decorated in any style which pleases the taste of the individual who handles them. Brush work seems to be specially well adapted for carrying out simple designs and patterns. It may be quickly done and will give a good and clear impression, which will accord rather well with the severe lines of the article in question. It is necessary to remember that anything involved or elaborate would be quite out of place in this connection, and the patterns selected, whether floral or conventional, should be those which are plain and direct in appearance.

A good enamel, suitable to stand water, may be used for the purpose, and the soft, clear shades, such as are generally used for china decoration, can be readily secured.
Of course the flower holders will not require to be washed as frequently as cups and saucers, for instance, or the enamel might be covered with a coat of clear varnish. The brushes chosen should be good ones and well pointed. The enamel must not be used too thickly and should be very evenly mixed. A medium brush will be the most useful for general work, as it is not probable that the patterns will be of any great size. A small brush or two may be kept at hand for the finer details. Each stroke of the pattern must of course be done in one piece without lifting the brush. Some skill and a great amount of care will be required to successfully place the sections on the rounded and perhaps polished surface of the jar. The strokes need to be very cleanly made with a steady hand. In order to make quite certain of the twists and curves that will best show the outline of the pattern, it may first be tried over on a sheet of paper. If preferred, the principle points can be touched in with a pencil, though as a rule the work is done directly by eye with the brush only. Of course it is necessary before carrying out the pattern to ascertain exactly its best position on the jar, so that it may show to a good advantage. Some drawings look well arranged round the base of the jar, thus leaving the remaining surface plain. Others may be effectively placed just below the curve of the neck. Sometimes a small all-over floral pattern will seem the most suitable, but much will depend on the shape of the jar. Possibly it may be thought worth while to paint the glazed background of the pot entirely in one shade. Then when the coat is dry, the pattern can be worked out in another or a lighter color. As a rule, however, the original cream or white looks very well as it is, especially if the color used for decoration is a soft china blue. On a rough, unpolished earthenware, blue gray or buff gives a nice contrast.

Small pots may be decorated for bedroom pin-holders, or made into dainty little corner vases for the table-centre. Any odd china lids may also be painted with a very dainty effect in shades of blue. The idea of these may be taken from old Dutch tiles. Ginger or honey jars make pretty preserve pots for the breakfast table, and they may be painted in colors which harmonize with the flower vases or with the coffee service.

Glass bottles and jam pots may sometimes be varied in shape by the following method of treatment. For the purpose will be required some olive oil—the commonest kind will answer very well—and a slender iron bar which will yet be substantial enough to bear heating to a great degree. The bottles selected should be of thin glass, those with sloping shoulders being the easiest for manipulation. The one under consideration should be placed on a perfectly level surface, and filled to a height which must be judged by individual discretion. The iron bar should be placed in a hot fire. The result of the experiment will be that the glass will break away at exactly the highest point that is touched by the oil. Thus the finished shape of the vase will depend entirely on the filling. As soon as the iron has been brought to a red heat, it should be removed from the fire and at once gently lowered into the oil until the bottle cracks in the required place. If the rod is rather a short one it is a good plan to grasp it securely with a pair of pincers to avoid any possibility of burnt fingers. The reason for the breaking of the glass is that the heat brings the oil on the surface very quietly to the boil and the bottle, being unable to expand quickly enough, breaks all round at the point where the pressure is greatest. The edges will probably be rather sharp. To remedy this, stretch a piece of glass paper firmly over a block of wood, of a size that can be easily held in the hand, and rub the border of the glass till it is smooth and regular. If desired, the vase may be decorated with metallic sealing-wax, either gold, bronze or silver, carefully banded round the top. This in itself would of course dispense with the roughness of the edge, and it would give the vase an effective finish.

It may be mentioned that the hot oil makes a very unpleasant smell, and it is better to carry on the operation out-of-doors or in a room which can be shut off from the remainder of the house. In every other respect the process is an extremely simple one and can be easily carried out by anybody. The oil does not act very well after it has become all heated by several times of using, but it can soon be cooled down again by placing it in the flask, in a pail of ice-water. If there are a number of bottles which it is required to shape, it is a good plan to use two flasks.

Useful picnic tumblers can be made from ordinary glass jam pots, only of course it is necessary to get the edges very smooth and rounded so that they may not be unpleasant to the lips. Certainly the glasses are inexpensive and breaking will not matter, which is always an advantage for the rough and tumble meals, when one is out camping.
August

August, with its heat and dust and lazy days, invariably brings us to the annual temptation to let things slide. The first and most appreciated of the flowers have all gone by; fresh garden vegetables have become an old, old story; here and there weeds are getting the upper hand in the fight, but then the crops are about all grown; so “what’s the use?”

Well, there’s quite a lot of use. In the first place, fully half of the garden’s good things, and more than half of the flower garden’s beauty, for this year are still ahead of us. In the second place, it’s time for us to be planning carefully our campaign for winter and for next spring.

About the Grounds

To begin with, then, there were one or two places we chanced to visit this summer that taught us some valuable lessons as to the use of trees and shrubbery. These were two or three comfortable little homes where the owners had neither greater natural advantages nor longer bank accounts than ours, but where the judicious use of a few evergreens and a clump or two of shrubbery had us outclassed as far as the general appearance of garden things went.

Plant evergreens now. Especially if the ground is fairly moist, plant them now. If it is very dry it may, of course, be advisable to wait until next spring, but in nine cases out of ten, this means that they will not be set out until next fall, if ever. There is not space here to describe the various spruces, hemlocks, pines, etc., available, at a price within reach of anyone, for beautifying the home grounds, but further information can be had on page 105 of this issue. I do wish to call attention to the fact that there are hundreds of small places upon which not a tree of these kinds is to be found, and where the expenditure of a few dollars would in the course of a few years, not only transform the appearance of the home, but add much to its market value. In planting such trees it is all important to give them a good start, and any extra care taken to make the ground fine and rich for two or three feet wide and deep where they are set, will be repaid richly. If very dry, let several pails of water soak into the soil in the hole the day before planting. In any case, be sure to pack the earth in firmly about the roots, using a wooden rammer and the feet to do a thorough job.

Get a few catalogues—they are full of illustrations and good suggestions—and look into the tree business. You will never regret the time and money spent, for nothing known—the Madonna lily and the Spanish iris—which should not be confused with either the popular German and Japanese iris, as it is very distinct. Both of these should be planted just as soon as you can get the bulbs, for it is important that they start growth this fall, in which they differ from most fall planted bulbs.

In the Flower Garden

Now is the time to plan next year’s flower gardens. Do it while this year’s objectionable features are still fresh in mind, and while new suggestions which you may have picked up here and there are still to be remembered. Get them down on paper. Make a complete and harmonious plan, instead of just sticking things in where there seems to be most room. Probably, to do this, you will have to move around some of the hardy things. Well, the shift will do them good, and incidentally a good many clumps can be separated into three or four, giving you next spring not only more flowers but better, for overcrowding always results in poor bloom. And then there are next year’s perennials to be thought of; you can easily grow your own—and the advantage of doing this is that you can have several hundred just as well as a few dozen, which isn’t the case when you buy them of a florist in the spring. Under “Coldframes” you will find a word more about this.

Fruit

It’s time to get the new strawberry bed made. And while doing it, why not get a few dozen potted plants and try growing a few by the method described in House & Garden in “Grow Your Own Fruit.” Set them in good rich soil, plant firmly so they will start at once, and keep all runners pinched off. Then with proper mulching and care, next spring you will have some of the finest berries you ever tasted. Grapes, too, should be looked after at this time. If they are not developing evenly it is probably because too many bunches have been left on the vines, and they should be thinned out. If only a few are grown, and if proper spraying has been neglected, results may be made certain by “bagging” the bunches with manila bags.
In the Vegetable Garden

In the vegetable garden, too, even in this hot, dull month, there are several things that should be attended to. First of all, care should be taken not to let those few weeds which have escaped the numerous hoeings and weedings remain unpulled. It's a big mistake to leave them a minute. They are not only maturing thousands of weed seeds for the succeeding season, but robbing the vegetables of needed moisture and food. Keep them cleared out, and if they have become so big that they cannot be pulled without doing damage, cut them off close to the ground. Purslane—that thick-leaved, watery-stemmed pest of midsummer—must be cleaned out as soon as it appears because it will mature seeds long before you suspect it of being ready to bloom. One plant, in rich soil, will grow as big as a bushel basket, but it ripens seeds when only a few inches long. It won't die: you must not only pull it but take it out of the garden.

Wherever there is room, late crops of spinach, rutabaga turnip, bush beans, early peas, radish or lettuce may still be sown. If your garden was carefully planned you will know ahead of time where all these are to go, and be prepared with seed of the proper varieties on hand. If not, be sure to make notes for next year's garden. It is time to tie up the first plants of endive for bleaching, and to begin to blanch or earth up the early celery.

Two Specially Important Things

There are two specially important things that must be done now. The first is to sow pansies for next spring's blooming. They can easily be wintered with very slight protection—some strains with none at all. The best way is to start them in a coldframe. They should be sown between the coldest season, but—before August being better. Make the soil as fine and mellow as you can: if dry, give it a good soaking the day before planting. Sow the seed thinly, and press evenly into the fresh soil. Cover with clean sand—not more than a quarter-inch at most, one-eighth is better. Then water thoroughly, being careful not to wash out any seeds, and cover up the frame. For five or six days it may be kept dark. As a precaution against the "damping off" fungus, dust on powdered sulphur over the sand, at the rate of one ounce to a 3 x 6-foot sash. No more water will be needed until the plants are above ground; but be sure to take off the dark covering as soon as they are up. As a means of precaution against heavy rains and too hot sun, cover the frame with two thicknesses of black cloth mosquito netting. The plants can be watered through this, and in bright hot weather should be given a shower every afternoon. In about six weeks they will be ready for transplanting, which should be done as soon as two complete leaves have developed. Set in very rich, mellow soil, six or eight inches apart each way. Keep clean, and before severe freezing sets in cover with a few leaves and pine boughs, or if kept in the frame, cotton cloth, the object being to keep them from freezing but from frequent thawing out and refreezing. No work you can do this fall will pay you such magnificent dividends next spring, and April, May and June will furnish you a supply of gorgeous blossoms that will surpass the ordinary pansy as the chrysanthemum does an aster.

The second thing I referred to is the sowing, about August first, of Grand Rapids lettuce for growing in the frames or under glass, if you have a place. Start the plants as in early spring, only in very hot weather keep the seed-bed slightly shaded. Next month details of transplanting and care will be given.

Coldframes

How about that coldframe that you neglected to build last fall, and didn't have time to put up this spring? Don't, objec your own sake and pleasure, put it off longer. Do it now, or get it done, either way it will cost but a few dollars. Why not get it ready now, and have lettuce and radishes until Christmas, and everything ready for a hotbed for getting a six weeks' head start next month.

American Spanish Pimentos

One of the best of the newer vegetable evolutions is a pimento which is adapted to the United States and which is prolific and hardy enough to be of use to the northern gardener. It masquerades under the name of tomato pepper, probably because it resembles a tomato in shape and color. It is the only member of the pepper family which is always sweet, the taste of which does not occasionally remind one of a pyrotechnic display.

The fruits spring from the axil of each branch, are round in shape, scarlet in color, so mild they may be eaten out of hand like an apple, mature in succession, ripen earlier than any other variety of the family and have the true pimento flavor.

It is now time to plan for the spring blooming bulbs. They should be planted this fall to appear in season.

These peppers are of extremely simple culture. The plants illustrated were transplanted to the garden about May 20th from seed sown in a hotbed about April 25th. The photograph was taken about September 24th.

The better plan, however, is to sow the seed in a greenhouse bench, hotbed or shallow pans in the house about March 1st to 15th. Transplant to thumb pots when the second pair of leaves is well matured and harden off in the cold frame, transplanting to larger pots as necessary. They may be transferred to permanent quarters about May 15th, or any time after danger from frost is past. The one great secret of success being frequent, thorough but shallow cultivation, keeping all weeds down and maintaining a dry mulch.
EDITORIAL

WE have for some time past felt the need of a place in the magazine for a more intimate form of expression than is possible in the articles and departmental notes. In these we can but direct toward the magazine's readers the stream of information, suggestion and, perhaps, inspiration that has its source in the minds of the leaders and pioneers in home making and garden craft. In view of the fact that a man looks to House & Garden for specific instructions as to when to set out bulbs, how severely to prune raspberry bushes or what to do against the attacks of the currant, the articles and notes, necessarily, have been for the most part a decided practical nature. In our hunger for planting information or suggestions upon the choice of hangings we are apt to lose sight of the broader side of home making—"we cannot see the forest for the trees." With the idea that a step back for a more comprehensive view of the subject as a whole cannot fail to be productive of good, we have set aside this page. In it we shall try to find space for an intimate discussion of some of the many interesting phases of home making in America.

THE PROMISE OF AMERICAN ARCHITECTURE

NOTHING could be more suitable as an opening subject than the encouraging prospect, everywhere apparent, of American architecture and interior decoration. Look back, if you will, but ten years, and recall the almost hopeless depths into which our national taste had sunk. Picture the stuffy, uncomfortable, depressing "parlor" of that day, with its lathe-product furniture, its sprawling design of gilt encrusted wall paper, its gaudily colored carpet, its hideous array of mantel ornaments and its rococo gilt picture frames that waged incessant warfare with their blatant background. Surely the picture is not overdrawn. Compare it with the home of today in country or suburbs. Could any prospect be more encouraging than this tremendous step forward?

OUR DEBT TO ARCHITECTS

HERE have been many forces at work assisting in this renaissance—the material prosperity of the nation, the increased facility of travel abroad and the advance of our educational standards among them, but it seems to us that especial credit is due the architects of the past two generations in America. Early and late they have labored for better things in American art, usually in the face of a lamentable but nevertheless firmly established tradition, ignorance, and a national taste that was at its lowest ebb. To these men who, by reason of their education and reinvigorated taste, strove always for better things, greater credit must be given by reason of the fact that they chose not the easier path in their work. It is always easier to make a living by giving a man just what he wants in the shape of a house rather than to impress upon him the desirability of spending his money for something that as yet he is unable to appreciate. Yet, on the whole, that more difficult course is the one the architect has in recent years chosen, and is choosing today.

AN INTERESTING EVOLUTION IN FURNITURE

THE betterment along the lines of interior decoration has followed the lead of our architecture and, particularly in the last four or five years, has made rapid strides towards the high levels that have been set in certain epochs of the past, when the pendulum of artistic appreciation had swung to a high point of the arc. It is particularly interesting, and perhaps instructive as well, to glance back over the more or less distinct stages by which we have reached the point we now hold. As might naturally have been expected, the increasing efficiency of wood-working machinery led the generation or two before us into a veritable riot of turned forms, machine-pressed "carving" and jig-saw detail that had absolutely no excuse for being, excepting that it showed how marvelously versatile our machinery had become. Satiated to the point of rebellion with this sort of thing, it was once more the perfectly natural thing for the public to face about and seek relief in the products of hand craftsmanship—the furniture that proclaimed, vociferously at times, by exposed tenon and pin, neat mortising and the absence of all curved lines, carving and other forms of ornament, its escape from the thraldom of the machine. Though better than what had gone just before, the unnecessary weight and clumsiness of this so-called Mission furniture—and with it came obtrusively coarse hand-woven hangings and ornament founded on geometrical forms rather than on plant life—soon became wearisome. A gradual process of lightening and greater refinement soon began to make itself felt, the beauty of the curved line was again recognized and finally a feeling after suitable and restrained ornament has started to develop. Of course there have been other tendencies apparent in this evolution—our recognition of the beauty of wood and line in the furniture and architectural detail of our Colonial ancestors, the influence of the art nouveau that stirred Germany into an artistic revolution, and our increased familiarity with the spirit and letter of historic styles that have gone through their marked cycles of revolt, refinement, decadence and revolt again in France and England. An unprejudiced survey of the road over which we have come in the past decade, however, cannot but be encouraging. We have been sitting out the chaff and, in the main, have refrained from straying into side paths that would have led only to disaster.

The progress in furniture is but an index of the advance made in the past decade in other branches of interior decoration. Look, for instance, at the wealth of varied design and texture in the fabrics now obtainable for hangings or for furniture coverings—and these not alone in the more costly forms. Indeed, in the case of fabrics, excellence in design seems to be found, as it should be elsewhere, nearly as frequently among the inexpensive stuffs as in those of greater cost. Look, also, at our modern American pottery, the increasing use of simple brass receptacles, the prevailing higher standards in floor coverings, the notable improvement in wall-paper design—particularly along the line of restraint and better color. Is not all this a most pleasing prospect?

AN A WAKENING TO THE JOYS OF GARDENING

OUR progress in gardening during the past decade has not been so marked as in architecture and interior decoration. Or perhaps it would be more nearly accurate to say that the advance, while as sure, has not been so apparent because of the fact that America as a nation has not yet reached a point where it is as much a national instinct to make a beautiful garden as it is to make a beautiful home. There is no need to reproach ourselves with this fact—just as there is no need to reproach a child because he can walk but cannot talk. We simply have not arrived at the gardening age, nationally. In England, as we all know, even the most humble laborer has his dooryard garden—he would as soon think of dispensing with it as with his cup of tea. The day when we, too, will have reached that stage is not yet in sight, but it is coming.
THE problem of finding an inexpensive, clean, dustless paving for streets of small cities has been solved by the development of tarviated macadam. This differs from ordinary macadam in that the voids of the roadway are filled with a matrix of Tarvia, a tough waterproof coal tar product.

Tarviated macadam costs but little more than ordinary macadam, and costs no more in the end because the Tarvia treatment reduces maintenance expense. Its plasticity makes it exceedingly quiet. Automobile traffic does not damage the surface, but, in fact, makes it smoother.

Traverse City, Michigan, one of whose streets is illustrated above, is one of the towns which has found tarviated macadam to be the best and most economical solution of the paving problem.

On Feb. 7, 1911, Mr. E. Wilhelm, The Mayor, wrote as follows:

"We have used Tarvia in paving a number of our streets with very satisfactory results. When properly laid, a smooth, elastic surface is produced, and I believe that it is equally as durable as some of the more expensive kinds."

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The Decorative Possibilities in Roofing

(Continued from page 89.)

diirst mischief upon similar occasions.

Great flanking double stone chimneys at each gable-end of a Colonial house, as shown in the photograph, give an aspect of strength and solidity that is sure to please a taste for robust architecture. The whole house has an established look. The chimneys with the connecting curtain walls would prevent any suggestion of angularity even in a steeper roof and have almost the effect of battlements.

The third picture shows a felicitous arrangement of dormer windows where the lines and proportion of the roof are not disturbed by their introduction. The frames and casements are of such light construction and so unobtrusive that they do not destroy the balance, and we still have nearly the unbroken effect of an unpierced roof. Dormers unless judiciously managed can work confusion. A roof all full of dormers loses its dignity and calm and becomes restless. It is like an unduly inquisitive, pecky person whose argus-eyed curiosity is always on the watch in all directions to see what goes next.

So many of the English cottage roofs owe their charm to their unbroken surface and treatment.

Attention should also be called to the placing of the chimneys which are so set as to break the sky-line agreeably. The proper placing of chimneys so as best to relieve the sky-line is a subject that cannot be too closely studied whether they be grouped or built at intervals.

The small house with the windows of the second floor bursting through the roof in a solid phalanx is a fairly successful piece of work. The effect of the one-and-a-half story house has been preserved and the windows of the second floor have been brought through the roof in such a way as to let you feel they are still a part of the roof. The gabled sky-line and irregularly placed chimneys of the English half-timbered house denote a steady normal growth, here a little and there a little, as the needs of each succeeding generation demanded. While the irregularity of the many additions breaks up the mass of the roof, it does not destroy its unity.

Who can resist the appeal of an old gambrel-roofed house? The old Dutch house in the picture with its well-proportioned gambrel, its steeper slope pierced by modest dormers and ending in a generous outcurved overhang forming a porch cover, and last but not least, its many balustrade surrounding the ridge of the roof, offers an example worthy of sincere imitation. It is a type especially suitable for the small country or suburban house and offers itself readily to modification. The one great danger in planning a gambrel roof is the tendency to make it too small. It is perfectly true that a gambrel roof is much better suited to a small house than a large one, but for the size of the building all the roof surface possi-
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Sugar Wafers

The one confection that offers unalloyed sweetness without cloying the appetite—offering the fragile goodness so desirable in an after-dinner tidbit.

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The Trend of Modern Furniture

*(Continued from page 95)*

assemble them with this charming style in the living-room and dining-room; and the owner of Hepplewhite or straight-legged Chippendale, perhaps very restrainedly carved, may feel safe in bringing certain of these pieces to its companionship. Their employment as a style or as a type secures oneness of effect not to be gained by a miscellaneous use of eighteenth century pieces.

And we have here, it may be asserted, the keynote of future informal furnishing—when rooms will not be furnished helter-skelter, nor pictures hung hit or miss—the assembling in phase or style by types. Conglomerate furnishing was a revolt against the equipment of the parlor.
MOTT'S PLUMBING

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Before Imperial solid porcelain bath tubs were successfully made, enameled iron was the generally accepted material. We make a complete line in both Imperial solid Porcelain and enameled iron. For the better class of work, however, Imperial solid Porcelain is indenifiable superior for beauty, cleanliness and durability. Its hard, snow-white surface, fired in the kiln at a heat which would fuse metal, can be kept spotless by simply wiping with a cloth or sponge.

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Fighting the Drought

(Continued from page 99)

is taken away from a square foot of surface in a few hours, try to imagine the amount lost upon even an eighth of an acre in a week of dry weather! And, unless you stop it, it will continue to rise from the depths of your garden and pass away invisibly into the air.

Fortunately, the way to stop it is simple and easy. From the day your garden is planted until you can't get between the rows, never let a crust form on the surface. That's the whole story. With iron rake and hoe and wheel-hoe keep the surface inch or two of soil finely pulverized. Especially just after every rain go over everything as soon as possible. Never mind if your garden is dry as ashes all the time; that is the way you want it, on the surface. And then, when your neighbor, obsessed with the foggy idea that the soil should not be stirred because it makes it dry out, is complaining about dry weather, you can scrape down with your fingers through the dust and take up a handful of good moist soil.

But times will come, in the driest seasons, when every precaution that has been taken will fail to hold the fort against the enemy. Day after day, week after week, you watch in vain for the black bank of storm clouds in the northwest, or hope for the heavy artillery of the heavens that foretells at least a temporary relief from the prolonged siege. Your water is giving out. Even if every possible drop has been
saved in the soil, growing plants have exhausted it. You must, after all, lose the battle, or irrigate.

Now, to the average mind that word irrigate means vast reservoirs costing millions of Uncle Sam's money, and miles of pipes and sluices and ditches and flood-gates—an undertaking of the Titanic West. But it need not suggest these things. It means simply applying water to your plants in such quantity that it will be of some real use—the ordinary watering is frequently worse than useless; for unless enough water is applied to soak down into the soil, the results are a crusted, packed surface, and roots tempted up to the hot top soil. With their inexplicable instinct, they will turn toward food or moisture as surely as a sunflower follows the sun.

The principle of irrigating involves only three factors, and they may be of very simple solution. First, an adequate supply of water; second, a suitable means of transporting it; and lastly, some method of applying it properly.

Probably many of the readers of this magazine have city water, with enough force from their three-quarter-inch pipes to run a good stream through an inch hose. For them the problem is a very simple one—unless some day when perhaps a few dollars' worth of extra hose is left by the department store's wagon, there comes a short notice from headquarters stating that there is enough water left to last thirteen days more, and will every one please be careful.

There are, however, many houses in which the water supply comes through a small pipe from a well or spring, and while the supply is constant, the amount of water on hand at any one time is very limited. In such instances some method of storing up the water until a suitable quantity for irrigating is on hand, becomes necessary. Either an open tank, elevated at least several feet above the spot to be irrigated, or a compressed air tank will answer the purpose. Or if the water is in a large cistern, or deep well, a good pump will save the necessity of a storage tank, the water being applied to the soil directly from the supply pipe. It may be operated either by hand, or a gasoline engine or electric motor—the system, of course, depending upon the amount of water required and other circumstances.

The cost of the various items mentioned above is, of course, of interest to the persons investigating an irrigation system. A metal or wood tank will cost from $15 up, according to size. A cheap and practical substitute may be had by uniting several barrels or hogsheds, which can be bought, without heads, for from 35 cents to $1.50 apiece. Short pieces of iron or lead pipe inserted a few inches from the bottom are used to connect them. The iron pipes are made tight by means of washers and lock-nuts, and the lead pipes by being driven through into the barrels half an inch or so, and then reamed out and hammered down tight. In this way a tank of considerable

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If twenty men form a line and pass the buckets from hand to hand, they can put out a larger fire. But the same twenty men on the brakes of a "hand tub" can force a continuous stream of water through a pipe so fast that the bucket brigade seems futile by comparison.

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- **New Jersey Tea** (*Ceanothus Americanus*), white.
- **Staghorn Sumac** (*Rhus typhina*), dense panicles of flowers, followed by attractive red fruit masses.
- **Sweet Pepper Bush** (*Clethra alnifolia*), white, feathery, flowers, spicy fragrance.
- **Hardy Hydrangea** (*H. paniculata*, var. *grandiflora*), white, turning to pink.
- **Rose of Sharon** (*Hibiscus Syriacus*), pink, red and white.

**Making a Garden on a Hilltop**

*(Continued from page 109)*

Pansies, parsley and even lettuce and a few tomato plants found their way into the beds. Two beds were bordered with gladioli. These were set in trenches ten inches deep and cultivated as if they were potatoes.

The mid-summer was perfectly dry. One month passed with only a single shower. Every week I went over the garden with the wheel hoe. The dust would fly under the blade and the work took on the character of sub-soil farming. Thanks to the deep preparation of the soil that the grass roots had made necessary, and the constant working of its surface, the garden grew in spite of dry weather, and we had flowers and salads from it all summer. The gladioli were especially fine, much better than I have grown from the same stock when I have planted them less deep and watered them. They grew very tall, and stood erect without stakes. The flowers were large and perfect.

When a square garden is set down beside a meadow with pine trees on one side, a hillside jutting with rocks-and-covered with daisies on another, and blue mountains stretching thirty miles away on every side, the masses of flowers must be larger and the colors more pronounced than those of the garden with a wall about it, or one that breathes the air of a city or town. This garden could never have a wall; its charm is its own, that of being able to look past the gay posies to a blue mountain background, but the step between meadow and garden seemed at first difficult to make. However, this is what has been done. A path three feet wide goes all about the outside of the beds. Beyond this, on the south, berry and currant bushes have been set in rows. All the large stones have been piled by the path that skirts the rocky hillside, and Clematis

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Yes, buy one—you intend having one some day, so whatever is the use of putting it off year after year and missing the hundred and one pleasures it makes possible. Why not do a little scheming and if necessary cut something else out so you can bring the greenhouse in? For nine solid months your greenhouse garden can be in bloom. Your out-doors garden will be supplied from it with good stocky ready-to-bloom plants that will mean at least a month's advance. But what is the use of dwelling on a greenhouse's advantages? Everybody knows how indispensable they are nowadays.

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Genuine "Standard" fixtures for the Home and for Schools, Office Buildings, Public Institutions, etc., are identified by the Green and Gold Label, with the exception of bath sets bearing the Red and Black Label which, while of the first quality of manufacture, have a slightly thinner enameling, and thus meet the requirements of those who demand "Standard" quality at less expense. All "Standard" fixtures with care will last a lifetime. And, no fixture is genuine unless it bears the guarantee label.

Send for a copy of our beautiful catalog, "Modern Bathrooms." It will prove of invaluable assistance in the planning of your bathroom, kitchen or laundry. Many model rooms are illustrated, costing from $75 to $600. This valuable book is sent for 6 cents postage.

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| Washington. | 411 Southern Bldg. |
| Toledo. | 311 Erie Street |

(paniculata) planted where it can grow over them. Goldenrod, wild asters, evening primroses, wild lilies and wild flowering shrubs are being massed along the other two sides of this outer path to further restrict and frame the garden setting. The garden is reclaimed now, and from this time on it can receive as many and choice varieties of hardy flowering plants as my pocketbook can afford.

Just here let me mention one of the chief advantages of growing flowers on a hilltop. The frost comes several weeks later than it does in the valley. Long after the fall flowers in the low gardens are dead and gone ours are blooming merrily. In the winter the hilltop is several degrees warmer than the valley. Last winter on the coldest night the Rockgirt thermometer registered only eight below zero, while in the village in the valley and even just at the foot of our hill the thermometers went down to twenty-two degrees below zero. Such a difference renders it possible for winter roses on the hill which cannot stand the damper cold of the valley, and this has been done successfully by a hilltop neighbor of ours. Of course, this works the other way in spring. The flowers in the valley are in bloom first if left to themselves, but our garden, being sheltered from wind and open to all the sunshine, is only about a week later.

A garden, to me, is a place apart, a place where I can go to be alone. It is my first necessity after I have a roof to cover me; my next is to have flowers about the house, sociable flowers that can make merry with my friends. For this purpose the sturdy, ever-blooming, more or less conventional geraniums always appeal to me. Shortly after we took Rockgirt, I invested five dollars in choice varieties of ivy-leaved geraniums of shades of pink. In winter they are kept in the sun-parlor and in window nooks. They are slipped once a year, the young plants are started in sand, repotted and used for outdoor decoration in summer. So the stock continually increases.

I wanted flower beds close to the house walls, but this was found to be impossible as the house stands literally on a rock with only a few inches of dirt to cover it. When a workman digs a hole he uses dynamite. This seemed a ludicrous way to plant geraniums, so I put them in five large porch boxes hung between each post to a plain porch railing. With much persuasion and top dressing, common woodbine has been induced to grow about the porch posts. By means of the railing, the boxes and vines, a dreary, bare porch that we found at Rockgirt has been converted into a cheerful out-of-door living room at little cost. Each spring white heliotrope and petunia plants are started indoors to put in the boxes with the pink geraniums. The white and pink flower clusters are charming between the green hanging vines. In the winter evergreens are planted in the boxes and form a great shelter from the flying snow.

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The Four Best Evergreens
(Continued from page 107)
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And by the way, if you have an automobile, then just attach a greenhouse to the garage and the heating for one will take care of both—a happy thought.

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Gathering and Storing Kitchen Herbs

To those who devote a portion of the garden to culinary herbs, their gathering and preservation for use during those months when the taste requires a stimulus is an important consideration.

Thyme, savory, parsley, sage and sweet marjoram lend agreeable flavors to winter roasts and stews.

Herbs should be gathered just before they flower, as leaf and stem are then in their best flavor.

Where the herb garden is in a permanent location such herbs as basil, marjoram, savory, sage and thyme are ready for picking in July. If grown from spring-sown seed, however, they cannot be gathered before September.

The work should be done on a dry day. Gather the herbs by breaking off the branches of the plants to a length of five inches. Cleanse them from dust by rinsing them in cold water.

There are two methods of drying. One is to do the work rapidly over a hot fire; the other is a gradual process in the sunshine with a gentle air stirring. There is something pleasingly suggestive in the thought of herbs dried in the soft summer air, but it is sentiment, nothing more. In reality they borrow nothing from the scented breeze. Sun and wind have served their purpose during growth. The better process is that of quick drying. To accomplish this they may be bunched and suspended over the stove, or spread upon a frame of coarse-meshed wire when the...
fire is hot and there is no steam, as on baking day. A moderate oven serves the purpose well if the door is left open and the herbs spread upon a wire rack or frame permitting circulation of the air.

When brittle-dry the leaves are picked off and stored in covered bottles or cans. If so desired, it is an easy matter to pulverize them. Lay the leaves upon a pastry board and roll them fine. Sift them through a flour sifter.

Herb powders which blend the flavors of several herbs and convenient accessories to the kitchen stores; for instance, those herbs which are combined into kitchen bouquets, favored by cooks, may be pulverized in this way and mixed in the desired proportions which individual taste determines.

An agreeable blend for flavoring soups or stews consists of one part sweet marjoram, one part thyme, one part winter savory and two parts parsley.

Bringing Wild Flowers Into the Garden

(Continued from page 97) impossible to find them at any other time than when in blossom. Those which have been named are only a few of the many which can be cultivated in the garden. A walk through the woods cannot fail to reveal many which are equally as deserving as those to which attention has been called.

The Garden of the Small Space

No one need be deterred from raising a few green vegetables by lack of space. Many things can be grown on a limited amount of ground. The experience of one of my friends proves my assertions.

She lived in a house with but a small plot of ground around it. One morning in the spring when she returned from market with six sturdy tomato plants, the rest of the family laughed at her purchase. In no way discouraged at their jokes at her expense, she planted the tomato vines close up to the back of the house where they could be trained up the wall. They responded lustily to her care, and soon covered it with green vines and leaves. She kept an account and found she had gathered one hundred ripe tomatoes. Some of them were rather small, to be sure, but large enough to count. Besides, she gathered nearly a bushel of green tomatoes in the late fall. She kept the frost from injuring the vines by means of a protection hung in front of her vines at night.

Her success so encouraged her that, this year she has tried more experiments. She planted lettuce at the foot of her tomato vines. By sowing the lettuce seed at intervals of time, she has had a succession of crisp, tender leaves all the season for salads.

Furthermore, she trained some cucum-
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Establishing Summer Ferns Indoors

(Continued from page 111) up in the dewy air but take in before the sun strikes them in the morning.

In filling large jars and boxes it is often necessary to combine several plants of the favored variety intermedium or other species, but fronds from several crowns rarely have the desired pose unassisted; this may be deftly done with heavy wire hairpins at the base of the stalk or else supported by branching twigs of the pesty willows; the soft grey catkins and richly colored bark of the varying species of willow are highly effective among the fern fronds, quite worth while for their beauty alone. Ferns of lesser growth which droop over and down are always attractive and often give the needed finishing touch.

The most attractive indoor window box that I ever saw was made an inch or so wider than the low sill on which it rested; it was of galvanized iron and bark covered. Two magnificent ostrich ferns reached almost to the top and nearly filled the window; they were carefully cut out to fit the width of the box after they were perhaps eighteen inches high—as the roots were undisturbed the growth preceded upward for lack of space to expand in the outdoor vase-like way. To prevent breakage because of certain inevitable spreading of fronds, cramped only on the window side, a ribbon guard was tied to brackets half way up on either side. Maidenhair, bladder and Christmas ferns with the delicate bishop's cap and foam flower filled the remaining space in the box. Pussy willows were also on duty for gathering in strayin fronds. Nothing in the world of plants so transforms the plainest of rooms or hides as an intelligent and artistic use of native ferns.

For the smaller ferns, especially for table or for use in the endless inches in any home that needs the touch of a wild flower or fern, glass dishes are preferable to all others—the plant is better; if lined with a sheet of moss over an inch of pebbles an artistic effect is obtained. The moss keeps the soil from working down and the pebbles quickly show an oversupply of water which can be drained out. The lining moss should be large enough to turn over the top and be pinned down with invisible hairpins; this prevents too rapid evaporation and makes an attractive finish. An eight-inch glass can quite easily carry a tall maidenhair as centerpiece with Cystopteris bulbifera, small Christmas and...
other ferns clustered about it, and each with the desired "hang" of fronds. Granted that nature is the great artist, she is not above taking a hint or two and subverts with perfect grace.

A most effective finish is the so-called gray moss or even a fluted gray lichen. Stiff growth of this sort is adjustable when thoroughly wet; just enough should be broken away to allow the new fronds to push through without scalping themselves. Young maidenhair with a touch of the Christmas fern above this gray carpet is an exceedingly lovely combination.

A Barrier Against Garden Mud

WHENEVER the weather has been at all damp—which time is, of course, the time when most of the garden hoeing has to be done—I have met with considerable objection on the part of my household regarding the mud that is tracked in over the floors. I have finally discovered a way of preserving peace in the family by means of a combined shoe scraper and brush which is attached to the wooden sill at the bottom of the cellar stairs. In coming in from the garden to leave the tools in the cellar, where they are kept, it is an easy matter to scrape off that portion of the garden that has been brought along.

R. F.

For a Longer Bloom

THE amateur gardener may be interested to know that a second crop of flowers may be obtained from many garden plants whose season of bloom would otherwise be short by cutting away the faded flower heads, and not allowing seed pods to form.
Notable success may be had with such plants as hardy Phlox and Sweet William: a new growth quickly follows, and the second crop of flowers is almost as profuse as the first.

**The House Fly**

A MODERN human interest story should be written, to be read as a part of the summer curriculum in every home, dealing with the housewife and the house fly. In this story the fly should appear as the subject of a relentless and endless war of extermination. In real life, however, the housewife, together with her family, too often plays the role of victim. That is the fly’s business, and, too generally, the housewife’s fault.

There are two leading propositions to be considered relative to the fly: first, what he is and does, how objectionable and dangerous he is; and, second, how to be rid of him. An acquaintance with the first should lead you to adopt the means of the second.

We have allowed ourselves to complacently regard the fly as a harmless insect that, at most, is a nuisance mostly because of his habits and his persistence. He insists on mussing things up in the house when he can get in, and takes an apparent delight in keeping us company at meals, walking over the table things and crawling in and among the uncovered victuals, leaving his disease-germed specks and the imprints of his butter and gravy feet on linen and dishes.

Beyond that, and the fact that he is not an appetizing accompaniment to our repasts, we have never taken the trouble to give him very serious consideration.

A sweeping holocaust is needed to show us flaws of construction, which may lead to better fire protection. Nothing less than an appalling sacrifice of human life seems sufficient to stir the people and the authorities to adopt means of relief. It required the grievous and calamitous experiences of the camp life of our soldiery of the Spanish-American war to teach us the awakening lesson of the fly’s fatal, disease-spreading habits.

During that campaign the fly killed more of our soldiers than the bullets of the Spaniards; more than all other causes combined—more to the extent of eighty per cent.—keeping nine-tenths of the men in hospitals, and killing a thousand to every dozen men who fell in battle. And all this was attributable to the disease germs carried by the common house fly from excreta and other infected matter, to the food in the kitchen tents and the mess tables.

The records of the War Department show that of 133,513 men, 22,420 were sick of typhoid fever, from which 1,924 died. The total deaths from all causes were 2,197. Most of the deaths from other causes than typhoid resulted from dysen-
tery and kindred bowel troubles, directly traceable in the great percentage of cases to the germs carried by the flies that bred and swarmed about the camps.

Scientists for years had suspected the fly as a carrier of disease germs. The camp epidemics verified their suspicions.

Our men were sent into the field with every modern device for fighting their enemies—excepting the fly. He was not taken into account. They had to reckon with him later; all because we had not then learned the vital necessity of proper sanitation to prevent the breeding of flies.

That the lesson was learned, and well, was shown by the six months' camp of the 234 Infantry at the Jamestown Exposition in the hot summer of 1907, with only two per cent. of sickness, and with practically no flies or mosquitoes, though located on swampy ground but ten feet above sea level. Intelligent camp sanitation served as the preventive of fly breeding, as well as avoiding development of poisonous germs to be carried by such flies as found their way to this camp.

It was simply an example of the class of sanitation that may be maintained about every suburban and rural home in the country, and that, with proper care and attention, would result in a proportionate lessening of disease.

The fly costs this country about $500,000,000 annually; which does not take account of the value of the thousands of human lives the fly is responsible for taking. As an instance, it may be cited that in New York City alone there are over 12,000 deaths each year directly charged to the disease-carrying fly. And New York, except along the immediate waterfront where sewage abounds and sanitary conditions are below the average, has only about one fly per capita to every 100,000 to be found in the suburban and country districts.

The breeding place of flies is in filth; horse manure, human excrement, decaying animal matter, rotting vegetables, fermenting garbage and the like. Each pound of such material will incubate about 1,500 flies, repeated every ten days twelve times during the season, or a total of about 40,000,000 to each ton of filth.

On 28 flies from dwelling houses, stables, pig pens and swill barrels, examined between the latter part of July and the last of September, there were found about 500,000,000 disease germs; an average of about 1,250,000 per fly. On 18 flies trapped while feeding about kitchen swill barrels the average was 6,600,000 per fly.

A number of flies kept and caught in a bacteriological laboratory, where cleanly conditions prevailed, were found to be practically free from disease germs; a most conclusive demonstration in favor of cleanliness.

Perhaps the next fly that falls in your coffee may wash off several millions of various kinds of disease germs before he swims to the edge or drowns. Probably he has just been feeding on the rankest

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mend it to the casual eye. Built perhaps sixty years ago on semi-colonial lines, the interior was found with the exception of the wing to be in fairly good condition. The wing was entirely remodeled.

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The small Colonial entrance porch was joined to the veranda and the household comfort was thereby greatly increased.

The small Colonial entrance porch was joined to the veranda and the household comfort was thereby greatly increased.

The Best Food for Ferns

POT ferns in old, rotten stump dirt, if it is possible to obtain it from the woods, for this is their natural soil. Keep them damp most of the time, leaving them continuously in a place where they get no wind and but little direct sunlight. Then about once in two or three weeks water with this solution: A half-teaspoonful of niter of potash dissolved in a gallon of water. (A smaller quantity may be made in the same proportion.) Put this around the roots rather than on the green fronds as it would scald them if too strong. This is the solution used in greenhouses, and nothing is better, according to florists.

An Oversight

DUE to a mistake, no appropriate credit was given Mr. Lawrence Visher Boyd, the architect of the “House in the Peach Orchard,” which began the July number. Mr. Boyd’s work has appeared in House & Garden from time to time, and we regret that readers were not apprised of the fact that this house was also his work.
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Getting Rid of Poultry Lice

A n extra effort should be made to rid
the poultry house of lice before the cold
weather sets in, for the gray hounds—
red when filled with blood—is one of
the worst of the poultry vermin, and spends
its time on the hens in winter, instead of
seeking refuge in the roost, as is its habit
throughout the summer. While the
weather is warm these lice prey on the
birds only at night, allowing them to
remain in comfort during the day, but in
winter they are always at work. For that
reason it is well to remove the roosts in
September and saturate them thoroughly
with kerosene, having a care that the
liquid penetrates every crack. The kero-
sene should also be used on the supports
which hold the roosts, as well as in the
nesting boxes. One of the liquid lice kill-
ers may be used in place of kerosene.

The white lice, which swarm all over the
poultry house if not held in check, and
which often get on the attendants, are best
exterminated by using whitewash or by
spraying the house with kerosene or a lice-
killer with a spray pump. A pump makes
it possible to drive the liquid into all the
cracks and corners. When whitewash is
used, it should be very thick and is best
applied with a broom, for even the roof
should not be neglected. Crude carbolic
acid—half a cupful to each pail of the
mixture—will make the whitewash bath
doubly efficacious.

There is one other kind of louse, a long,
yellow felloe, which remains on the hens
all the time. As a rule, this louse does not
multiply very rapidly and causes little
trouble if the hens have an abundant op-
pportunity to dust themselves in dirt or ashes,
the latter only when loam or sand is
not available. Loam is preferred by the
hens to light sand. Persian insect powder
may be dusted into the plumage if these
body lice seem numerous.

E. I. F.

The Causes of Shelless Eggs

W HEN shelless or very soft-shelled
eggs are found under the roosts, it
is well to examine the latter to make sure
that they are as wide as they should be.
If so narrow that the hen has difficulty
in maintaining her balance, shelless eggs
are often laid as a result of the bird's strug-
gles to keep her position. The roost
should be flat, two or three inches wide,
and securely rounded on the upper corners.

Soft-shelled eggs often result from in-
proper feeding. The daily rations should
include green food of some kind and grit
as well as oyster shells should be supplied
if the birds are kept in confinement. If
running at liberty, they probably will get
enough grit. Indeed, hens on range sel-
dom lay shelless or soft-shelled eggs.
Con-
diments or other stimulating foods tend
to cause the laying of imperfect eggs,
as does a ration which causes an accumula-
tion of fat, although this explanation is
more often to be looked for in the case of
hens one or more years old than in that of
pullets. Pullets, when frightened, lay
shelless eggs.

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Oswald C. Hering, architect

CONTENTS DESIGN: FALL ANEMONES
Photograph by Nathan R. Graves

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Photograph by H. H. S.

HOMES THAT ARCHITECTS HAVE BUILT FOR THEMSELVES
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A ROUND-UP OF THE BEST PEONY VARIETIES
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GARDEN DEPARTMENT
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SHRUBS
Making the Garden Path

EDITORIAL PAGE
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Copyright, 1911, by McBride, Nast & Co.
The home of Mr. Ernest F. Guilbert, Forest Hill, N. J.—Guilbert & Bettelle, architects.

It is seldom indeed that one finds in a modern home of comparatively moderate size a room of such magnificent proportions. The rough, dull warm gray of the plaster walls above the wainscoting forms an ideal background for the tapestries and old velvets that are hung upon it.
Homes That Architects Have Built for Themselves

I.—THE HOME OF MR. ERNEST F. GUILBERT IN FOREST HILL, A SUBURB OF NEWARK, NEW JERSEY—A DUTCH COLONIAL TYPE WITH AN UNUSUAL LIVING-ROOM

BY P. A. HUNTINGTON.

Photographs by H. H. S.

[The charge is frequently made that the layman when building his home is timid regarding the incorporation of features that would give his house individuality, preferring rather to hold to the conventional thing in the fear that he will get something bizarre. In houses that architects build for themselves we should see the results of unhindered design. This is the first article in a series; other examples will appear in future issues.—Editor.]

I HAVE very much the same feeling in seeing a new house that is aroused by meeting a stranger. In either case there is the first rapid appraisal of the subject as a whole, then the sharp lookout for those features, mannerisms or idiosyncracies that go to make up individuality. Just as one type of man leaves an absolutely colorless impression on one's mind, without the least desire to meet him again, so does a house fail to awaken the faintest flutter of interest in the mind of the visitor. The pity of it is that the vast majority of houses fall into this class, lacking even a simple feature that would serve to show a personality behind the design or the furnishing. And for this very reason—the prevalence of the commonplace—a house that really has something to show you, some expression in materials that proclaims an idea or an ideal that house arouses in you a feeling of appreciative satisfaction very similar to that resulting from a meeting with a man like Theodore Roosevelt, Thomas Edison, Gilbert Chesterton, or any other man of strong personality.

And, fortunately, these houses of distinct individuality are not confined to any one class, locality or size. You may find one at Lenox, stately in its broad acres, but you are just as likely to come upon a far humbler sister in a little country lane. Neither size nor expense seems to have anything to do with the matter. Frequently, indeed, you will find the costliest materials used with the worst possible taste, or, on the other hand, the least expensive woods given a treatment that indicates the fullest appreciation of their particular sort of beauty, lifting them high above the plane of ordinary things.

While, as I have said, you need not expect to find houses of character in any one class, there is no doubt whatever that if you wanted to find one in a hurry you would save time by looking up first the homes, that architects have built for themselves. The chances are that you will find what you are seeking before you have looked through many of these.

Of course, the reason is not far to seek. In designing his own home the architect is hampered in no way—unless it be on the score of expense—in carrying out the ideas that his training and experience have shown him to be most desirable. Probably he has a number of pet schemes up his sleeve that have been worked out for past clients who have been too timid to allow anything out of the ordinary to appear in their future homes. At the same time, the architect, if as is most likely, he is a man of refined tastes, will have no desire to produce a
The narrow gallery leads to the two guest rooms on the second floor.

The narrow gallery leads to the two guest rooms on the second floor.

The great living-room, 21 x 31 ft. without the bays, and 18 ft. high. is the focal point around which the whole house has been built.

In approaching the house one comes up a rather steep hill and passes the side of the house before turning a corner at the right to find the entrance at the far end of the plot on the side street. The large opening in the near corner indicates the tile-paved porch which is screened in in summer and glazed in winter.

Mr. Guilbert's house, in Forest Hill, N. J., is one that impresses upon you its individuality as

One of the two large "guest rooms" may be adapted to use for billiards.

The property is level -- 100 x 117 ft. -- is from eight to fifteen feet above the sloping streets. The entrance was therefore placed on the less important street to minimize the steps, also to allow the principal frontage to be occupied entirely by the dining-room and the large family porch opening upon the lawn, as will be seen in the accompany-

Mr. Guilbert has indicated in a little pencil sketch the treatment of a property adjoining his own house.

In another sketch the garage appears at the right-hand side just beyond the entrance steps and joined to the house by an arch.

Soon as you get the first glimpse of it, up under the shelter of its great trees, on a steep hill. There is a house you want to know intimately, and which, once known, will have a lasting place among your house friends.

Mr. Guilbert's desire was to have a large living room, but otherwise to keep the house as small as possible. The property is level -- 100 x 117 ft. -- is from eight to fifteen feet above the sloping streets. The entrance was therefore placed on the less important street to minimize the steps, also to allow the principal frontage to be occupied entirely by the dining-room and the large family porch opening upon the lawn, as will be seen in the accompany-

Mr. Guilbert's house, in Forest Hill, N. J., is one that impresses upon you its individuality as

One of the two large "guest rooms" may be adapted to use for billiards.

The property is level -- 100 x 117 ft. -- is from eight to fifteen feet above the sloping streets. The entrance was therefore placed on the less important street to minimize the steps, also to allow the principal frontage to be occupied entirely by the dining-room and the large family porch opening upon the lawn, as will be seen in the accompany-

Mr. Guilbert has indicated in a little pencil sketch the treatment of a property adjoining his own house.

In another sketch the garage appears at the right-hand side just beyond the entrance steps and joined to the house by an arch.
ing plans. The reception room is very small, with a low ceiling, and from this room an entrance to the living room is made interesting by descending five steps through a deep recess. You find yourself in a room eighteen feet high.

This Jacobean room is very simple in design, except that it contains an ornamental gallery of the English baronial halls, which serves as a corridor to reach a portion of the second floor bedrooms. The ceiling falls slightly from the center to the side walls and is divided into large panels, with small moulded beams. The seven-foot wainscoting is framed in a way that avoids the expense of panel construction, showing a very effective use of inexpensive materials. At one corner of the room is the great fireplace, seven feet across the opening, nearly six feet high and about four feet deep. The brick hearth is four inches above the floor. It is interesting to note that this great cavern requires a flue more than two feet square, and on a cold winter night, with a half dozen four-foot logs, well burned to coals, gives a cheer not hard to imagine.

The woodwork of the room is chestnut, stained a warm, dark brown, and waxed. The floor, of oak, is a little darker than the chestnut. On walls and ceiling the plastering, to imitate the old work, is very rough, being done with a small, round-edged trowel. It is painted in water color—a dark, warm gray wall, with a light gray ceiling, affecting age rather than color. Needless to say, this makes a splendid background for the tapestries. The chandeliers are of old silver.

In the dining-room, the color scheme is in old, delft, blue and yellow, with a red Welsh quarry tile floor. A long row of casement windows, and the wide seat, occupy almost one whole side of the sunny dining-room. Beyond lies the tile-paved porch, which is reached also from the living-room.
The fireplace at one corner of the great living-room is large enough for one to walk in under the Tudor arch. The flue necessary to make it draw properly is over two feet square.

Long row of casements and a seat, nearly occupy one long side of the room. From this, and from the living-room as well, opens the family porch, about fifteen feet square. It faces the best view, is exposed to the prevailing summer breezes, is far enough from the entrance to be private, and is fifteen feet above the street, therefore as secluded as could be desired.

There are four bedrooms on the second floor and two baths; on the third floor, a large bedroom and billiard room, also two servants' rooms and bath, and large stock closet.

The basement contains a laundry, vegetable room, photographic dark room, furnace and coal storage space.

The kitchen, pantries, rear hall, etc., are ample, and are provided with a red composition floor that is ideal for such quarters, being very sanitary and easily cleaned. All the service portion of the house is in white wood, natural finish, while all the master's portion, except the living-room, is in cream white, with single-paneled doors, in dark mahogany.

One will notice the hardware particularly, the old-fashioned thumb-latch handles, placed rather higher than the usual knob level.

All windows are casements, opening out, with screens on the inside. A lever operates the window from inside the screen.

That most interesting and pliable style, Dutch Colonial, marks the exterior of the house, with low walls and gambrel roof. Twenty-four-inch shingles are used as a wall covering, laid eleven inches to the weather and dipped in white shingle stain, afterward brush-coated with the same stain. The roof shingles are stained a dark gray-green that soon turns to a color that looks like a very old shingle.

Mr. Guilbert feels that his efforts have been best complimented by a stranger, an old gentleman, who told a neighbor that the house was "all right, but too old fashioned."
A Round-up of the Best Peonies to Plant Now

THE EMINENT DESIRABILITY OF THIS HERBACEOUS PERENNIAL—WHEN AND HOW TO PLANT—THE OPINIONS OF PEONY GROWERS AS TO THE BEST TEN OF THE ALMOST INNUMERABLE VARIETIES

BY HENRY H. SAYLOR

Photographs by N. R. Graves, Chas. Jones and the Author

ONE frequently comes upon the statement that if such and such a person were to be exiled to an uninhabited island for the remainder of his life he would choose to take with him such and such a book. Merely as a form of emphasis, and trusting that such a choice will never be thrust upon me, under the same circumstances I believe I should choose, among the thousand and one flowering plants, the peony. Admitting the difficulty of a choice between this and the rose, I hold that the scales would turn in favor of the former, for on an inhabited isle I should have far too much to do to find time to keep up the necessarily incessant warfare against the rose’s many enemies. The peony, on the other hand, by reason of its freedom from disease and the attacks of insect pests would bring only the rewards of its wonderful beauty and fragrance.

It should need no argument to convince anyone who has had even the least experience in trying to obtain presentable borders or masses of planting around the house, that the great bulk of dependence should be put upon the perennials. It is merely an aggravation to spend hours in planting seeds of annuals in carefully arranged plots, only to find, in midsummer, that many of them have not come up at all and that others have brought clashes of color into the scheme that should never have occurred. On the other hand the perennials, such as the peony, foxglove, larkspur, phlox, and such other old standbys, may be depended upon absolutely to come up year after year in the same place and in the same colors.

Admitting the superiority of the perennials, why should so much stress be laid upon the peony? It is a difficult task to hold a brief for any one flowering plant; there are so many others that may lay claim to superiority in one or more particulars. It would be foolish, therefore, to advocate the use of any one flowering plant to the exclusion of others, but what I do want to do is to emphasize as strongly as possible the fact that the peony is something without which you should not attempt to make a garden.

In the first place the peony is very easily grown; second, when well established it is a permanent feature of the garden; third, the peony is perfectly hardy wherever apples can be grown; fourth, the blooms are extremely large, showy and in a variety of colors, from white through pinks and reds to purple; fifth, most varieties are fragrant; sixth, the plant has practically no enemies, so that neither spraying nor hand-picking of insects is necessary; seventh, as a cut flower the peony is as valuable as it is for landscape effects in the garden. Surely this is a formidable array of advantages to be placed over against two very small disadvantages: the peony multiplies rather slowly; and, second, many varieties produce such large blooms that the slender stems are not strong enough to stand erect and the bloom is beaten down to the ground and ruined by rains.

The latter fault of the peony may be overcome or avoided in two ways: first, by the selection of varieties that are notably strong in stem; second, by some mechanical device or support such as a wire hoop on three legs, similar to the supports that are sold for tomato plants.
As to soil, the peony is not at all particular in its choice. It may be safely said that a garden that will grow vegetables will produce satisfactory peony blooms. The plant prefers a medium heavy soil that is neither distinctly clayey nor sandy. The peony is very much like the rose in this respect, having a fondness for a fairly heavy, rich soil.

Because of the slowness of propagation, gardeners will always procure their peonies as mature plants of one year, two years’ or three years’ growth. After the blooming period in May, June and July, the peony presents a luxuriant growth of foliage until late in the summer; this then begins to dry and finally entirely disappears with the early frosts. This habit of growth indicates that the plant is in a dormant state in fall and winter, so that the time to plant is from the middle of September until the first of November.

The plants are secured from a nurseryman who may be depended upon to supply varieties that are really true to name, in the form of dormant roots, such as the one illustrated herewith. These roots will show at that time a number of pinkish eyes, from which the next year’s growth starts very early in the Spring.

While peonies have successfully been transplanted in the spring, it is, to say the least, an extremely difficult task and one that is usually sure to cause the loss of some of these delicate succulent shoots, which are at that time of the year pushing up through the ground.

In planting the roots in the fall they should be set in carefully prepared soil which has been dug deeply and well enriched with very old pulverized manure. Here again the peony is very much like the rose in its dislike of having manure directly in contact with its roots. For this reason the manure must be thoroughly incorporated with the soil by continuedforking before the roots are set. The roots are then placed so that the upper eyes are not less than three inches below the surface of the soil, and they should be set from two to three and one-half feet apart, whether in rows or groups. After planting it is a good thing to cover the ground with a good heavy mulch of manure as an added protection to the roots—although probably not a needed one for that reason—and to serve as a further enrichment of the soil.

In the spring it would be well either to remove this mulch very early or else to allow it to remain until after all of the shoots have come up through it. Do not attempt to remove it from about the shoots themselves for this is sure to result in damage.

The first care the peony may receive in the spring is not a necessary one. After the dark red shoots have appeared and have unfolded the leaves and branches, there will appear several buds at the end of each stem, in some cases five or six. It is impossible for the peony to bring all of these to maturity, so that to make the most use of the available energy it is a common practice to pinch off all but the largest bud, which will probably be the
When the buds are attaining a very large size, just before unfolding, it may be noticed that ants are running up and down the stems and over the buds and leaves. There is nothing to be feared from this invasion, as the ants do absolutely no harm at all. They are merely seeking the sweet, gummy substance that exudes from under the edges of the bud's unfolding petals.

The peony may be depended upon to produce luxuriant blooms of very large size without further attention. If you are like most garden amateurs, however, you will not be satisfied with this, but will want to find some way to produce extraordinary blooms. An application or two of liquid manure, after the buds have begun to swell, will contribute to the size of the flowers. The peony is a gross feeder and cannot easily be overfed.

In the case of certain varieties, the beginner may be puzzled and discouraged to find that the buds formed the first year after planting will fail to develop, but will turn black and finally fall off. Unless this happens again the second year, there is no cause for alarm. It simply indicates that the peony has not become sufficiently well established in its site to nourish properly the buds that have been formed. In case this blasting of buds occurs the second year, it would be well to investigate the matter of soil or situation. The soil is probably unfit for reason of its clayiness or lightness, or perhaps the plant does not receive sufficient sun, which the peony must have.

In cutting the blooms it is well to pick them off in the early morning just as the bud is starting to unfold, plunging the stems at once into water and thus preventing air from entering the stem. The flowers will then last for several days or perhaps a week in water indoors.

Assuming that you are convinced that your garden should not be without peonies next year, the very important question arises: what varieties should be selected from the almost innumerable ones catalogued by the nurserymen? It may be well here to draw attention to a most important principle that should govern the selection of varieties of any flower. It is this: a variety appears in the horticultural world always as a novelty. It is offered in glowing terms usually in one or two catalogues, necessarily at a high price. It may turn out to be a great improvement on all earlier varieties, or it may turn out to be practically worthless within a year or two. In any event a variety that has proven itself fit to survive will in time be offered in many of the nurserymen's catalogues. In this way it may be recognized as a standard tried-and-true sort. For instance, Festiva Maxima is probably considered by the majority of peony growers, whether amateur or professional, as the finest white to-day. It was introduced by Mielze in 1851 and has held its own against all aspirants since that time.

I have asked a number of men who really know peonies and make a business of growing them, to name the ten most satisfactory varieties for the amateur gardener. These lists follow. In the same way that Festiva Maxima recurs continually through these lists, you will find several others that have received almost as marked recognition. Couronne d'Or appears often—white with yellowish reflex petals and carmine edges. Duchesse de Nemours is another standard favorite, a sulphur-white with greenish reflex. Others that appear in several of the lists on the next page are: Modeste Guerin, a bright rose pink with purplish cast in center; Marie Lemonie, a large sulphur-white, shaded with pink and chamois—very late bloomer; Felix Crouse, a brilliant red, late mid-season; Eugene Verdier, a flesh-pink, cup-shaped flower, shaded with yellow and salmon; Delicatissima (also known as Floral Treasure), a clear, delicate pink, lighter at center; and Mons. Jules Elie (see illustration), a glossy flesh-pink, shading...
to a deeper rose at base. I can give no better advice to those who are going to plant peonies this fall than this: Pin your faith to these thoroughly established varieties—they cannot possibly fail, and the results will naturally lead you into the enjoyment of trying out the year’s novelties next season.

Beaute Francaise
Couronne d’Or
Duchesse de Nemours
Festiva Maxima
Lee’s Grandiflora
Rubra

W. M. WARNER HARPER, Andorra Nurseries.

Achille
Candidissima
Couronne d’Or
Delacei
Duchesse de Nemours

ARTHUR T. BODDINGTON.

Festiva Maxima
Mons. Jules Elie
Delacei
COTTAGE GARDENS COMPANY.

Festiva Maxima
Delacei

Modeste Guerin
Jeanne d’Arc
Mons. Jules Elie
Ellwanger & Barry.

Festiva Maxima
Alba Sulphurea
Delacissima
Jeanne d’Arc
Livingstone

Eugene Verdier
Alice de Julvecourt
Felix Crousse
Festiva Maxima
Eduis Superba
Madame Ducel

Festiva Maxima
Couronne d’Or
Dorchester
Madame Chauny
General Grant
Pamponia

W. S. CHANDLER, Thos. Mechen & Sons.

Edulis Superba
Festiva Maxima
Mad. Ducel
Modeste Guerin
Madame Calot
Marie Jacquin

George H. Peterson,
Fair Lawn, N. J.

Festiva Maxima,
Mme. Crousse,
Avalanche,
Couronne d’Or,
M. Jules Elie,
Enginne Verdier

Festiva Maxima,
Mme. Crousse,
Avalanche,
Couronne d’Or,
M. Jules Elie,
Enginne Verdier

WILLIAM A. PETERSON, Chicago, Ill.

Festiva Maxima,
Mme. Lemoine,
Delacei,
Mons. Jules Elie,
Richardson Rubra,
Giganthea Superba,

Livingston
W. H. WETHERBY,
Livingston Seed Co.

Mme. de Verneville
Georgiana Shaylor
James Kelway
Lady Alexandra
Duff
Theresa
Rosa Bonheur

Mont Blanc (Lenoime)
E. J. SHAYLOR.

Mr. Shaylor adds that if the amateur cannot afford these varieties, here is another list of lower cost:

Festiva Maxima
Mons. Martin Cahuzac
Aurore
Baroness Schroeder
Eugenie Verdier
Mme. Jules Dessert

Soulanges
Venus

Mme. de Galhan
Milton Hill

New Ways of Controlling Electricity in the Home

WHAT RECENT IMPROVEMENTS CAN DO, NOT ONLY TO HELP BY LABOR-SAVING DEVICES, BUT TO ECONOMIZE IN THE AMOUNT OF CURRENT USED

BY KATHARINE NEWBOLD BIRDSELL

The new house that is not wired for electricity bears the same relation to up-to-date home convenience that the old-fashioned cistern with pump does to the modern method of plumbing.

That electricity is a necessity and a convenience nowadays is a matter of daily common knowledge. The small householder has come to look upon its use as a matter of course just as he does that of a water pump, a sewer or a gas furnace.

The greatest objection, if one can call it such, to electric lights in the home, has been that of the consumption of power, with only one degree of light; the light was either turned on in its full power, or the room was in darkness. Now, however, the invention of several economical devices which may be attached in a minute to all fixtures, enables us to have a dim light or a medium light, like that of turned-down gas, as well as the full blaze. The devices work either with a chain or a cord, or merely in the turning of the bulb by hand. The turning down can also be effected at a distance, which is convenient for those of us who have the bad habit of reading in bed.

One economical house owner has had a switch put in his dining-room which controls the four center lights, so that one or four lights may be turned on or extinguished. When the maid sets the table, the button is given one turn, which lights one bulb, giving sufficient light for her work. When time to serve the meal, a second stop on the switch lights the

The arduous task of cleaning and polishing silverware is made a matter of a few minutes’ work with electric help.
cluster, making the room brilliant. A third stop in the switch turns out the brilliant lights, leaving only the one to enable the maid to "clear off." The last light is the same as the first, dim, but sufficient for working purposes.

In some small houses the buzzer which summons the maid from the kitchen to the dining-room is distinctly heard when there is a hull in the conversation. This annoyance may be prevented by having a tiny red light instead of a buzzer, placed in so conspicuous a place that the maid will constantly keep her eye upon it.

Electric table lamps are now provided with a dimming switch which increases or diminishes the illumination, giving varied quality of light and making for economy. This device effects an economy in the light consumption of from 30 to 80 per cent.

No one objects to economy which affects either a gas or an electric lighting company, nor does the company object. The more convenience they can supply to their customers, the more the customers’ pleasure; also the more investment in the delightful devices which save trouble and use greater quantities of power!

A reading lamp should be most carefully selected; a scientific lamp is of nearly as much value as scientific eye-glasses. No direct rays from electric light should be allowed to meet the naked eye. The reading light should be diffused by proper scientific globes, which will also control the light rays, so that the greatest efficiency may be secured without loss of artistic effect, and with no shadows.

All that is necessary for the installation of proper reading lamps is a small switch connection with the main feed wire which may be made from either ceiling or floor.

Where a bedroom is provided with center lights, or with wall brackets which do not suit the positions of the furniture, it is advisable to have removable brackets fastened to either side of the dresser or bureau with thumb screws, connected with a candlelabrum switch and wires to the nearest baseboard receptacle. These candlelabra will throw a splendid light on the glass and upon the person before it. It is also a great convenience to have a portable electric candle installed on the writing desk.

A little ingenuity exercised when wiring a house will result in the introduction of single useful lights in various places that have heretofore been neglected. Why should the garret be dark? Why should the cellar be comparatively dark? Why should you carry a candle to your closet or storeroom? There may be a connection in every dark closet, which will turn on the light when the door is opened. This is accomplished by the switch being set in the back of the door hinge; as the door opens wide the hinge presses the button, keeping the light full till it is closed or partially closed. A switch of this sort in the door of an unlighted garret, as well as in closets, would be a boon. The installation is simple and any good electrician can do the work. A tiny light inside the medicine closet and on the old-fashioned wardrobe, would also be a great help.

Who has not had trouble with finding provisions in the icebox, because of the dimness of the light? A small electric light so arranged that it will light the whole box, can be connected with the door, as above described.

Two lights in the bathroom, one on each side of the mirror, are possible with only one outlet, concealed by one of the fixtures. The extra light is provided by a wire run under the mirror to its opposite side.

Reminder lights are valuable in certain parts of the house. Take, for instance, the cellar. Most cellar illumination is controlled from the kitchen; but the light consumption is in the control of the person who forgets or remembers to turn out the cellar light. Coming upstairs in a hurry, the cellar door is closed, and a flood of light is perhaps left below to burn all night. To guard against this waste, a small red light is set in the kitchen in series with the

(Continued on page 184)
Three Experiences with Lily Pools

HOW THE "LILY-POOL LADY" REDUPLICATED IN THE GARDEN SOME OF HER CHILDHOOD'S FAVORITE HAUNTS

by Dorothy and Lois Willoughby

Photographs by the Authors

A LILY pool is the very center and life of a garden. A garden without a pool is like a living room without a fireplace.

It is so deliciously cool on a hot day to sit down and see the reflection of the sky and of the surrounding flowers in a pool of green water. The fishes dart gaily about, taking mosquito eggs here, gulping a bug there, and jumping for their food when ever the spirit moves them. Then at last they settle down under a big white water lily for a long, drowsy nap.

The different colored lily leaves as they open up in the water, so placid and restful, hold your attention, and nothing is more beautiful than the Nymphaeas as they slowly unfold and as slowly fall to sleep again.

Many people think it quite impossible to become interested in gold fish, but these pool dwellers are not monotonous as they imagine. Gold fish can be taught to feed from one's hand, and if fed regularly soon recognize the approach of the one who feeds them. Then, too, it is exciting sport to see them fight for a bug that comes within striking distance, so you see there is much that is interesting besides their brilliant colors.

A friend of the writer's, whose childhood was spent in the country, has never forgotten the delights she experienced at meandering about in a big swamp. Here the rains formed numerous pools, around which clustered the blue flag and cat tails, towering far above her head. Here, too, was a colony of famous frogs. It was a most wonderful playground.

After her marriage she went far away, where swamps and cat tails were almost unknown. But her heart yearned for the pool and she went to work to make one. The result was most gratifying and she soon had duplicated some of her favorite haunts in the old swamp. The way she did it may prove interesting, and these are her instructions:

Dig a hole—if it happens to be in clay soil, so much the better—starting with a depth of one foot and gradually sloping to three or four feet in the center. If the pool is four or five feet long, it should be two and one-half feet deep in the center. For a larger pool of three feet is better. Wherever the lay of the land permits, it is well to let it follow its natural lines. However, the pool can be made any shape one wishes, round, oblong or of geometrical design.

If there is a beautiful tree in the vicinity, dig the lily pool near to catch the reflection in the water. The tree also serves as a windbreak. Dogwood and hardy shrubs can be added, but remember that the lilies must have full sun for at least half of the day.

After the pool is dug it should be thoroughly tamped down, stamping it hard with the feet, and then with a pole or stump, so as to make a firm bottom that will hold water. For a natural pool this is all that is necessary. In ordinary weather the rains will keep it well filled and the soil will drain it.

Plant the lilies in a tub. Put four inches of well rotted cow manure, well pressed down, in the bottom of the tub, and cover with six inches of soil. The soil from a swampy place is ideal for water lilies and should be used if possible. If not, use a good rich soil mixed with rotted cow manure. Place an inch of sand and gravel on top. This will prevent the dirt from washing away from the lily roots and keep the water clear.

For a water garden of this kind the hardy varieties of Nymphaea (water lily) have been tested and found the best. They are the least expensive, costing from 50 cents to $1 a plant, and one is sure of their blooming the first year.

Gladstoniana is a robust white lily with flowers from 6 to 8 inches in diameter. Marliacea is another vigorous
variety, which comes in white and a beautiful soft flesh pink. The W. B. Shaw, a superb early blooming pink water lily, has leaves 8 to 15 inches across, and flowers 8 to 10 inches in diameter. There should always be some night blooming lilies. These open soon after sunset and do not close until nearly noon the following day. The Dentata, one of the best night lilies, has flowers measuring from 8 to 12 inches in diameter. Plant with this the blue Zanzibariensis lily. All of these varieties re-open from three to five successive days.

Around the edge of the pool plant freely iris of all kinds—Japanese, German and Spanish; common blue flag, marshmallow, meadow beauty and all kinds of narcissi. And don’t forget the pickerel weed. This native plant with its pale blue flowers is very beautiful under cultivation. Like the water hyacinth, however, it needs restraint to keep it from becoming too luxuriant.

With these preparations completed, put in the fish and plant seaweed for them to nibble. This can be bought at any place where fish are sold.

Another attractive flower for the pool is the water hyacinth. However, be careful to start with only one plant or at the end of the season the pool will be crowded full of hyacinths. This plant can be kept intact by building a little wooden floating frame around the bulb which will not be noticed in the water.

When the flowers are planted, push the tub down until it is securely settled in the bottom of the pool, and fill in the water with a hose. Every day put in a bucket of water for evaporation. This will gradually change the water and keep it from getting stagnant. To change the pool entirely, simply let the water run and flush the pool. You can have a drain by making a gutter and always keeping the water at a lower level until you want to flush the pool. But as the fish eat the mosquito young and keep the water clean, this need not be done until the end of the season when the pool is drained and cleaned for the winter.

When it comes time to put the hardy Nymphaea into winter quarters, drain the pool of all the water. Then put leaves 2 or 3 feet deep around the roots, entirely covering the bottom of the pool. On top of this lay a few branches or sticks to keep the leaves from blowing away.

The tender Nymphaea, the Zanzibariensis and all night blooming lilies, must be dug up, leaving as much soil around the roots as possible. These should be placed in a flower pot which will hold enough water to keep them moist. The water can be cold, but must not freeze.

Greatly inspired by the success of her effort, the woman built herself another pool. This garden was made of three half hogsheads sunk until the open heads of them were flush with the ground. The soil was prepared the same as for the first water

(Continued on page 185)
The venerable John Burroughs, a frequent visitor at Yama-no-uchi, has hit the spirit of the place in his remark: "I come here to find myself; it is so easy to get lost in the world."

"Yama-no-Uchi"

"THE HOME IN THE MOUNTAINS," WHERE MR. FRANK SEAMAN FINDS OPPORTUNITY FOR A NEVER-ENDING ACTIVITY IN BUILDING AFTER THE JAPANESE METHODS, BREEDING CHICKENS AND HATCHING TROUT

BY ROBERT ALLISTER

Photographs by Helena D. Van Eaton

No finer compliment was ever offered to a human habitation or to any spot in this broad country, than that voiced by John Burroughs as he sat in this log cabin in the midst of these old American hills.

"I come here to find myself; it is so easy to get lost in the world."

And so they engraved the words in copper and set the tablet into the gray stones of the chimney.

One day a visitor, pausing in his journey into the further Catskills, looked over the stones and timbers and remarked: "I live in an old house myself. It was built in 1730." Not an awkward tribute to a cabin scarcely three years old!

The cabin crouches like a big black hen on the brink of the valley. There is a splendid swirl of country all about it. The rise beyond is gentle. The dip below is sharp, shadowy, sunlit, all patches of light and shade, rise and fall, rock and fern-dell, softness and sharpness, the big range of hills on the other side of the valley looking strangely remote in shimmery weather, stalwart and imposing when picked out with snow.

Down in the immediate hollow are the trout ponds, five of them, one emptying into the other and spilling over at last into the stream that turns a picturesque wheel, ducks under an arching Japanese bridge and ends, you never find out just where, among stepping stones, orchid-spotted dim places and rocky vistas of sunlighted currents. Midway is the tea house, that might have been lifted out of Nippon—making you think that the Indian Napanoch of the village might have been Nipponoch—the Japanese stables that remind you of the way the Tokio castle lifts itself beyond the bridged moat; the hatchery by the middle lake and the trout man's cottage a pole-length away. The sound from below is the murmur of a waterfall, a busy tumble of water that in winter builds fantastic castles of ice.

If you come up directly from the ponds you mount by irregular stones that seem to have happened, but which tell of that subtle Japanese ground art in which not a chip of stones goes unnumbered.

Think of it as just the opposite of the Italian notion in which garden beauty is art cut out with a knife. Your Japanese thinks that in landscape nature's way is a good way and must not be spoiled. Nature's way is imitated in his art, and if you guess the device too quickly it is bad art. So that here in this American version every little splash of moss, or turn of path, or glimmer of wood must seem to have been discovered and not invented. In the large it is nature arranged, and the nature of this region, rather than nature bedecked or disfigured.

It is here in this garden spot, that we shall ultimately see a true Japanese house—a house of which the stables, the water-wheel, the bridges, and the fairy tea house are prophetic—a true Japanese house in the vestibule of which, if you please, you shall remove your shoes before entering the prim, paper-screened rooms with all of their straight beauty, all of their intellectual nicety and
classical simplicity of line, and always eloquent harmony of color.

There are two gates. One, the Japanese gate, true to the Japanese way, and a very awesome affair if you meet it in a dim light, leading through a leaf-hung labyrinth which in the fair season is flecked with spots of lantern light. At the upper gate you meet the sign of the Black Hen (which explains the hint smile) and drive past the brooder houses and hen mysteries of the upper farm, to the cabin itself.

The log cabin is not Japanese. Frederick Remington decided that it was "just plain North American," and the description fits all that you will find on this busy and blossoming level. Yes, we have come up out of the little Japanese paradise for the moment to a region of native lines and native ideas. I shall tell you in a moment some things that will suggest how the Japanese theory of things, like an aroma from the out-spreading garden below, has been able to invade and, to my thinking, transfigure for the time, certain nooks of this sternly North American abode. Just now, let me supplement the picture which you will have already looked at, by saying that the cabin seems to grow out of the soil. The boulders of the chimney begin in a heap, rising casually in the earth as if debating whether they would be a chimney. Once they make up their minds, the chimney gets down to business and becomes the real thing in chimneys. There is another one beyond, heaped in the heart of the house—the one with the Burroughs tablet.

Bigger boulders fringe the brow of the hill and mark the edge of the terrace. Your path from the carriage-way twists over broad slabs that again seem like a happy accident in nature's architecture, until you find yourself under the overhang of the roof. You tether your hat on a peg. If you have any sentiment you will not hang it on Dr. Hornaday's peg, or Frederick Remington's or Ernest Thompson Seton's or James T. Powers'—they are all labelled just as yours will be labelled, a wide row of them. Artists, writers, publishers, travellers, captains of industry—there is a long list of foreign and native notables, and a sprinkling of plain folks.

Then the stained chestnut half-door, studded with metal, swings to your welcome and you step into the full shelter of that long, low roof. Oliver Wendell Holmes once remarked that "the hat is the vulnerable point of the artificial integument." The roof is the hat of a house. And it is the vulnerable point. To produce the right ensemble in a house, first catch your roof. Let us not be bigoted.

There are many sorts of proper roof. But the line of this one, following the slow slant of the big hills, not effronting the storm, wide in its shadows for the torrid days, snuggling close to the shrub-and-tree-dotted plateau, surely has a consistent and enduring charm.

The logs of the cabin end unevenly at the notched ends. I can fancy the first dismay of the native builders when the designer insisted on the rough realism of these uneven ends. There are other things here that must have puzzled these native builders, who certainly builted better than they knew. The inset wood designs in these straight, heavy, unpainted doors, for one thing, must have seemed more than a trifle eccentric to the country carpenter—and he had to be the country carpenter, for it was part of the plan of the designer (who sat near the workmen, her drawings in her lap, and forgetting them frequently, I fancy, in impromptu creation) that every stone, stick and hand should represent the region in which the house was made to grow.

But you are looking at the broad living-room fireplace with its big crane, transplanted from some venerable hearth, and its cavern vast enough to give elbow room to the hulky oak from the wood-box rising head-high on the right hand. Along the edge of the shelf under the Burroughs tablet, runs a whimsical line from the "Book of Tea"—and if you have not read the "Book of Tea" you have missed one of those enchanting book-excursions which only happen to you when you come close enough to the mantel, you read: "Let us linger here in the beautiful foolishness of things."

If you miss the philosophy of that line, I'm afraid that you will miss the philosophy of the cabin, you will miss a feeling of something fine, quaintly done, in everything about you.

And yet the oddest things about this living-room have a reasonableness when you become conscious of them, that might well illustrate some of the deeper meanings of that debated word Art. The wide-silled windows looking out upon the valley are as logical as a log, if it comes to that. The curtains of unbleached linen seem as inevitable as the golden brown of the ammonia-fumed natural wood—a superb hue, by the way, a background fit to set off a Japanese lily or any splash of color that chances near. The bookshelves—yes, there are many books, and books again; books that range the world, that ransack the arts and sciences, that ransack life. There are big chairs in which to read them, chairs that gather you up while you "linger here" and "find yourself." Barbaric blankets the Navajoes made, some of them from

The Japanese gate, an awesome affair in a dim light, leads into a wonderfully beautiful drive up the hill, now past a mass of rhododendrons, now following the brook

The log cabin is "just plain North American" and seems to grow right out of the soil
The trout pools spill over into the stream that turns a picturesque wheel.

spaces on the dull Indian red of the floor. Your eye may chance to discover other artistry of the red men (and red women) in two or three mellow-hued baskets near the rafters. A very giant of a moose's head, crowned by a superb pair of antlers, once laid low by the host's rifle, looms against the timbers of the far wall, and peers in the twilight as you might have seen it in the far northern woods.

Add a few rifles and trout rods to the walls, a few souvenirs of travel, and you begin to have something of the simple surroundings. An electric wire creeps covertly into this North American haunt. It performs an artistic service, for at the rising hour it sets Paderewski to playing a soft bit of Shubert on the piano which stands cheek-by-jowl with the chimney.

For the moment, we seem far from Japan, but it is just at this juncture that the poetic Nipponesque philosophy reappears. In the Mikado's country, you will remember, the greeting of the guest is a delicate, extremely subtle art, perhaps we ought to say religion. Not only is the single spray of flowers in the bare, the exquisitely bare, Japanese room, a mystical homage to you and the season, to the thing your coming stands for, something not to be said by any other flowers at that moment, but the single vase shining on the raised piece of floor at the alcove is a symbol chosen from out the treasure in the "go-down" outside the house, to say something in silent art language to you and for you on that particular occasion. If you came again, you would see another single symbol, just as you would see another flower, that would touch the dominant note of that hour. I cannot pretend to expound, because I cannot pretend to understand, the full beauty of this symbolism. I mention it simply by way of suggesting how the hostess, who has sat at the feet of Japanese nobles, and who knows as few who are not Japanese are permitted to know, the deep meaning of these things, has applied the idea in this

The late Frederick Remington and Homer Davenport on the terrace

the famous Harvey collection, cover the couches and mark out the famous Harvey collection, cover the couches and mark out

North American log cabin.

For example, of a morning you will notice that the three or four objects of pewter on the mantel are not the copper or old Chelsea that you saw there the night before. To-morrow morning, you will catch the different lines of Wedgwood or pink lustre, and the next morning a Colonial setting will start your suspicion of a vast "go-down" or some ample China Room, a suspicion that will be confirmed by the happenings of the table itself. At each meal the dishes change, day after day, like the clouds or the shadows in the valley, and with them, always in an amiable harmony, the hand-woven runners or Colonial covers. Napkins follow suit. In the design of some of the Newcomb pottery as well as in the linen itself, appears the Japanese characters for "Yama-no-uchi."

"Yama-no-uchi," the name of this picturesque estate, is something of a mouthful if you take it suddenly. It was a bit puzzling at the last Madison Square Garden Poultry Show where the "Yama" Black Minorca hen took first prize—but that is another story. Marquis Ito gave the place its name, and the Marquis gave the translation with it as "The Home in the Mountains," so there you are. The hieroglyphs are good to look at. You are glad to meet them again and again in unexpected ways and places.

At the table, they add a little of the exotic to an effect that is usually not exotic at all. For here hundreds of Colonial pieces come and go—I ought boldly to have asked to see the China Room. I should like to know what the Japanese butler thinks of these Washington plates; and for that matter, what the Japanese maid thinks of those old American coverlets and patriotic pieced quilts which deck the Revolutionary mahogany in the sleeping rooms, and which displace one another in some daylight hour when you are not looking. If you are a collector, I can fancy your feelings. The oriental mind has a different perspective and might well be perplexed by this log cabin glimpse of the West touched by the pene-

Big boulders fringe the brow of the hill and mark the edge of the terrace.

The kettle hangs from an ancient crane beneath the motto from the Book of Tea.
trating symbolism of the far East.

The sleeping rooms, by the way, have a manner of seeming to be rustically primitive while meeting you at the essential points with the proffer of a modern luxury which most of us are weak enough to welcome even in a log cabin. There is no litter of things, no restless clutter here or elsewhere, to produce the effect bluntly described by the artists as "noisy." The peaceful brown of the logs that make the main walls is punctuated by a fragment of illuminated text that is a low-voiced greeting to you. It is a little matter, but when on another visit the low voice sounds the different note of another day, you have a deepened sense of Kipling's "magic of the necessary word."

From the windows of this side opposite the valley, you look out on a thousand apple trees, a thousand currant bushes, two thousand raspberry bushes and a kitchen garden spread with the varying greens of everything that will grow in this climate. The upland is otherwise alive. Wu, the reticent Japanese dog, has learned to take peacocks, partridges, squab and guinea hens as much for granted as blue Andalusians or Rhode Island reds. Wu, indeed, produces the effect of being past astonishment. Also, like every other living thing here, he is well fed and content.

In the clothes-presses of this cabin are peculiar treasures that play a part in the charm of life as the hostess guides it—captivating kimonos, sashes, sandals and fans of the unvarying Nippon fashion, as well as a score of Yankee gowns dating from the days when we were imitating the Empire and St. James.

Of an evening after one of those brief mountain twilights, these silken things are likely to come forth to transform the company, and a strangely fascinating scene they make of it. Shades of Dan'l Doone and Davy Crockett! What a fantasy in the light of the roaring hearth!

I remember one night when the host and hostess and men and women guests all were called to appear in true Japanese garb, and were supplied with the wherewithal to obey the command. I remember Rin, the little Tokio maid, down before the charcoal burner fussing deftly with the tori-nabe, her ceremonial procession through the kneeling group, the awkward efforts of the inexpert in disposing of their heels, the solemn efforts to respond properly to the deep salutation of the maid, herself as graceful as a geisha, and the butler, wearing a wonderful blue, standing at the back, only his emotionless face caught by the firelight. I remember Rin's epic song, weird and strident, full of a strange dramatic passion, the guttural twang of the samisen, the odd thrill of those Eastern dissonances, and the hush that fell upon us to the close of the recital.

At the end, we took our candles and filed away, leaving only Wu, blinking on a Navajo blanket. And the cabin, like a great black hen on the brink of the wide darkness, closed its eyes until the dawn.

A whimsical poet who has felt the spell of Yama-no-uchi ends his screed with these stanzas, which may serve the same purpose for me:

"And so, thou Yama fair, I guess,
We'll count thy beauty wise,
And all thy rare No-Uchi-ness
Religion to the eyes.
For Beauty finds its proof in Peace,
And here the sign is sent.
May fortune grant thee lasting lease,
Thou Cabin of Content."

The stained chestnut half-door, studded with metal, welcomes you into the shelter of the long, low roof.

The sleeping-rooms have a manner of seeming primitive while meeting you with the proffer of luxury.

The office, chicken houses and trout hatchery are built as they would build in our climate and with our materials.

The tea house that might have been lifted out of Nippon is exact in its fidelity to the Japanese type.
The Prophet's Chamber
A NOVEL IDEA FOR FURNISHING THE SPARE ROOM—A SIMPLE BUT DISTINCTIVE ROOM THAT WELCOMES THE PASSING GUEST

BY LYDIA LE BARON WALKER

Photographs by the Author

The accommodations of a house are not necessarily in proportion to its size; and there is a kind of economy which consists not so much in curtailing as in expanding the facilities one possesses. These reflections were suggested by a very simple room in a New England home, which the clever little hostess picturesquely termed "The Prophet's Chamber." The idea embodied in that characteristic bedroom is at once so pretty and so practical that it may prove interesting to many other housewives, wherever they may be.

Before entering into any details of the nature and furnishings of this interesting chamber it will be appropriate to lead up by referring to the genesis of the idea in its modern application. From these words the reader will probably jump to the conclusion that the thought is not new, and this inference will be both right and wrong. That is to say, the accommodation is so old as to be new. It is too old even to be a revival. It is simply a hint taken after the lapse of ages from what was hardly more than a casual suggestion made by a hospitable woman of Old Testament times when she was anticipating that a certain prophet would pass that way. To refresh our memories we may recall that the good woman said to her husband: "Let us make a little chamber, I pray thee, on the wall; and let us set for him there a bed, and a table, and a stool, and a candlestick; and it shall be, when he cometh to us, that he shall turn in thither." Without feeling competent to indulge in any learned commentary on the curious words "on the wall" as they occur in the text, we may satisfy ourselves with observing that this prophet's chamber was, at least, in some out-of-the-way place. It was not one of the familiar and accustomed rooms, utilized in the ordinary round of domestic life. It was an odd room, a sort of extra that was always to be ready for the passing guest. And this pretty piece of thoughtfulness is wafted to us after all these centuries like the odor of flowers that have long since faded.

The central thought of such a room now would not be essentially different from that which inspired the old room referred to in the book of Kings. It is for the passer by, the chance guest, the visitor for a night, who needs hardly more than a restful chamber into which he may retire and feel at home before he starts again upon his way. The chamber is not one where a visitor would be installed who was going to remain for any great length of time. The accommodations would be too limited, and possibly the location of the room not sufficiently convenient for anything like permanent occupancy. The furnishings too, are of the simplest character, hardly differing from those enumerated in the quaint and ancient description. A bed, a table, a stool, a candlestick, such were the simple items. There was enough to meet the requirements of necessity, and the very simplicity of the place would not be lacking in certain elements of taste; but there was nothing superfluous, nothing for display or empty show. It was a temporary abode rather for wisdom than for fashion, though one might imagine its occupant sleeping peacefully within its quiet enclosure. Its very atmosphere seems to breathe peace.

The conditions of life probably do not vary so much as we are apt to fancy in the different epochs of time. The women who lived 900 B.C. had problems similar to those confronted in this year of grace; and, we are solving them well or ill as they solved them well or ill. Every housekeeper now has her occasions in the round of the year when informal hospitality is to be extended to some good friend of the house. It cannot matter that the so-called spare room is occupied, there must be some cozy corner that will show a welcome even if it show little else. And probably in almost every house there is some out-of-the-way room which a resourceful woman can adapt to the purposes here outlined. It may be off in the third story, former abode of trunks and boxes. If these can be disposed of elsewhere, the room may be converted into a Prophet's Chamber. Or it may be some hall room so small that one hesitates to put into it anything much larger than a cradle or a sewing machine. Yet if it seems expedient, even such a cubbyhole can be transformed with the exercise of a little taste, though the quarters be close. One point that should be observed is that wherever the location of the room, however limited its dimensions, and however simple its furnishings, it is associated with a certain respect which appears in this designation as a Prophet's Chamber. Its occupant need not feel in any way slighted, but quite the reverse. In that room he is, as it were, admitted in a special way into the intimacy of the household.

The room of the New England hostess was small, as befitted its character. It was furnished as the description indicated. A low cot bed by the window invited rest. The ancient slat-back chair, a cherished heirloom, was drawn up comfortably near the bed. On the broad sill a bowl of blossoms bespoke thoughtful expectation. The floor was bare save for a home-made braided rug. The mahogany table in the corner had two drawers, which supplied in a measure the lack of a bureau. In one drawer were tucked away a few accessories such as pin cushion, hand glass, (Continued on page 186)
**Storing Vegetables and Fruits**

**THE CARE AND PRECAUTIONS NECESSARY TO KEEP FRUIT AND VEGETABLES THROUGH THE WINTER—WHAT KIND OF A STORAGE ROOM OR FRUIT CELLAR TO BUILD**

**BY M. ROBERTS CONOVER**

Photographs by S. W. Fletcher and others

The preservation of fruits and vegetables is difficult only when heedlessly attempted or when one lacks the right equipment. After breaking contact with the soil or the parent plant, winter vegetables must be subjected to certain changes to render them proof against decay for a time at least. The methods of preserving raw products either deprive the product of heat above a certain temperature, or of moisture in a warmer atmosphere, according to the requirements of the fruit. In the case of apples and pears, the low temperature retards the ripening process thus postponing decay, but with certain classes of vegetables the ripening must be perfected by heat and the absence of moisture thus toughening the outer skin so that it protects the flesh.

All fruits and vegetables must be so handled that no bruises are made on rind or skin and no injury by sun-scalding or by freezing. One storeroom cannot meet the needs of all fruits and vegetables. The attic will house strings of peppers and bundles of herbs, but it is too variable in temperature for fruits on tubers.

The root cellar is ideal for barreled apples, Irish potatoes, carrots, beets, etc., but too damp for sweet potatoes. The warm dry air of a storeroom over the kitchen, where fire is kept the winter through, will preserve sweet potatoes, squashes and pumpkins. It is a fact, however, that no matter how careful the storage, vegetables will fail to keep where the preliminary steps were carelessly taken. For instance, winter apples and pears should have attained full size, but in favorable localities should not have ripened when gathered. The snappy weather accompanying frost retards the ripening process and favors the ultimate keeping of the fruit. After hand picking, apples and pears should be kept as cool as possible—in a building—if possible. After several days they should be sorted, boxed or barreled and stored where the temperature will not fall below 32° nor rise much above 38° in the winter.

Squash and pumpkins, cut from the vines and left lying on the

(Continued on page 188)
The Simple Arts of Budding and Grafting

A MEANS OF SECURING BETTER VARIETIES OF FRUIT AS WELL AS LARGER YIELDS—THE UNCERTAINTY OF GROWTH FROM SEED COMPARED WITH THE ASSURED RESULTS OF GRAFTED STOCK

by CLAUDE H. MILLER

Photographs by Charles Jones

THE possibilities of pleasure as well as profit in the home fruit garden are greatly increased if its owner understands the art of grafting and budding. Both of these processes are extremely simple and require but little skill or dexterity. The general rule of professional fruit culturists is to propagate the stone fruits by budding and the seed bearing fruits by grafting, but these laws are by no means as inflexible as those of the Medes and Persians.

In recent years great progress has been made in both of these methods of raising fruits true to name. Most of the nut trees, chestnuts, hickory nuts, pecans, and so on, that we now obtain from the nurseries are from grafted stock. In passing it might be said that when the student can successfully graft a shellbark hickory scion on a wild pignut sapling he is ready to graduate. A beginner had better confine his efforts to fruit trees such as peaches, plums and apples before attempting nut culture.

Budding is easier than grafting. The latter is usually done in the spring, just before the buds begin to swell, but budding can be practiced at any time when the bark is loose enough to peel, and is usually done in mid-summer because at that time well-developed buds can be secured. To go back to fundamentals, the principle of both budding and grafting is to unite a young growing tree of some unknown or undesirable variety, a small portion of the bark or twig of a desirable sort so that the two will unite to form a new branch which can be trained to form the head of the tree. It is one of the mysteries of nature that although the stock upon which the graft is made may be a comparatively large tree, and the bud or scion which is grafted no larger than a pin head, the ultimate tree which will grow from this union will possess the qualities of the tree from which the scion or bud is taken, and not be influenced at all by the stock upon which it grows after budding.

The practical value of propagating fruits in this way instead of by growing from seeds is due to the fact that if we attempt to grow a tree by planting the apple seed for instance, we can not be at all sure that the tree which may grow will bear fruit all similar to the kind which bore the seed. It all depends upon the kind of pollen the bee was carrying that effected the fertilization of the blossom. It thus becomes pure guesswork and absolutely unreliable. Seeds from the most lucious greening or pound-sweet may produce a tree which will bear only the meanest little apples in no way resembling their parent. It is necessary, therefore, if we wish to propagate fruit trees of known varieties to resort to a method more certain than growing from seeds or pits.

The parent stock, that is, the stock upon which the budding is done, is usually a seedling tree two or three years old. All we shall need for an outfit for budding is a sharp knife, some raffia and a “bud stick.” August is in most cases the best month to practice budding, as at that time well developed buds may be secured.

We must first of all have seedlings upon which to bud. These should be transplanted into nursery rows after the first season's
growth. If we have them in quantities we are ready to go into the culture of fruit extensively. Usually, however, the amateur fruit grower will only have a few trees to practice upon, and will use for his parent stock the seedlings that have come up along the road or garden edge. While budding may be practiced at any time that the bark peels readily, it is commonly done in August for most fruits and September for peaches. The latter may be budded on seedling stock that has been grown from a pit the same year.

A few days before budding it is customary to remove the leaves from the stock to a height of several inches from the ground. This will have a tendency to make the bark more firm when it is ready to receive the bud. “Bud sticks” are secured from the ends of bearing branches on desirable trees of known varieties. The bud itself is found at the base of the leaf petiole. In most kinds of fruit it is a tiny thing not much larger than the head of a match.

The buds must be well developed. Those near the ends of the shoots are the least desirable. The bud is removed from the stem by cutting off an oval shaped piece of bark. Use a sharp knife. The stem of the leaf may be used as a handle for the bud. It is better not to leave any wood attached to it. If cut carefully only the inner and outer bark will remain.

To bud a tree we first make a “T” shaped cut in the bark of the stock to be budded. This cut should go through the bark into the wood. Then peel the edges of the bark back and roll them slightly. The bud is inserted into this cut and firmly pressed against the peeled wood. After which it is securely bound in place with soft twine, strips of cloth or raffia. The latter is the best.

The bud will not make any growth of consequence the same year it is inserted, but if it does not shrivel, but remains green, after a few weeks we may be reasonably sure that it is alive and will succeed. The next year when all the buds spring into growth, all the other leaves from the parent stock should be rubbed off and everything done to stimulate its growth.

In view of the fact that budding is such a simple process and one without any mystery or hocus pocus it is surprising how few gardeners understand it. There is no plant wizardry about it. Anyone of average intelligence should learn how to bud in a few minutes. The whole secret is to secure a point of contact between the stock and scion by a union of cambium layers of stock and scion, to use healthy, vigorous buds, and to do the work neatly.

Although grafting proper is done in the spring, this season is the time to prepare for it. The principle of the operation is just the same as that of budding, but twigs are used instead of buds. These twigs, however, are selected for the vigor of the buds and usually are three buds in length. Ordinarily only the previous year’s growth is used. These scions must be kept dormant, and to effect this may be stored in sand, moss or sawdust in a cool cellar. Where they are to be used for top grafting—that is where the tree is cut back and a new head growth is planned—the scions may be stuck in the ground beside the tree. In the spring they are used in cleft grafting.
The herring-bone pattern of laying floors may be used to good advantage when the units are of narrow widths and somewhat longer than usually seen.

A Revolutionary Idea in Flooring
THE USE OF SMALL UNITS AS A SOLUTION FOR THE DIFFICULTY OF SECURING A SERVICEABLE AND ATTRACTIVE HARDWOOD FLOOR AT MODERATE PRICE

by J. Crow Taylor

Photograph by Leon Dudmun

Flooring, like many other details in house designing, is more or less an unsolved mystery to the average individual, and some of the confusion about it is directly traceable to the fact that ordinarily when a magazine or technical journal goes into the subject of flooring the discussion is given over to the highly artistic and expensive type of floor. Sometimes the average reader concludes from this that the ideal in flooring is too expensive, and at other times the conclusion may be drawn from reading details of the care involved in keeping a highly polished floor in order, that it would be an uncomfortable thing to live on and would require rubber heeled shoes and rubber tipped furniture to keep it from being scarred up.

Some people may want floors of this kind, and everybody may occasionally long for an artistic floor of this high order on some special occasion, but the average house owner wants a floor that will give both satisfaction and service and leave him feeling comfortable in the matter of cost and care.

He can have it, too. It is much easier, in fact, to have a floor that is pleasant to look at, and at the same time is serviceable and comfortable, than it is to have some of the over-elaborate floors. It will give more satisfaction in the end and cost so much less that the only wonder is that more people have not heretofore gotten entirely satisfactory floors by seeking utility rather than ornament.

The secret of satisfaction in a floor is small units. That is, narrow widths. Back in the pioneer days of lumbering and building flooring boards were made 8, 10 and 12 inches wide. Finally, when machine planing came in, the width was reduced to 6 inches and then to 4 inches, and finally to 2½ inches.

Meantime the hardwood flooring industry developed and brought with its development still narrower units. This is really a part of the explanation of the success and the improved appearance secured by the use of hardwood flooring. It was the introduction of narrow units and the elimination thereby of unsightly cracks. The units were reduced down to 2½ inches and 2 inches on the face, after being finished, and now there is coming a new era with still smaller units.

The popular width in flooring today among those who have followed it out to a logical sound basis, is 1½ inches wide on the face. This is to be had right along in oak flooring, and soon it will likely be available in practically all woods. When it is, everyone can have a satisfactory floor no matter whether it is made of oak, maple, beech, pine, fir, gum or other wood. A floor made up of narrow strips carefully put together cannot shrink enough in any one given strip to cause unsightly cracks. Consequently,
The long and narrow units give an opportunity for distinctive design and refute the general statement that they cannot be handled for borders or irregular floors.

it can be finished off with varnish and either used bare or with rugs, and it can be made cheaply enough that if desirable it can be covered with carpet in the winter.

Carpenters and builders do not as a rule advocate these extreme narrow units in a floor. It is not to their direct interest to do so, because it takes more nails and more time to put the floor down, but eventually they will have to come to it; besides where the flooring is rightly made and is end-matched, the joints can be made anywhere regardless of whether they are over a joist or not, and in this way it does not require a great deal more time or even as much waste in lumber to lay a floor as with 4 inch stock.

In building a new house one of the best plans is to lay all the plain floors of standard thickness, 13/16, up-stairs and down, with stock only 11/2 inches wide. This gives a neat appearance and safeguards against unsightly cracks. If it is a floor that is simply to be painted over, it needs no further treatment than just painting, but if a more artistic finish is desired it can be gone over with a smoothing plane or a scraper and then filled and varnished, and it makes a very attractive floor no matter what kind of wood is used.

The writer has just been through some experience with flooring in the building of a new house in which the original intention was to make the up-stairs floor of comparatively narrow widths in pine, and the down-stairs floors in oak. Half of the down-stairs, the library, kitchen, and side hall was to be finished with plain thick oak of common grade, and the parlor and dining room with thin oak flooring laid on top of a sub-floor with a striped border and rug effect, and the front hall with parquetry and borders.

The up-stairs floor of 21/2 inch pine was laid first. Then, the plain oak floor down-stairs was laid with No. 1 common 11/2 inch oak 13/16 thick right on the joists.

After figuring it up and looking at it when finished the pine floor which had looked fairly well at first was decidedly disappointing as compared to the oak floor in narrow strips, because after the heat had been on in the house for awhile it showed cracks, whereas there is hardly a crack visible in the oak floor. What made it all the worse, too, was the discovery on casting up the figures that the pine floor had cost exactly as much as the oak. It had taken a little more time and trouble to lay the oak, but the cost of material was the same in each case. Therefore, if it were to be done over again all the plain floors up-stairs and down would be laid in No. 1 common oak 13/16 of an inch thick and scraped and finished with a filler and varnish using a special varnish on the kitchen floor to stand mopping with water.

After this experience when it came to finishing up with the porches there was involved about a thousand feet in porch floors. This instead of being made of pine, cypress, or even of concrete, was made of the same stock used in the kitchen and library, 11/2 inch face 13/16, No. 1 common oak, and painted.

It would be in order to digress for awhile here on the subject of porch flooring to say that for a porch that is up off of the ground and can be mounted on piers and the air allowed to circulate underneath, a good wood floor is much more satisfactory than one of concrete. It is healthier and really looks neater. Moreover, it will last if kept painted. That is the secret of woodwork exposed to the weather; keep it painted. Renew the paint on it every year, and it will last indefinitely. And in this way a good solid wooden floor with air circulating underneath will perhaps last as long in a porch as a concrete floor.

Where a man does not intend to go into artistic borders and rug effects in his floors he can get a neat floor that will justify finishing off with varnish and wax by using 11/2 inch stock. If he has a new house he can use it in standard thickness without a sub floor by having it end matched and let the joints come wherever they will. If it is in an old house and it is desired to put the floor on top of an old floor take a thinner stock, take 3/8 inch strips 1 1/2 inches wide and he can get border effects.

It is the original floor construction particularly in mind now, however, and one strong point it is desired to emphasize is that it need not cost any more to get a floor that you can be proud of, than it does to get an ordinary floor that you have to cover up with carpet. Go to your planing mill or lumberman and insist on getting narrow stock. It doesn’t matter whether it is oak, pine, maple or beach, you should insist on the narrow units just the same, as this is the secret of getting artistic effects in an ordinary floor. It is the one thing that eliminates the unsightly cracks and makes the floor attractive.

The oak floor, where it can be had at anything like reasonable prices, is more durable and more satisfactory generally, and if you are anywhere near the oak territory you can get what is called the No. 1 common grade of oak at about the same price you can get good common pine. This is a grade that has sound knots, some small worm holes, and little rough places in the flooring, and some bright sap, but by throwing out a few pieces and selecting and fitting your stuff up carefully you can get a floor that when filled and finished... 

(Continued on page 187)
What Type of Heating?

by Charles K. Farrington

This is the problem that faces every house builder, and also any owner who must replace a worn-out furnace. Each of the three forms of heating most used at present, hot water, steam and hot air, has its enthusiastic adherents, but there are some special cases in which each system appears to have arguments in its favor over the others.

A man whose business was building houses and then renting them told me that he would not use steam or hot water in any of them. This was not because he did not highly value these forms of heat, but he had found by costly experience that if these systems were carelessly or improperly managed (as is too frequently the case in rented houses), they would be damaged far beyond that which hot air plants would be under similar misuse. Here a certain heat seems best, not because it is considered superior, but on account of local conditions; and in any home where no thought or supervision can be given the furnace by the occupants whether they be the owners or not, by all means put in a hot air heater, of sufficient size to properly heat the house. By this I do not wish to give the impression that there is anything difficult or complicated in the management of a steam or hot water heater, for this is far from being the case, and anyone can easily learn to care for them, but their construction is such that if they are misused, they will be much more likely to be injured than will a hot air one. For example, the writer knows of a hot water furnace which has an automatic attachment for opening or closing the draft and damper according to the state of the fire. But the occupant of the house (who was also the owner) would on cold winter days detach this arrangement and open the draft wide, and also a large door underneath, which was only intended to be used for taking out the ashes. This he did simply because he desired as much heat as possible in a hurry. Such treatment was very injurious to the heating system, and warnings had to be given him that a continuance of such practices would be likely to prove costly. I have seen steam furnaces which were abused in a similar manner, and have known fires to be lighted in both steam and hot water heaters with no water in the boilers. But where steam and hot water heaters are managed with a small amount of care, they are very desirable for house heating in the average home.

It is well to use a hot air heater when a sufficient supply of fresh air cannot easily be obtained from outside. This is a strong point in favor of the hot air system, as it constantly supplies fresh air without bringing the chill of outdoors into the house.

We will now suppose that a person decides to use either a hot water or a steam furnace; what are their good points? It is possible to heat a house well with steam, no matter how cold the weather may be, if the heater is large enough, and it will also heat up rapidly in the mornings after the fire has been cleaned, and the draft and damper adjusted; but a steam heater requires more attention than a hot water furnace does. I have found from careful observation that it is necessary to coal a steam furnace on an average of every two hours when heat is needed in cold weather. This is caused by its construc-

Radiation Surface

An important consideration is the size of the radiators. When you figure the heating surface of your radiators be sure and have them large enough. Do not be afraid of your being too warm. You can easily and economically regulate this at the furnace by having a large or small fire as required. When you have figured the total heating surface of the radiators add twenty-five per cent, for the heating surface of the pipes leading to them, and also twenty-five per cent. for a margin of safety on the side of excess heat. So many people do not figure this last item, and so obtain an outfit which will never be satisfactory. They may be able to heat the house if the fire is continually forced, but only by burning a large amount of coal. Let me give the following examples:

Well Designed Heating Plant.

<table>
<thead>
<tr>
<th>Heating surface</th>
<th>800</th>
<th>800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Margin of safety</td>
<td>200</td>
<td>none allowed</td>
</tr>
</tbody>
</table>

So for the first example a heater supplying 1200 feet would be required; but let us suppose that the nearest size made to this was 150. Then by all means use the next size above. Always be on the safe side as regards excess heat. The slightly additional cost of the heater will soon be made up in the coal burned. But so many plants are figured according to the second method shown, and they are invariably disappointing. It must be remembered that in a well designed plant it is planned to heat the house by having a large heating surface in the radiators heated by moderately hot water. This allows you to have a much smaller fire than

(Continued on page 189)
Growing the Milkweed for Food

by Grace Aspinwall

Photographs by the Author

We are constantly adding new food-stuffs to our list and one of the newest is milkweed. It has proven itself so delicious and healthful that we can only wonder at our long neglect of a staple left to grow wild in pastures and roadsides.

Milkweed is now being cultivated for the market and, by proper planting, the tender shoots are to be had into October, whereas in the wild state they are past their tenderness in June.

The flavor of the milkweed is almost exactly like that of asparagus; a blindfolded person given it to eat would pronounce it asparagus. It is, however, an even richer vegetable than the asparagus, as its stalk and leaves are filled with a thick milk that is exceedingly nutritious when cooked, or, for that matter, when eaten raw as a salad, which many people prefer, only the tips being used in this case.

For many years farmers' wives in the country have always mixed a few milkweed stalks with the mass of mixed greens which they delight to gather—dock, dandelion, mustard, etc., but they rarely use it by itself, which is after all the most delicious way, for when cooked with other greens the delicate flavor is lost.

The milkweed which is now being cultivated in gardens from seed, grows several times larger in the stalk than the wild variety, and the stalks in some cases are as large around as a quarter of a dollar; when cut for cooking about eight or ten inches of stalk are cut, with the large tender thick leaves on it. These stalks are cut into inch or inch and-a-half lengths and cooked for about the same time as asparagus, and served with butter.

Anyone who desires to cultivate milkweed in his garden can do so very easily by simply planting the seeds very early in the spring. They will grow and flourish in the most barren soil and without any attention, but if one desires giant stalks and leaves and an added tenderness and succulence, one had better fertilize the soil and weed and hoe the young plants.

The lady whose picture is given here has made a great success of cultivating not only milkweed but dandelions, yellow dock and several other weeds, for which she finds a ready market among her friends. She was led to the work through ill health. She was acnemic and no medicine seemed to do her any good, so on the advice of an old country doctor she went into a little Connecticut farming town in the spring and lived on tender greens and dairy products. She ate milkweed, dock, dandelion, plantain, tender young horseradish leaves, wild mustard and nettles, not to mention clover, both tender leaves and blossoms, which she ate as salad and found them very peppery; in fact clover leaf salad eaten in a large quantity will take the skin off the throat.

All these wild weed foods strengthened her so quickly and so perfectly that she made a study of cultivating them. She declares that we are just beginning to learn the wonders of weeds, for about our door-yards and pasture fences are to be found no end of delicious materials for tempting dishes.

All these things may be kept at the tender age for the table by different planting periods, just as peas and string beans are.

Although the milkweed is so common it may be well to state here that the variety Cornutii is understood in this article as the milkweed for cultivation. Its leaves are broader and softer than other kinds and its flowers a dull purple in large nodding umbels. The swamp milkweed (incarnata) is useless as a food, as its leaves are tough. It may be differentiated by its rose purple or flesh tinted blossoms, and lanceolate instead of oval leaves.

Just try milkweed next spring and see for yourself how delicious it is. You will grow a plant that is decorative as well as useful.
A Bulb That Will Prolong the Fall Garden

PLANTS which prolong the blossoming season and tend to adorn the garden in autumn are generally welcomed by all flower lovers. The colchicums most emphatically possess this attribute. Once planted they never fail to present themselves, and their delicate but cheerful coloring is very attractive. Much is said of the desirability of planting the crocus to brighten the garden and the lawn in the early spring days, but the colchicums, although equally desirable for the fall garden, receive but small attention. They are perfectly hardy and once introduced can be depended upon for a fine showing year after year, through all vicissitudes of fortune and even utter lack of care.

One pretty garden, of which the owner was justifiably proud, had a bed of these flowers. Circumstances required the surrendering of the garden and removal to the city. A visit, after fifteen years had passed, showed the colchicums still living, though they were all that remained to tell the tale that a garden once flourished there, and they were growing in the grass in the hardest of soil.

In another garden some colchicum bulbs were taken up to be planted in another location. It was supposed at the time that all were removed, but small ones must have been left in the ground which later was set out to raspberries. The colchicums, however, did not propose to yield their right of previous possession and every fall bloomed profusely around in the grass among the berry bushes. The pinkish-lavender and pure white flowers made a very pretty show in the grass, and the bulbs seemed to blossom earlier and more profusely than those in the garden beds; the flower stems, too, were longer than the ordinary ones.

The colchicums make a very effective display when grown in masses, and they can be recommended for growing in grass if it is not often mowed. When once established they should not be disturbed for years, unless necessary, or unless the flowers show signs of deterioration.

The manner of growth of the colchicum and the way in which the seed is produced are very peculiar. In September the buds appear and the flowers are soon in bloom without a green leaf to protect them from the winds and storms of Autumn, which they bravely face and from which they never seem to suffer harm.
The flowers are much like the crocus, varying in color; some are white, some pink and others checkered lilac, purple or white.

A double form was found to bloom somewhat later than the single varieties. Its first blossoms were purple, but the later ones were white.

In October the blossoms die down, leaving no trace of the plant. There would be no time for seed to ripen, and, by a curious provision of nature, these are buried all winter within the bulb. In spring a fruit stalk with lily-like leaves appears. This makes a rapid growth and the seeds ripen about the first of June, after which the plant again dies down to be resurrected in September in the pretty, lavender and white flowers.

In form the blossoms are like the crocus; in color they vary; some are white, some a pale rosy pink or pinkish lavender, and others are curiously tessellated or checkered lilac-purple and white. Each bulb will produce a number of flowers, often six or eight in succession. The bulbs are so determined to blossom that if taken up just before blooming and placed in pots or baskets of moss, they will go on flowering as if nothing unusual had occurred, and will even produce flowers if the bulbs are not planted at all. The single forms are more commonly cultivated, but there are very pretty double varieties.

One plant which produces double flowers has (Continued on page 191)

A Combination Hotbed and Storage Pit

AN INGENIOUS CONSTRUCTION WHICH PERMITS THE HOTBED TO BE USED FOR COLDFRAME, STORAGE PIT AND EVEN AS A BROODER FOR SPRING BROILERS

BY RICHARD MAXWELL WINANS

WHEN we built the combination bed and pit shown in the accompanying drawings, we found that while our original intention had been considerably more than met in the design, later developments demonstrated that supplemental uses were of even greater practical value.

The plan was conceived in an emergency as an expedient to save a valuable lot of large plants of various tender vegetables which, because of an unusually backward spring, were being crowded to death in the limited confines of the hot-house. That emergency was a blessing in disguise, since it has enabled us to so greatly profit by the resulting invention.

Our first frame was built to accommodate tomato plants in bloom, together with eggplant, pepper, muskmelon and cucumber plants ready for the field. When the weather permitted their removal to the open there was no further use for the bed and a suitable number of plants of each were left in the bed, where they were forced to fruit days in advance of those transplanted to the field. After that we constructed an extra run of this bed for the purpose of fruiting such vegetables under glass, and we have yet to record a single failure.

As our experience with this frame progressed we found it admirably adapted to other uses. Aside from serving the purpose of a cold frame, in which lettuce, radishes, spinach, young onions, etc., may be grown in late fall and early spring, it is a forcing bed par excellence for growing and fruiting such plants as tomatoes, eggplant, cucumbers, etc., far in advance of those grown in open culture. And as a true hotbed it seemed so much better than the ordinary "single-run" bed that we at once abandoned the old type.

The main advantage for all of these purposes is the increased amount of air space, the possibility of securing a freer circulation in ventilation during the day and the confinement of a greater volume of heated air during the night, together with the advantage of the ample headroom of a small hot-house, in which borers may carry on the work of transplanting, weeding, etc., during the roughest weather, having the sash...
closed tight against influences of rain or wind.

Then, too, unlike the ordinary hotbed or cold frame, it need not be idle through the severe winter months, for by removing the glass sash and substituting boards lengthwise on the rafters to hold a covering of litter and earth, it is converted into a practical and convenient storage pit for all sorts of root crops, potatoes, onions, cabbage, celery, apples, etc., that is more satisfactory than a cellar and much better than trenching or banking, since one may have ready and easy access to the contents in any and all kinds of weather without disturbing or exposing more than the qualities or varieties desired.

It was left to a neighbor, however, to adapt this frame to a use which has the distinction of being at once unique and profitable—that of raising hot-house spring broilers. Having in mind the possibilities of protection and warmth of this bed as a nursery, brooder and forcing house, the first broody hens were encouraged to set and the resulting broods at once put under cover of the glass roofed frame.

The result was that they had broilers ready for the table about the time others were beginning to arrange to set their hens and start their spring incubators. This scheme for raising hot-house broilers worked so successfully that they have increased their beds each year and are now profitably growing extra early broilers for market; a market among a class willing to pay fancy prices for such choice specimens, the demand for which they have never been able to meet.

In a similar manner late fall broods are handled in these frames so as to produce broilers for use up to the Christmas holidays.

Another practical advantage of this frame is that when built in one long section—the most desirable form—it may be divided into subdivisions or compartments, of such size as desired, for the purpose of maintaining various temperatures, or for different purposes, such as coldframe, hotbed, vegetable or poultry forcing house, etc. For ease in handling these partitions should be built in two sections of matched lumber, to permit of being readily placed or removed.

This combination frame may be built of any length found desirable or convenient, from one to accommodate a few hotbed sash to a bed two hundred feet long or longer. The prudent builder will locate his bed or beds so they may be added to in length as required.

Convenience to an abundant supply of water is one of the first considerations in selecting a location, which should be a site having good natural drainage. The bed should be, although not necessarily, set to run north and south, to permit the sun to reach every portion of the bed soil at some time during the day. It is well if the location is sheltered from the north winds.

Because of the width of this bed, when built of any length, the earth removed in making the excavation may be loosened with a plow and taken out with a two-horse slip scoop or wheel scraper.

The best time to build the frame is in the fall or after the season's work is well over and men and teams are somewhat idle; or any other time during the year when the ground is not frozen solid.

Having determined upon the number of sash to be used, and, therefore, the length, lay out the ground lines fifteen feet wide for excavation. Although bed is only about thirteen feet over all, free room is desirable for setting and lining posts without crowding the banks of trench.

A depth of not less than three feet is advised, especially where tomatoes are to be fruited in the frame. The sides are to extend about eighteen inches above ground level, which will allow a soil filling of eight to twelve inches in the coldframe or forcing bed, or a good depth for fresh manure when making up hotbed.

The floor of the bed should slope from sides to center but be level the length way. Since it is absolutely essential to have a dry floor when the bed is used for storing crops we found it necessary to dig a ditch in the center lengthwise and lay a three-inch tile in fine gravel for drainage purposes.

The inside of the bed is eleven feet six inches, and posts are set to allow for the thickness of inside boards or plankling, i. p. The outside, o. p., may be covered with any old plank or boards available. To insure a perfect alignment the posts, s. p., should be sawed, at least on the inside face, and set at least three feet deep to secure permanent rigidity, and if "puddled" tamped all the better.

The inside alignment of posts must be absolutely perfect, or there will be trouble with rafters bucking or dropping, from the very beginning.

Aside from the material for the walls the lumber for the skeleton of frame, the rafter rail, guide strips, ridgepole, ridge boards and center posts must be of thoroughly seasoned stuff with straight edges and free from warp.

The rafter rail, r. s., is of 2x2 in. (Continued on page 191)
The form of the broken pediment over this doorway lends dignity to the apartment by the use of simple lines. There is little detail work here.

The reeding and detail around this door are typical of the best Colonial work. The garlands were seldom carved, but were of papier maché and very lasting.

The spider-web fanlight is often used by modern builders. It gives a lighter effect than the imposing pediment in the first illustration.

All the decorative effect of the wood texture in this mahogany door is set off by the white framework.

Such treatment as this successfully shuts off a room from the hall without the disagreeable or darkening effect of solid doors.

The slight decoration in this transom adds the note necessary to complete the impression of a Colonial room.

TYPES OF INSIDE COLONIAL DOORS
Facts and Figures in Connection with Outside Painting

INFORMATION THAT THE HOUSE OWNER SHOULD HAVE BEFORE HIS HOUSE IS PAINTED—THE BEST SEASON FOR THE WORK AND THE BEST MATERIALS TO USE

BY GEORGE E. WALSH

Photographs by P. H. Humphrys and others

WITH every recurring season the question of painting the house causes more or less concern among house owners who wish to keep their place in good repair at all times both for looks and protection. No hard and fast rule can be laid down as to how often the exterior of a house should be painted, for that is something decided largely by climate, the condition of the paint, and the thoroughness of the last job. In high and dry climates paint retains its color and usefulness longer than at the seashore where the disintegrating effects of salt and moisture are always at work. Some houses need repainting every second or third year, while others may not require it oftener than every third or fourth year.

The early fall of the year is considered by most architects and painters the best time to paint the house. October is one of the best months, for it is a quiet month, with few heavy winds to blow up dust, and most of the insects of summer are dead or hibernating. There is little danger of heavy frost to injure the paint. One paints his house to protect and beautify it. The selection of colors must therefore be a matter of individual taste, but to protect the woodwork there must be good paint material and good workmanship.

The composition of colored paints, however, should be understood in a general way by the owner of a house. The white paints consist of white lead or oxide of zinc, and combinations of such inert materials as barytes, gypsum, whiting and silica. The only durable black pigments are lamp black, gas and bone blacks. The red pigments consist chiefly of the iron oxides and red lead, but often the coloring of these are heightened by mixing some of the aniline dyes with them. The aniline dyes are misleading, for they give an artificial brilliancy to the color of the paint, but they quickly fade and cause disappointment. The yellow pigments are the chrome and the ochres. The former are the brighter in appearance, but not so durable in effect. Aniline dyes are sometimes mixed with the yellow paints to add to their brilliant lustre, but they should not be accepted for permanent work. Blue paints are made from the Prussian blues and the ultramarines, and the greens from combinations of Prussian blue and chrome yellow. The brown paints get their colors from the umbers, siennas, and the so-called mineral browns. They are all very durable.

Pure linseed oil should be used for mixing and emulsifying the paints. A good many cheap substitutes are used, such as petroleum oil, cotton-seed oil, rosin oil and fish oil. None of these gives the same permanent results as pure linseed oil. No known substitute has ever been found to take its place and give the same excellent results. Turpentine and benzine can be used in the paints in small quantities to reduce the thickness of the pigments to good working condition without any particular harm. They are also used sometimes to hasten drying and to secure the "deadness" of surface. Both the benzine and turpentine are volatile, and they disappear and do not remain in the dried coat of paint. But even their use should be limited to actual needs.

In painting a house contractors usually figure that the cost of the labor represents from two-thirds to three-fourths of the whole cost of the job, and where there is a good deal of cornice, sash and ornamental painting to be done the cost of the labor even exceeds this proportion. So the paint after all is not the all-important part, and one should therefore insist upon the best and also upon good careful workmanship. The covering capacity of a gallon of paint is a matter that depends a good deal upon the condition of the house to be painted. On a new house the wood service absorbs the paint much faster than on a surface that has already been treated. If ten pounds of white lead will spread over 22 square feet of surface, the usual estimate, the same amount of material in a second coat will spread over 324 square feet. A painter under average conditions figures out the total surface area to be painted in square feet, and then divides this by 18. That gives approximately the number of pounds of white lead in oil that will be needed to do a good three coat job. For a two coat job divide the number of square feet by 200, and the result will give approximately the number of gallons of white lead paint.

Paint is not only an insurance against deterioration but is a certificate of good standing. These houses of similar style owe their different appearance to the fresh painted boards of the house on the right.
needed under ordinary conditions to finish the work satisfactorily.

But this quick method of computation is misleading unless the condition of the wood is considered. Some very porous, knotty wood will absorb paint to an alarming extent. In order to prepare such a surface properly all knots, cracks, and nail holes must be putted up. A painter who intends to skimp on his job can easily spread good paint over a much wider surface by thinning it with turpentine or benzine. It is in this work that the use of these two ingredients can be made harmful and injurious. While they do not dry in the paint, they spread it over so thinly that the wood has little protection.

Parts, if not all, of the exteriors of many modern houses are stained or finished off in the natural woods today, and this naturally increases the difficulty of making proper estimates on the cost. Most woods need some treatment to alter the color, and the process of deepening the grain or changing the color without injuring the grain or raising the surface is a somewhat delicate one. There are many kinds of stains used for interior and exterior work—oil stains, water stains, alcohol or spirit stains, acid and alkali stains, pigment or wiped stains, wood dyes and the fuming process. Most of these stains are for interior work alone, but many of them are used for piazzas and porches. Oil stains are really nothing more than thin paints mixed from colors that have a transparent nature such as sienna,umber,ochre,Vandyke brown or the lake colors, which are of vegetable or aniline origin precipitated on a base of whiting. Many varnish stains consist simply of varnish mixed with ground dry pigments, and they are entirely unsuitable for the finish of houses inside or out. They may do for touching up furniture, but not for house trim. Another class of stains consists of varnish colored with aniline dyes. They may have their usefulness, but not for house painting or staining. The colors soon lose their brilliant tone.

Exterior stains and varnishes must all be of a durable nature, and the best are none too good. For porch columns, outside door, window sash and the like only good spar varnish should be used. A good spar varnish costs from four to five dollars a gallon, while interior varnishes may be had for two or three dollars a gallon. To use the latter for exterior work is waste of time and labor. It is economy in the end to use only the best spar varnish for all woodwork exposed in any way to the weather. In the carriage trade they have evolved what they call coach varnish, and sometimes this is recommended for exterior house work; but while superior to the cheaper inside varnishes it is not nearly as satisfactory as a fine grade of spar varnish. This coach varnish applied to porch columns will begin to check and crack within a few months.

No matter how good the varnish is, it cannot be expected to last on an exposed piazza, except on the ceiling or protected sides, much longer than eighteen months or two years without renewal. A good many property owners appear to be ignorant of this fact, and when the varnished surface begins to wear off after a year and a half they blame the painter. One should face this fact at the beginning. A varnished exterior surface will need retouching after eighteen months as a rule, no matter how good the material originally applied. Most varnishes dry too quickly for permanence. They dry by the oxidation of the oil in them, but they also perish by rapid oxidation and lose their lasting qualities.

Wherever varnish is left exposed to the weather it should not be rubbed down to deaden the gloss. It must be left bright, for rubbing down cuts through the varnish film and permits the air to get inside and disintegrate it rapidly. The dead effect of varnish in exterior work is obtained quickly enough by the action of the weather and it should never be artificially hastened. Where several coats are applied, the first two may be slightly rubbed down to secure a smooth surface, but the last one should be left glossy and bright.

One may make a rough estimate of what it would cost to paint his own house or to have it done by a professional painter. Contractors generally have their own way of figuring the amount of surface space to be covered and then set their prices per square yard for the work. Their estimate of surface area is based upon the general character of the house. Thus on clapboarded walls they estimate the number of square feet and then add one square foot to each square yard to allow for under edges of boards. Cornices are measured by length and breadth, and then one-half more added to make allowances for the under surfaces of curves and edges. Outside blinds have their height multiplied by twice the girth for sta-

(Continued on page 193)
Mr. Smith's home is a charmingly informal one that is based on no distinct architectural style. It is another object lesson in favor of a perfectly straightforward development of the plan in simple materials.

The first floor plan is exceptionally compact, with its simple staircase and no waste hall space.

Lavatories are provided for two of the bedrooms—an instance of foresight that is far too uncommon.

In the living-room, with its simple dark woodwork and rough, warm gray plaster walls, the paneling of the lower part of the walls merely by the use of vertical strips from baseboard to plate-rail, is particularly interesting.
THE TRANSFORMATIONS OF TWO OLD STONE BUILDINGS ON THE ESTATE OF
MR. W. E. HERING
ABINGTON, PA.

Oswald C. Hering, architect.

Above and to the left is shown an old stone spring-house that stands on the edge of a pond. There is a very fine swimming-hole nearby, so the upper portion of the old building is now fitted up with dressing-rooms for the bathers.

The other two pictures and the cover of this issue show the transformation of an old smoke-house into a picturesque and comfortable studio.

The spring-house as it was

The smoke-house as it was
Willow Seats for Steps

Small willow seats designed especially for the stoops of city houses or for piazza steps are among the newer conveniences that promote outdoor comfort. They are as substantially woven as are the willow chairs, and are like an ordinary footstool in shape, except that they have legs at but one end. These legs rest on the lower step and support the front of the seat so that a firm level surface is had, and the seat fits snugly over the step. They are decidedly more comfortable than the straw mats sometimes used on steps and much cleaner than porch cushions, which are bound to collect more or less dirt. Several sizes are to be had with slight differences in the height of the legs and the depth of the seat, so that steps of varying width may be satisfactorily fitted.

Their most attractive feature is that they are practically indestructible and can be used season after season. When soiled or worn looking they can be made to look as good as new with a coat or two of stain. As pieces of furniture they are, of course, useful only during the warm season, for their unusual shape does not permit of any indoor service, but they occupy so little space when stored away that they are of slight consideration when the disposal of the piazza furnishings for the winter is undertaken.

Care of Screens

The durability of screens may be greatly increased by a little care. Store in a dry place—the attic is much to be preferred to the cellar under most circumstances—and always clean thoroughly before putting away. Brush off all dust; repair any breaks, and if paint or varnish is required for the frames it is better applied before storing for the winter. When this is thoroughly dried, brush over both wire and frame with kerosene. Frequently through the summer give them the same treatment—it may be quickly done with a broad paint brush and a small can of kerosene. This cleans the wire of all dust and grease, prevents rusting, and proves disagreeable to flies as well.

Brittany Pottery

There are some charming peasant potteries to be had that are very unique, and for the housewife or hostess who wants something unusual nothing could be prettier for a breakfast or luncheon service or for an afternoon tea set. It might be possible even to collect a variety of pieces, enough for a dinner set, but one would experience some difficulty in doing this.

The peasant potteries, of which the Brittany ware is perhaps the most charming, are made by the peasants of various countries when the cold weather forces them to abandon their work in the field or on the water. The making of these potteries not being the principle occupation of the people and the time which they devote to its manufacture short, the quantity made is necessarily very limited. But even if little time is spent in the manufacture, none of them is without a certain beauty, which though crude is not without its artistic value.

The headquarters for the manufacture of Brittany pottery is in the locality of Quimper, in the department of Finisterre, northwestern France.

Brittany pottery has a high glaze, is made of heavy earthen ware and comes in various odd shaped pieces as well as the conventional plates, cups and saucers and bowls. The peasants originate new shapes each year, so that it is wise in buying to get all that one is apt to need at one time, at least of such pieces as cups and saucers and bowls, for the next season's output of what is supposed to be the same thing may vary greatly in size and shape.

Although all dishes which we consider necessary to a dinner set are not made in the Brittany pottery, there is quite a variety of dishes from which one may select those best adapted to one's needs. There are plates of various sizes, charming little cups which could never tip over, they are so squat. These have the quaintest of designs: yellow flamingos, yellow birds, blue birds, roosters, quaint little ladies in full peasant skirts and peasant caps, and little gentlemen in full breeches and broad brimmed hats. Each piece is signed with the initials of the artist and the name of the place where it is made, H. B. Quim-per being a signature that is often seen. The signature often forms part of the design, and being placed under the little lady and gentleman, as it frequently is, it appears as if it were their name. I call them "Mr. and Mrs. Quimper."

Though the design on each article varies, many arrangements of line—conventionalized flowers, birds and people being the motifs—all harmonize, for the same general style of design is followed in each. Blues and yellows are the predominating colors, with reds, greens and oranges. Some are very vivid in coloring and others are soft in tone. Blues, yellows and reds for the colors of a breakfast or afternoon
This peasant pottery is so unusual and so quaint that it is somewhat difficult to supply the demand for it, now that it is becoming known. The dealers seem not to have discovered it as yet, or else the amount that is made is so limited that the importers do not care to handle it. A few of the studio shops, however, have discovered it, and appreciating its charm, import each year quite a quantity of the pottery. One artist dealer goes each year to Brittany to select his stock, for, like most things, there is a choice to be made. The shapes of some pieces are better than others, and the dealer has confided to me that unless a careful selection is made of the colorings, some of them are rather too vivid.

Besides the plates, cups and saucers and bowls, of which there are plenty to be had, the peasants make such pieces as soup tureens, salad bowls, even an oil and vinegar cruets, salt cellars, egg-cups, cream pitchers and sugar bowls. Amongst the prettiest pieces are the little two-handled porringer which is shown in the illustration. These are made in four or five different sizes. The larger porringers have two little holes in the base of the standard and by passing a wire through to make a loop by which to hang them, they can be arranged in groups of two or three, or more, on the dining room wall. Hung in this way they are very effective.

There are bread and cake plates, some round, some square, and of these there is usually but one design of a kind. Next in size are very large plates, twelve and fourteen inches in diameter. In the absence of platters these can be used nicely. As useful as these plates may be at the table, I think their decorative value is one of their best features. On china closet or buffet or mantel they add charm hard to be surpassed by other wares.

Probably each piece of pottery costs in Brittany but a few cents, but by the time the packing express charges and 60 per cent. duty, which is levied on china, is paid, the price is advanced very considerably. However, the small porringers cost from 35 cents to 50 cents each, cups 50 cents, small plates 35 cents to 75 cents, and the larger pieces, such as large plates, salad bowls, etc., $1.50 to $2.50 and $3.00, making the cost not very great for set of dishes which is really unique and never fails to please the guest who has tea or luncheon served to them on china so truly novel. Several of my friends have made wedding presents of small services, and the gift has never failed to please the recipient.

Suggestions to Users of Electricity

Few users of electricity know the difference between the two systems in general use; also about different voltages. Fan motors, sewing-machine motors, cooking apparatus, etc., made for direct current will not operate on alternating current. Also the voltage of any piece of apparatus must correspond with that of the system supplying the electricity. If not, a fire may result, or the device be rendered inoperative until repaired. The following example will tell what is the proper way of ordering or determining in case you are offered the loan of any piece of apparatus:

"Alternating current; voltage 110; article, electric sewing-machine motor."

Dangerous results (a costly fire narrowly prevented becoming dangerous) suggested the above hint. Often housewives will lend each other different devices such as have been mentioned above, without knowledge that what worked on one system of electricity will not work, in fact is very dangerous to attempt to operate, on another. This is especially true when one moves from one town to another. The direct system may have been used where the owner first resided, the alternating in the place he moves to. The voltage may also vary.

An Efficient Alarm

A very inexpensive and satisfactory device is one that may be placed underneath a rug, mat, or even under the stair carpet and which when stepped on will sound an electric bell at any desired point. They are made by a number of electrical supply companies and make a very satisfactory alarm. If used at night a switch may be placed at any convenient point, and the device rendered inoperative in the daytime by simply turning it. All materials for an ordinary system of this kind can be purchased for about $1.75, and

The designs are various and admit of a wide choice, but all are on the same general color scheme and decoration, and it is not necessary to have exact designs to harmonize with an ingenious householder can install it in a very short time with little labor.

This form of alarm is simpler than some of the old types and has the advantage of being in an unlocked for place. Skilled second-story men often have found no difficulty in avoiding the door and window alarms, but this type may be an absolute guard for every floor no matter where the house-breaker effects his entrance.
September

It seems quite natural to consider September as the close of the gardening season. A far better way, however, is to think of it as the beginning of next summer’s plans for grounds and garden. The intermission of winter will make all this year’s mistakes and good resolutions fade into the indistinct past, and you will start next year’s work and problems from practically the same point as you did this year. Instead of such a happy-go-lucky system, or want of one, you should certainly utilize this year’s experiences, and build them into the foundation of the coming season’s work. Have you any definite plan for doing so? Or are you trusting to that most fickle of assistants—memory? Why not do as House and Garden has so often urged you, in your own interest, to do: make a sketch of the grounds and jot down improvements you could make?

A Garden Path

For instance, is there not some track across the lawn, leading to a flower bed or a shady spot, where a neat path would look much better than an uneven bare track? Why not put in a narrow gravel path? You can either do the work yourself or supervise some unskilled laborer. There is no need of calling in the assistance of the profession of landscape gardener or florist. First mark it out, with string if a straight path, or if it is to have a graceful bend or two use a number of small stakes, that can be moved in or out at will until you get your curves just right. Cut out the edges evenly with an edger or sod cutter and remove the sod and soil. This, by the way, will be excellent for the compost heap, or for some bed that could be raised a little. The width of the path will depend, of course, on what it is to be used for and its harmonizing with the other features of the place.

Into this excavated path put coarse gravel, coal-ash clinkers or any other very coarse material which you can easily obtain, filling it within about two inches of the top. Tread or pound down very thoroughly and then fill in with small gravel or screened coal ashes, a little above the surface of the lawn, and well rounded up in the middle. If possible, it will be well to let the lower layer stay awhile and settle before putting on the top one, but the other should be in place, trodden down some time before the ground freezes. The great advantage of making paths and walks in the fall is that they have a chance to work down into a permanent position during late fall and early spring.

Shrubs

This is a good time also to pick out those places on the lawn where shrubs or trees would add to the general effect of the place. Stand on your porch or veranda and in your mind’s eye fill in the empty and thin-looking spots. Is there an open vista to the left, terminating in your neighbor’s unsightly chicken yard? Can you not imagine the improvement a good thick horse chestnut, or clump of spirea, with its dense mass of graceful sprays, or even a shapely pine or hemlock from the wild woods, would make? Perhaps a few flowering, low-growing shrubs would break the monotony of trees planted in straight lines, or at regular intervals. Your place is the exception indeed if no improvements suggest themselves to you as you look out across the lawn. Make them this fall. The trees are not expensive, and you can have the nursery man deliver them in proper time for setting in your locality. Many, such as pine, hemlock, spruce, birch, maple, cedar and others, may be had in many sections simply for the trouble of digging them up. It is, of course, more difficult to transplant such trees than those grown in the nursery, where previous transplanting has caused the formation of a dense mass of roots, in place of the long main tap-root which trees dug from the woods usually have. However, with care the uncultivated trees may be brought through; even if some of them die, those remaining will repay the trouble of securing and planting them. Always take up as much earth as possible, cut off cleanly all broken or bruised roots and firm well when setting out. If the soil is so dry that water must be used, put it in the bottom of the hole.
Plants of Merit

A plant, which, although popular, is not in such universal favor as it should be, is the peony. It is a robust grower, and free from practically all the diseases and insects attacking many other ornamental plants, but it needs a deep rich soil to do its best. If you have plants old enough to divide, attend to it by the 20th of this month. One good strong bud is enough to put in a place. Most sorts will do best when put three to four feet apart. If you are going to set out new plants, perhaps it will be safest to wait until next spring, but get the bed ready now. Make it rich, with manure if you can get it, and plow or spade it up deep and rough on the surface. The old peony bed should be mulched with manure, and if the soil is very dry, kept watered. Remember that the peonies, like many other hardy plants which make a very quick growth in the spring, store up energy and food in the crown of roots a year ahead. You will get returns for any care given now in next spring’s beautiful foliage and enormous blooms.

Another flower that is an old popular favorite, but by no means universally seen, is the larkspur. The colors are wonderful. Set plants or sow seed now, or divide your own roots later in the fall when all growth has stopped.

It is also time to sow petunias, phlox, Drummondii and other small growing annuals for winter blooming indoors. The secret of starting small seeds at this time of the year is to have the soil thoroughly moistened the day before sowing, and to choose some place that can be sheltered from too much direct hot sun, and heavy rains. A coldframe with finely pulverized and prepared dirt, that can be covered with a sash of protecting cloth, will be as good a place as may be had. The best plants will be had by transplanting once just as soon as possible, before putting into the boxes and pots for winter blooming.

While speaking of sowing seed, do not overlook the possibility of having earlier and better sweet peas than your neighbor’s. How? By planting them this fall. Prepare your trench, unless it is on ground that you know is thoroughly drained by a sandy subsoil, by digging out to a depth of twelve to eighteen inches, and put in the bottom coarse coal ashes or gravel. Cover this to within four or five inches of the top with soil that may be made as rich as one-half manure. Do not use fresh manure, which might heat and cause the seed to sprout. The idea is to keep the seed dormant until spring. For this reason the planting should not be done too early, thus allowing the seeds to start and be frozen back. Wait until cold weather is at hand, two or three weeks before you may expect freezing.

The House Plants

A job which should not be put off, is the preparing of your winter plants for blooming and decoration indoors. The ideal way of getting a flowering plant, such as a geranium, ready for winter work is to start it from cuttings or seed, in early summer. Keep them growing in pots plunged up to the rim in soil, and turned every week or so to keep them from rooting through. They should be re-potted when necessary, and all buds kept pinched off before blooming, so that their full strength may be saved for blooming indoors. Where these preparations have not been made, however, one can still have a supply by getting to work at once. Select a few of the best formed plants, preferably of small size, and if the soil is dry, water thoroughly for several days. Cut them back severely—two-thirds to three-fourths of the new, rapidly made growth. After the cuts have healed over, pot them in good rich porous soil (mix with it swamp or sphagnum moss, leaf-mold or chip-dirt, to one-half its bulk if necessary). Pot them firmly, water thoroughly, and keep in partial shade for a week. From the new growth which will rapidly develop you will get good results. From plants too large and old to bring in, take cuttings. This is the most favorable season of the year for rooting cuttings, and with clean, coarse sand, and carefully selected ripe wood, you ought to get very satisfactory results.

In the Vegetable Garden

Lettuce and radish may still be sown, and spinach, onions and borecole for wintering over. Try also parsnip, carrot, peas, to be planted now, just too late to germinate this season. The seed costs but a few cents, and it’s well worth taking the chance, which is by no means too big a one, that they will come through all right, as far north as New York. The advantage of fall sowing is that seeds can begin to grow before the soil is dried out enough to work in spring; besides which, of course, it relieves the spring rush.

All the onions should be ready for harvesting this month. In very dry seasons, sometimes before September 1. As soon as the tops die down and wither pull them even if small. Later rains, instead of making them larger, will ruin them entirely. Pull and pile up in window, three to five rows in each, according to the weight of the crop. They should not be piled up much. Turn with a wooden rake two or three times that they may dry off evenly, and then spread out as thinly as possible under cover, but in an airy place, as they must dry out a good deal more before being stored for winter. This must be done previous to severe freezing.

Keep an eye on the weather to prevent losing your squashes. A few days before frosts are to be expected, cut them with a few inches of vine to each (never break off the stems), and turn over to expose the under side to a few days sunlight, then carry in and pile, being exceedingly careful not to bruise, where they can be covered with bags or mats from the first light frosts; store in a safe dry place as soon as possible, as it takes but little frost to spoil them.

Geraniums such as these may be had all winter if started from cuttings now

A typical geranium cutting should be carefully selected for good ripe wood

This is the most favorable season of the year for rooting cuttings. Take them from this portion of the branch and trim off the lower leaves
THE TURN OF THE ROAD

LIKE a breath of spring on a March day comes a letter to day from a man who has gone back to the land.

"I'm dead broke, but I own a farm. I'd rather be broke and own a farm, than not be broke and not own a farm."

"I have been camping in the orchard in a tent and having the most glorious time. I have spent weeks under an old apple tree with a saw and a pruning knife, looking for that 'ideal' that HOUSE AND GARDEN says is the requisite for a successful trimmer and pruner. Bang the editor's head! There isn't any ideal! He is just talkin' hot air. Send him up to me and I'll pound his head and then show him deer that watch me bathe in the morning, a mother partridge shoewing her brood from under my feet, the scarlet tanager that greets me from a nearby tree, the baby birds that swing in nests in every other apple tree. I'll show him the miniature brooks and the valleys and the hills of this farm. I'll let him look at a landscape that cannot be beaten. All these things are worth more than 'ideals' anyhow. Why, I don't believe the editor would know an ideal if he met one walking up town."

Probably not, but if we wanted to find one in a hurry, we would take the first train for that farm in the glorious old hills of Vermont.

It is amazing, the widespread extent of this desire to get out of the wearing struggle of city life back to a way of living that agrees so infinitely better with our calm reason. No, it is not amazing, on second thought, for it is such a perfectly natural reaction from the life we have gradually been speeding up to. Looking at the movement—for it is strong enough to warrant that name—in an absolutely disinterested way, it betrays the fact that it is a reaction rather than a logical forward development, in that it is making itself felt almost exclusively about the greater cities. That is to say, there is no reason to believe that we as a people are going to become more of a farming people than we now are. There is too much restlessness, too much nervous energy leavening the mass for that. The distinctly American trait of an abiding lust for power, for influence, for the acquisition of wealth, is too strong to be swept aside by the less blatant attractions of a more contemplative mode of living. All of which is not going to disturb for one moment the serene joy of the man who has decided to make the break and get back to the soil. What does he care about the stock market, the subway problem or the latest restrictions on the building of tenement houses? Other problems are his—the selection of seed corn that will produce a few more kernels to the ear, the diverting of that spring on yonder hillside to feed a new irrigation system, the oiling of that shotgun up on the wall pegs, in preparation for a day after quail. Life with him flows as a slower stream and the cup he quaffs from it is a deeper one. Probably he is never going to accumulate a "fortune," in the accepted meaning of that most elastic term, but the land is going to give him enough and to spare in return for his labor, and his life will be really worth living.

THE POOR MAN'S GARDEN

An editorial in the New York Sun recently complained bitterly that the landscape gardener, in spite of the widespread interest in this work, still seems to be only a luxury for the possessors of great country estates. The point was made that the poor man or the man of moderate means had no such expert to aid him in the task of laying out the garden in accordance with the best ideas along these lines.

In all humility, we venture to say that this is precisely what HOUSE AND GARDEN is trying to do, just as it is trying to show the man of moderate means what is best in architecture and interior decoration, without necessitating too great a cost.

The phenomenon that the Sun complains of is not in any sense restricted to landscape architecture, or in the more humble term—gardening. The man who has three to five thousand dollars to spend upon his home, faces the same problem—that of building well and beautifully within his means. In many cases he feels that the services of an architect would add expense without justification, failing to realize the indisputable fact that the few hundred dollars he would pay for the architect's services would be saved twice over in securing proper construction and the effective use of inexpensive materials.

Unfortunately these small problems are not attractive to the architect. His expenses in drawings, writing specifications and supervising the erection of a house costing $5,000 are practically identical with his expenses in performing the same services in the case of a house costing $10,000, yet his reward in the second case is double that of the first. This of course is due to the existing system of architects' charges being based upon the percentage of the total cost of the building. The system is not ideal, but the experience of many years has shown that it is the most practical working system thus far devised. Of late years architects have expressed their recognition of the greater cost of time and labor involved in a small house by increasing the percentage rate below $10,000 or $7,500. This is only fair, and the results from a practical as well as an aesthetic viewpoint are well worth this higher fee.

The case is identical with the gardening and landscape side. People who have not thought deeply in the matter are far too apt to feel that they can readily dispense with the services of the skilled landscape gardener, when the work is not extensive in its scope. Then too, on the face of things the man is apt to think his own knowledge concerning planting is sufficient for all practical purposes on a small place. The only solution of the problem that we can think of is the same for both cases—that the prospective maker of a home investigate the matter fully enough to satisfy himself that the services of both an architect and a landscape gardener are not only advisable, but true economy, and that he be willing therefore to pay the price.

CHEAP SEEDS

In a nearby grocery store there is a small tray divided into perhaps twenty compartments, each containing packets of seeds lithographed in gay colors. On the under side of the lid, which is hinged and held at a convenient angle with chains, is an inspiring garden scene and the legend, "We can highly recommend these seeds." To our certain knowledge that tray and most of its contents has been in that store for three years, brought forth each spring into a prominent position to tempt amateur gardeners.

The packets of peas, beans, lettuce, and so on, bear no seedman's name—a fact that mutely testifies to his business sagacity, for when seeds fail to sprout the amateur gardener has no unerring memory regarding the name the packet bore. When one considers for a moment the relative values of the seed and the labor that go into the making of a garden—not alone the labor of making ready the soil and planting, but the season's work in cultivation, transplanting and fertilizing—it would appear that the very best seed obtainable is none too good on which to base the hazard. If we were casting about for the most common causes of failure in gardening, one of the first to hand would be cheap seeds.
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FLOOR VARNISH

In Canada, 61 Courtwright Street, Bridgeburg, Ontario
New Ways of Controlling Electricity in the Home.

(Continued from page 155)

cellar light or lights. While the cellar lights are turning the red light in the kitchen burns, serving as a reminder. The red light should be set where it will directly confront the person who mounts the cellar stairs. The cellar light that is controlled from the kitchen is the only worthwhile light, for it need not be turned off downstairs while you grope your way up in the dark, nor need a streak of candle grease bear testimony to the use of a light in the hand.

An adaptation of the door-hinge idea has been worked out by an out-of-town house owner. His place is surrounded by a fence with a gate. When he opens the gate on his arrival at night, the switch set at its hinge turns on the light on the piazza, enabling him to plainly see his way. This light may be turned off at the house when desired; but the approach of a caller, or anyone who opens the gate, will serve to turn on a welcoming light. In the case of a tramp or other undesirable, the magic light will probably serve as a watch-dog and repel rather than invite advance.

This convenience could we well adapted to city houses where on opening the area gateway one is confronted by abysmal darkness. Suppose the opening of the gate turns on a light in the areaway; it would serve not only as a help to the newcomer, but would enable the person who opens the door to see what manner of man desires admittance. Lights of this sort would also be a valuable aid to the police.

Nowadays a large public building not equipped with electric fire signals is an anomaly. For private house use these annunciators have not had sufficient attention. The country house should be provided with an annunciator connected with the stable, with an outside gong to summon the neighboring assistance, with the fire department, or at least with a loud gong to warn all the inmates. These annunciators require the breaking of their glass covering with sharp blows, which breakage releases the spring controlling the connections.

The instantaneous electric hot water supply for the bath room, kitchen or laundry is a newly perfected apparatus which will supply hot water in small or large quantities as desired. The most improved connection provides for the passage of electric current through cold water, the water being automatically turned into the heater as the electricity is turned on. This provides against overheating the carbon rods before the water comes in contact with them, doing away entirely with the danger of steam explosion.

The man-of-the-house need not growl over lack of warm water and good light for shaving, if his house be wired for electricity. A portable shaving glass arranged with a movable shade and diffused electric light underneath, throws a good light upon the face, without shadows. A
wall mirror could be made to serve the same purpose with small stationary lights around it, half shaded so that no shadows fall upon the face. The electric shaving-mug holds a half pint of water quickly heated from the device at the bottom of the cup when attached to any incandescent bulb socket.

That the hot water bottle is to be relegated to the past, and to those not progressive enough to use electricity, is demonstrated by the electric warming pad—a thick pad apparently made of eider-down flannel. The heating element is concealed in the center; and when attached to a socket one has all the delight of a hot-water bag with the knowledge that it will retain its heat indefinitely. The warming pad is also usable with a small storage battery for carriage, sleigh or car travel, and for use where a house is not wired.

The portable electric lighter has many uses. In a home where gas is used for illuminating and for cooking, this lighter, attached to a common dry battery, is guaranteed to furnish thousands of lights at less than the cost of a box of matches. It may be used for anything that requires a light—lamps, cigars, fires—and its safety is assured.

The various electric culinary helps now flooding the stores are enough to make our great-grandmothers turn in their graves. Think of cooking one's whole breakfast, including griddle cakes, on the table, without the aid of a match, but with an electric coffee-pot, and an electric griddle and toaster, hot at a moment's notice. Think of the sick-room convenience in heating food on the spot. Think of doing one's washing and ironing by electricity. Think of cleaning one's curtains, chairs, pictures, woodwork, mattresses, carpets, floors by a simple electric suction process. And all this in addition to general water and heat supply secured by electric motor.

A general utility motor is now installed as part of the paraphernalia of progressive housewives. These small motors are used for running the sewing machine, polishing brass and silver, chopping, washing, and freezing ice cream. The friction will burnish brass and silver without paste or polish.

Surely the question of domestic service is fast reaching its solution in the genii of electricity.

In installing electric connections it pays to see that most careful insulation is made. Economy in electric installment is like economy in plumbing—a saving at the spigot to spend at the bung.

Three Lilly Pools
(Continued from page 157)
garden, and then the barrels were filled with water.

The pool was at one corner of the garden, with a background of shrubs and lilacs. Water lilies—one the Odorata

It is now customary at afternoon teas and luncheons to serve

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The hardware on your home tells of good quality and thoroughness of poor construction and lack of judgment. If it looks badly or fails to work properly, it is a source of annoyance so long as the house stands, but if it is right, it is a cause of constant satisfaction.

The Oakland knob and escutcheon shown are especially suited for Colonial, Craftsman and Mission homes. It is one of the 123 Corbin designs in 19 schools and made in 54 finishes, found upon homes of refinement everywhere. The best dealer in your city sells it.

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Petrifax Cement Coating

There is bound to be more of less powdering. The dust is not only annoying, but it is injurious to the throat and lungs. Two coats of Petrifax make a sure and lasting remedy. Gives a hard surface that will not crack or peel. Washable, and prevents spitting from oil or grease.

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No. 46 Petrifax is the exact color of cement. Also made in white and several shades. Write for interesting booklet.

Dexter Brothers Co., Boston, Mass.

Be sure the word PETrifax and our name are on every barrel, keg and can.

The Prophet's Chamber

(Continued from page 162)

brush, comb, etc. On the top of the table was a century old brass candlestick holding a plain white candle as nearly like the old dipped ones as could be found. By it were antique snuffers, similar to those in use in the days of the prophet. A Bible, in harmony with the tone and intent of the room, was also kept on the table. The sloping walls were covered with a simple paper of nodding golden-rod. The only ornament was a small but ancient print of a Biblical subject.
It will be seen that such a room is quite within the reach of every one. Its simplicity is in keeping with summer homes, bungalows or shacks. Indeed, the more elemental the features the more like the traditional chamber on the wall. If such a room is made in a pretentious house, it must be treated with care. Eliminate everything but the stipulated furnishings. Otherwise it will be too much like any other and not a character room as it should be. The writer would suggest the use of plain paper in some quiet tone rather than a flowered one, such as was used in the particular room photographed.

There are three elements to be distinctly borne in mind in the development of this chamber: first, it should be simple; second, its furnishings should be antique; and third, it should breathe a gracious air of hospitality. The modern guest, like the prophet of old, will be glad to rest there a little as the busy world goes by.

A Revolutionary Idea in Flooring
(Continued from page 167)
ished off looks very well. The small defects are obscured by the filler and you have an inexpensive floor that you need not be ashamed of.

When it comes to the more artistic effects in flooring, in the thin floors laid on top of sub-floors there is a chance for the exercise of common sense and the getting of good effects without going to the extremes that are often talked of in the papers. There are generally three grades of the oak flooring stock and two divisions aside from these, quartered and plain. It is generally better in this work to buy the quartered oak, for though it costs a little more it works with less waste and presents so much better figure and gives so much more satisfaction generally that it is well worth the difference in price.

The three grades in quartered oak may be popularly named as follows: clear stock; selecting, which have a few defects of beauty, but nothing marring the usefulness of timber; and sap, or a grade lower than the selecting, including a few fine worm holes and quite a lot of sap stock, which is not admissible to the clears.

The writer was in a newly finished display room of a flooring plant the other day where they had laid many examples of their flooring to show them off to visitors, and among the lot were some examples of that third grade or "sap" and until attention was called to it not much difference was noticeable between it and the other except that it seemed to have been filled with a darker filler.

Now, it so happens that the dark fillers are quite the style to-day and one can take this third grade or "sap" in thin flooring, lay it in whatever pattern is desired either with border or with stripes or rug effect or pave it in with blocks and
different. The telephone system furnishes a circuit and lets you do your own talking. It furnishes a highway of communication. The telegraph company, on the other hand, receives your message and then transmits and delivers it without your further attention.

The telegraph excels in carrying the big load of correspondence between distant centers of population; the telephone connects individuals, so that men, women and children can carry on direct conversations.

Already the co-operation of the Western Union and the Bell Systems has resulted in better and more economical public service. Further improvements and economies are expected, until time and distance are annihilated by the universal use of electrical transmission for written or personal communication.

Double Tracking
The Bell Highway

Two of the greatest factors in modern civilization—the telephone and telegraph—now work hand in hand. Heretofore each was a separate and distinct system and transmitted the spoken or written messages of the nation with no little degree of efficiency. Co-operation has greatly increased this efficiency.

The simple diagram above strikingly illustrates one of the mechanical advantages of co-operation. It shows that six persons can now talk over two pairs of wires at the same time that eight telegraph operators send eight telegrams over the same wires. With such joint use of equipment there is economy; without it, waste.

While there is this joint use of trunk line plant by both companies, the telephone and telegraph services are distinct and

American Telephone and Telegraph Company
And Associated Companies

One Policy
One System
Universal Service

ANDIRONS FOR EVERY ENVIRONMENT

Your home should have an atmosphere of comfort and refinement. A cheerful fireplace with proper accessories will do more to give a room character than anything else.

Graf Fireplace Fixtures give a fireplace interest. They are made in a wide variety. Be the prevailing note of your room Colonial, Dutch, French, Mission, or of any other type or period, we can supply the proper fixtures. Write for our illustrated booklet "Fireplace Fixtures." It shows Andirons, fenders, seat fenders, smokeless gas logs, wood boxes, etc.

Write us NOW. Our book "Fireplace Fixtures" is FREE.
FRANK H. GRAF MANUFACTURING CO., 323 Seventh Ave., New York City

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Then there is the Yale ‘Holder’ Check (which keeps doors open when you wish) and the Floor Check (for double acting doors) that is applied under the flooring.

Furnished in ‘finishes’ to harmonize with your other hardware.

Every Blount or Yale Door Check is of the famous Yale Quality.

Send for Illustrated Booklet with full specifications.

The Yale & Towne Mfg. Co.
The Makers of Yale Products
9 Murray Street, New York, U.S.A.
Chicago, Boston, San Francisco,
London, Paris, Hamburg

Storing Vegetables and Fruit

(Continued from page 163)

ground, cure during the warm days of September, but must be covered when a clear cold breezeless night invites frost. These vegetables are ready for storing when the stems are shriveled and free from moisture and the rind somewhat hardened. Only a dry air will keep these vegetables in a room where the temperature does not get below 40 degrees.

All tubers must be at least surface dry before storing, with the exception of sweet potatoes, which are most exacting as to care. They must be dug before frost and subjected to a slow drying out in small slatted baskets or crates in a warm room. Carrots, beets, turnips, parsnips and such vegetables cannot be dried and stored satisfactorily as are sweet potatoes, as they lose so much by shrinkage. They are best if stored where they may get the slight moisture of soil contact. Fine, clean sand on the floor of a cool cellar is the best substitute for natural conditions. A layer of sand about two inches deep is spread upon the floor, the vegetables laid thereon and then covered with more sand.

Onions, beans, peas and peppers require a dry room well above freezing after a preliminary sun-drying.

Cabbage keeps crisp and fine-flavored under a mound of earth.

A little detail well worth attending to now in advance is getting a few barrels. They always advance in price as the apple picking season comes on, and frequently one cannot get them for love or money.
What Type of Heating?

(Continued from page 168)

would otherwise be possible, and as I mentioned before, this saves coal and labor. In addition, a large enough heater allows you to put in an additional radiator if you enlarge your house, and also enables you always to warm your home even in bitter cold weather without auxiliary means of heat, which are often expensive and troublesome to maintain.

Whatever heat you use, whether it be hot water, steam, or hot air, be sure to figure carefully the size necessary to properly heat your home, then select the heater. In addition to what I have mentioned about the excessive amount of coal which is burned when the furnace fire is forced, there is another serious objection to doing so, and that is that the iron heating surface of the furnace will be injured so that it will not readily absorb the heat of the fire. Take the ordinary range lid for example. People frequently complain that they can heat their stove lids red hot and yet cannot obtain sufficient heat to cook properly. Of course they cannot: the iron has been overheated and has been ruined for the purpose for which it was intended. It is a serious and costly matter to ruin a furnace in this manner. Better by far pay the slight additional cost of a large enough heater in the beginning.

THE INDIRECT SYSTEM

There is still the indirect system to be considered. For the benefit of those who do not know this, I will say that in the "direct" the radiators are placed in the rooms they are to heat, while in the "indirect" fresh air is obtained from outside and heated by the means of an enclosed coil of pipes or radiator, the warm air then passes through a tin pipe to the room it is to heat as in a hot air system. This method gives a very pleasant supply of warm air, but it is more expensive to operate, requiring seventy-five per cent. larger furnace and seventy-five per cent. more heating surface in the radiators than a hot water heater; and fifty per cent. larger boiler, and forty per cent. more heating surface in the radiators with steam. This system also involves a far greater amount of attention than the direct, for if constant heat is not maintained in the coils or radiators cold air will enter the rooms unless the supply of air from the outside is shut off. I have known houses where a combination of the direct and indirect was used, the direct for the bedrooms and halls, and the indirect for the rooms most occupied by a number of persons at one time, such as the living room, parlor, dining-room, etc., but even in these houses where there was a man constantly employed about the place who could give a part of his time to attending to the heating apparatus, the indirect part was not satisfactory because of the amount of attention it required to maintain for even degree of temperature. It was found best to substitute the direct for it, and to obtain fresh air by ventilators in the windows, or...
A RE you penny wise and pound foolish? Would you use a cheap quality of varnish, stain or enamel in the interior of your new house? This would prove expensive economy.

An inexpensive wood may be successfully used for the trim of the house, but the stain, varnish or enamel should be of the best that is made.

The quality of the materials manufactured by Murphy Varnish Company is unsurpassed; the price puts them within reach of all wise home makers.

YOU may be interested to know that as a customer of Murphy Varnish Company you are entitled to the service of their Department of Decoration without any charge whatever. This includes expert advice on the treatment of the standing woodwork. Sample panels showing the finishes recommended are sent upon request, also complete advice on the decoration and furnishing of your house. Samples, cuts and prices of all goods are supplied. You will find the suggestions artistic and practical.

Write today and send your floor plans.

Address Department of Decoration
Murphy Varnish Company
345 Fifth Avenue New York

The Houses of Wood or Brick
From the Address of W. E. Dunwoody, at the Dealers' Convention, Macon, Ga.

On account of the fact that lumber is daily becoming scarcer and more expensive, and the consequent comparative cost of a house of brick and one of cement or wood is a daily problem, the Building Brick Association of America recently undertook to determine something definite regarding this matter, and I give the results of this investigation for your consideration.

For this purpose, a modern eight-room frame house of good design was chosen, and plans and specifications were prepared by a well-known and competent firm of architects. These plans and specifications were submitted to five well-known contractors, and each fully advised of the object of the investigation.

Each contractor was given the same information and instructions, and each took plenty of time to figure with care, with the following results:

Taking a weather-boarded house as a standard, they found that a house complete even by opening the windows themselves when necessary. In the average country home one finds a constant supply of fresh air entering around the doors and windows, so the direct seems all that should be required, especially if the rooms are thoroughly aired at intervals. In city residences in some cases this is not so, as it is more difficult to obtain ventilation in houses built closely together; and a well constructed hot air furnace may then be used to advantage, if you do not care to install the indirect system to obtain a plentiful supply of fresh air. The indirect is frequently used for heating churches or public buildings where many people gather together at one time, and where much ventilation cannot be secured while they are present because of the danger of putting them in a draft. Steam is usually used for the indirect heat in such buildings and answers admirably because a steady constant heat is not required; only a large amount for short periods of time, and as there is a janitor or sexton to look after the fire when the heat is needed, there is no difficulty with the cold air supply from outside. But in most private residences conditions are entirely different, and a constant supply of heat at an even degree of temperature is what is required.

EXPENSE

This is a much debated subject, but the writer has found that hot water does burn less coal. Of course now we are speaking of the direct methods. Steam he would place next, and hot air last. Over against this conclusion we must place the fact that the cost of installation and equipment varies in just the reverse order—hot air least and hot water the most expensive.

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Makes its strongest appeal to people of taste and refinement. A large business of supplying the purchaser direct has been built upon the simple, artistic lines of our designs, solid construction, and a variety of custom finishes, meeting every possible requirement of discriminating people.

A large assortment of Furniture in the natural wood or stained to suit the individual taste. Your choice of any of several finishes to harmonize with the color scheme of your rooms.

Send for full set of illustrations, mailed upon request.
WM. LEAVENS & CO.
Manufacturers
32 CANAL STREET, BOSTON, MASS.
with the outside walls of brick ten inches thick would cost an advance of 6.5 per cent. over the weather-boarded house; that a house with twelve-inch brick walls would cost an advance of 10.7 per cent. over the weather-boarded house; that a house of stucco on hollow clay blocks would cost 4.9 per cent. in advance of the weather-boarded house; that a house of stucco on frame would cost in advance of 2.5 per cent. over the weather-boarded house; and that a house with four-inch brick veneer on hollow clay blocks would cost an advance of 7.7 per cent. over the weather-boarded house.

In these estimates face brick were figured to cost $17.50 per thousand, and common brick $9.00 per thousand.

A Bulb that will Prolong the Fall Garden
(Continued from page 171)

shown some rather peculiar characteristics. The blossoms usually appear rather late; the first ones are always pinkish-lavender in color; after a while flowers are produced which show some white petals, perhaps half of the blossom being white and the remainder lavender. At the last, perfectly pure white blossoms appear. This is usually in November. Whether the cold weather has an effect on the color of the blossoms is an unsettled question in the mind of the owner of the garden, but these characteristic features have been shown by the plant every season for several years.

One has but to see a mass of these pretty flowers blooming late in the fall in the garden, or scattered around in the grass, to be convinced of their desirability, and once introduced, no flower lover will be willing to have them banished from his domain.

A Combination Hotbed and Storage Pit
(Continued from page 172)

close intervals to stuff, spiked at sides, two inches from edge to top, the post being sawed at a slant, as shown in fig. 2, to allow the sash to slide over for ventilation, watering, etc. At proper intervals on this rail small blocks are nailed to fit snugly on each side of the rafter ends.

The sash guide strip, S. G., in fig. 5, is of white pine, one inch square. To prevent after-swelling and binding these strips should be thoroughly saturated with linseed oil and two coats of white paint given before attaching to rafters, R.

The rafters and ridgepole are of 2 x 4 in. material. The ridgepole is made up of two pieces, L.R.P. and T.R.P., spiked together. The top piece, T.R.P., as shown

HAVE YOU A HANKERIN'

for those firm, sweet apples you used to knock off the tree with a club when the old man wasn't looking? That was back in the days when the East—the natural apple country—was producing bumper crops. It was before the days of Oregon apples that have size and color, but lack the real flavor of Eastern hillsides. I have rejuvenated a Vermont orchard and will have for October delivery a limited quantity of apples that are just a little the best that can be grown. Drop me a card for the particulars.

JULIAN A. DIMOCK, East Corinth, Vermont

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Builds his own home he wants the best of everything. MR. ERNEST GUILBERT, City Architect of Newark, N. J., began right by making all his window casements swinging out.

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No perplexing and endless lists of varieties to puzzle over. We have done the eliminating—the sorting and sifting. We offer the best sorts in existence and ONLY the best—guaranteed true to name—and as we grow for discriminating customers, we supply only established plants at the lowest possible prices for quality.

"OUR REPUTATION HAS BEEN BUILT ON THE QUALITY OF OUR STOCK"

WE SHIP ONLY IN THE FALL, AND OUR ANNUAL CATALOG IS NOW READY. IT'S UNIQUE—DISTINCTIVE—VERY DIFFERENT FROM OTHERS. MAY WE SEND YOU A COPY?

MOHICAN PEONY GARDENS, BOX 25 Sinking Springs, Penn'a
in fig 4, is notched in, as at R.N., to hold upper ends of rafters. The rafters are held together, as shown in figs. 3 and 4, by bent pieces of heavy wire, as indicated by B.W., the upper ends of S.G. being cut away to allow inserting of binding wire into rafters.

A ridge board, R.B., in fig. 6, is necessary to prevent wind getting under sash ends and lifting sash. This board is made of one-inch fence stock, nailed together trough-shaped and held in place by a third board, attached as at R.B.S., notched to fit over wire and rest on ridgepole.

The length of center post will depend on depth of pit and thickness of support, C.P.B., which is necessary to prevent settling. In setting up, the ridgepole is slightly toe-nailed to center post and rafters laid on at intervals to steady ridge, which must be absolutely level. The rafters are not nailed at either end, it being the purpose to make the skeleton or frame of this bed portable and easily removable. The center posts may be placed ten feet apart for supporting sash, but an extra post should be placed between to support the extra weight of earth and covering when used as a storage pit.

The ends are built on a separate form or frame and attached to end posts by heavy hooks instead of spikes, to permit removal. A vertical sliding door is placed in one side of this end to permit easy entrance to frame when used as a storage pit without disturbing the protecting banking of litter.

Fresh manure, F.M., is used to bank sides when used as coldframe or hotbed.

We found it desirable to run a line of water pipe, with taps at convenient intervals, inside the frame, for watering plants during severe weather.

For the purpose of working inside with sash closed a plank is arranged, as shown in fig. 7; eleven feet four inches long, with a hog chain of heavy wire to support the weight, and light strap iron with hooks on ends to hang on rafter rails, at either side, so that men may work from it over bed in planting, weeding, etc.

Fall Care of the Lawn

THOSE who are becoming so discouraged at the present appearance of their lawns may take some cheer in the knowledge that September is the best season of the year to get rid of such annoying interlopers as dock, dandelion and crab grass. Work done now yields more permanent and satisfying results than in the spring, although it does take considerable muscular effort.

The deeply rooted weeds, dandelion and dock, must be dug out with some weeding instrument, going so deep that there is no possibility of their growing again.

With crab grass the case is different. By the end of August this pest will be found to have crept over much of the lawn.
and crowded out much of the grass. Take a sharp toothed rake and carefully pull these runners or creeping stalks to the surface, then run the lawn mower over with the knives lowered so that it will cut very close to the ground. The plant is of annual nature, dying each fall, but its seeds come up each June unless prevented in this manner.

In the places left bare by these operations, work the soil loose and sow good seed. It will have time to become well established before frost, and indeed if this procedure is carried out, the lawn should look its best by the last of October.

Facts and Figures in Connection With Outside Painting.

(Continued from page 175.)

tionary, and by three times the girth for rolling slat blinds. The measurements of window sash are obtained by multiplying the height by one and one-half times the width, and if fancy by three times the width. The surface area of the columns is obtained by multiplying the height by one and one-half the girth, and fluted columns by twice the girth. Tin roofs and flat sides are measured by simply multiplying length and breadth. Chimneys, conductors, spouts, large boards and crestings are estimated by multiplying the length by four times the girth. In dipping shingles one thousand shingles are estimated for each four hundred square feet of finished surface.

It will be seen that this estimate of the surface area of the house to be painted is quite different from simply multiplying height by the breadth. But it is necessary in order to include in the surface all the small under parts that must be touched. The professional painter must take cognizance of this, more on account of the time required for painting than because of the extra paint. It requires nearly twice as much time to paint a broken than a flat surface, although nearly the same amount of paint may be used on each. The simple, plain houses which are so much in fashion to-day are therefore cheaper to repaint than those broken up with many gables, balconies, and gingerbread ornaments. To paint a house of the latter type a painter will add nearly one-third to his estimate for a plain house. So in the long run the plain house of straight simple lines is not only cheaper to build, but less expensive to keep in repairs and well painted.

After making his estimate of surface area—which by the way is generally one-third more than the area obtained by simply multiplying the length by the breadth, or one-half more for a house elaborately ornamented and broken up—the painter usually charges for work and paint materials at the rate of ten cents per square yard for one coat, and thirty cents for three coats. This is for new work.
Plain Words from a Painter to a House Owner

"You would think that painters averaged better than bankers, lawyers or merchants, the way people trust them," said an old painter to a property owner who had called him in to tell why his painting had gone wrong.

"Painters will average just as high in skill and honesty as any class," he continued, "but we have to contend with in our trade as much as you do in yours. And you property owners leave everything to the painter who bids lowest.

"There is nothing much wrong with this job except that the painter used a substitute for pure white lead and did his work too hurriedly. I suppose he had to do it in order to make anything on what you paid him.

"Next time specify pure white lead guaranteed by the 'Dutch Boy Painter' for all your painting, and give the good painters in your community an even chance. Then allow them time to do the work right."

Ask us for "Dutch Boy Paint Adviser No. 81," includes information on painting decoration (in the house and out), flower and shrubbery arrangement, etc., most valuable collection of booklets--free.

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An office in each of the following cities:
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KITCHEN VENTILATING SYSTEMS, PREVENTING COOKING ODORS. FREDERICK B. WHITLEY, Enginner and Contractor
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old work the charges are generally fifteen cents per square yard for the first coat, twenty-five cents for two coats, and thirty-five cents for three coats. This price varies somewhat in different parts of the country. In the South, for instance, three coats of old work are applied for twenty-five cents per square yard. Varnishing is generally based on a charge of fifteen cents for one, and thirty cents for two, coats. This is for ordinary varnishes, and for special high grades more is demanded.

From these figures it is possible for one to make a rough estimate of what it should cost to have his house painted in a workmanlike manner and with the best of paints. Where there is little competition it might be well for a property owner to have a pretty fair idea of the cost of the work, and he can tell then if he is paying a good deal more than the market price for similar work in other parts of the country. When a paint contractor comes in and makes a survey of the job, and gives a bid for it, it is quite necessary that the owner should have an approximate idea of the cost. This may result in the going down a bid anywhere from $20 to $100. Unscrupulous painters will frequently take advantage of a house owner’s ignorance if they think there is little chance of the over-charge being detected.

One may be partly prepared to estimate the cost of painting the house without the aid of a professional painter. As the cost of the labor runs from two-thirds to three-fourths of the total cost of the job, one must be prepared to find a starting difference when the owner does all the work himself. Thus if the surface area of his house measures 7,200 square feet or 800 square yards, the cost of the job would be $80 for one coat or $160 for two coats, at ten cents per square yard per coat. The cost of paint for the two coats should be only about $80. The rest represents the labor of the painter. We can estimate the amount of paint needed by the other method given above. You divide the number of square feet by 200, and this gives the number of gallons of white lead in oil needed for two coats. In this case 7,200 square feet divided by 200 gives 36. If we pay $5 a gallon the material for the job will cost $180, but good paint can be had for much less than this, which will leave a margin for extras.

If one does not count his own labor the work of painting the house is not an expensive job. It can be undertaken without much fear of extra costs which frequently loom so large in carpentry and cement work. Painting exterior surfaces is really a simple operation. The chief thing is to work the first coat in thoroughly, spreading the paint well so that it will not be thicker in places. When this has thoroughly dried the second coat should be applied a little thicker. The chief thing in the second coat is to secure a uniform, smooth surface without streaks or bumps. Much depends upon keeping the paint properly thinned so that it will not streak, and not so thin that it will run.

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This book is full of illustrations and information on Brenlin—the new window shade material that outwears several ordinary shades.

Brenlin is made without the “filling” that in ordinary shades falls out and leaves ugly streaks and pinholes.

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won’t crack, won’t fade; water won’t spot them. They always hang smooth and even—always look fresh and attractive. Brenlin always proves to be the cheapest shade you can put up.

One or more good dealers in all cities sell Brenlin. Write us for samples in all colors, and in Brenlin Duplex, light one side, dark the other. These samples, with the beautiful little Brenlin book will aid you in selecting just the right color. Write today to the

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The name BRENNLIN is perforated along the edge of every yard of genuine Brenlin. Look for it.

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For flowers and vegetables. Used as a spray. Get it from your dealer or write for particulars to

Aphine Manufacturing Co., Madison, N. J.
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Ah Cum and Mimosa—among the founders of the breed in England—were smuggled from the Imperial palace committed suicide on the approach of the troops. The little specimen Schorff, taken by Lord John Hay and given to the then Duchess of Wellington, lived to the age of 18 years. He was bronze and brown in color, with a black muzzle, and a magnificent coat. He was undoubtedly a sleeve specimen and weighed from 4½ to 5 lbs. General Dunne secured one of the five, which he presented to Queen Victoria. It was so small as to sleep curled up in a forage cap. The portrait of this little dog painted for the Queen by Landseer is said to be at Windsor Castle now. Later on in 1890 Miss Loftus Allen imported Pekin Peter, and in 1896 she imported the two first black Pekingese into England. In 1896 Mr. T. Douglas Murray imported Ah-Cum and Mimosa. It is interesting to know how these dogs left the palace. In the June number of the "Kennel" (English) Mr. T. Douglas Murray says: "Ah-Cum and Mimosa, the two little celebrities among the founders of the breed in England, were acquired with great difficulty, and only obtained by being smuggled out of the Imperial palace hidden in a box in the hedges for some Chinese deer. Their ages, as with all importations, remains guesswork, Ah-Cum being presumably about a year old, and Mimosa, somewhat younger. Their (Continued on page 207)

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WENZ & MACKENSEN

Proprietors of Pennsylvania Pheasantry and Game Park

names appear in the pedigrees of almost every well-known dog on the show bench. Ah-Cum was throughout his short life acknowledged as the most typically perfect Pekingese spaniel in England. He was the first winner of a Pekingese championship at the Crystal Palace. As the most beautiful dog known to us, both in shape and color, he has been set up at the Natural History Museum, South Kensington, London, where he may now be seen. Ah-Cum died in 1905, and little Mimosa in 1910.

On the question of size Lady Algernon Gordon Lennox says: "The Pekingese is essentially a lady's pet dog, and as such they should be small enough to be easily handled; at the same time, bone and substance should not be sacrificed, and with a maximum weight of 10 lbs. the Pekin Palace Dog Association (England) has thought it advisable to fix a minimum of 5 lbs., in order to prevent a possible 'weirdness' in type; it would therefore seem that about 6 to 7 lbs is the ideal weight, and when the dog is true to type as regards bone, he will generally appear to the eye considerably smaller." A. G.

Three Poultry Fallacies

POULTRYMEN on the Pacific coast are trying to persuade the general public that eggs with brown shells contain just as much nutriment as those with white shells. This color of eggs is a popular superstition in several parts of the country. New York City has the same predilection for white eggs that exists in Los Angeles and San Francisco. Boston, on the other hand, pays a premium for brown eggs. All this makes trouble for the poultryman, for it is the nature of the brown-laying kind to sit, while the white layers do not sit and are not as good table fowls. And what is the difference in the eggs? There is no difference; none whatever. One egg is just as rich and as well flavored as the other. These things do not depend upon the color of the egg shells, but upon the feeding of the hen.

Another fallacy is to the effect that fat hens will not lay. One hears this doctrine preached everywhere. It is all wrong. An old fat hen may not lay, but a fat pullet lays more eggs than a pullet which is poor in flesh. It may be accepted as a fact that the danger of feeding a pullet so much that she will stop laying, is not very great.

Along with this second fallacy goes another, which reasons that corn is fattening, and so corn should not be fed. And yet corn is the best all-round grain which the poultry keeper can obtain. Repeated experiments on practical plants have shown this to be a fact. Not, of course, that corn should be fed extensively; other grains in variety, as well as beef scraps and vegetables, are needed. The amateur will not go far wrong, however, if he makes cracked corn half the grain ration, in winter at least; and if he supplies an abundance of beef scraps or meat in some other form, along with alfalfa, clover or garden vegetables, he will get eggs.

E. I. F.

HICKS TREES—A COMPARISON

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Putting on the Winter Garb Indoors

THE WHOLE PROPOSITION OF REFURNISHING FOR THE FALL AND WINTER—WHAT THE SEASON OFFERS IN ARTISTIC STYLES OF FURNITURE, CARPETS AND DRAPERIES FOR ALL CLASSES OF HOME

by HETTIE RHODA MEAD

Photographs by Floyd Baker, F. W. Martin and others

With the fall months come many duties in house and garden. It is the time when one's home inside the house, and without, must be prepared for the winter. The fall clean-up of the grounds and gardens must be succeeded by a thorough renovation of the house. During the spring and summer months our work and our activities have kept us much outdoors; now, for another six months, our activities will be mostly confined to our homes. So the needs of the winter call for an entirely different setting. It is now time to take down the delicate muslin and cretonne hangings, to put away light willow and cane furniture, and to roll up the cool rugs of woven grass and straw and light ingrains.

The birds are flying southward and the butterflies have long since disappeared from our garden that was so lately bloom-laden. So our cretonnes, chintzes and muslins, which represented the life of the early spring and summer, are no longer appropriate. Where we had draperies, rugs and furniture designed to give the home all the appearance of coolness and lightness that was possible, we must now change our furnishings to colors and forms that will suggest warmth and coziness and protection from the cold and inclemency of the weather without.

Nature will give us all the suggestions we need as to color. We remember the delicate shades and colors of the wood anemones; they have given place in our garden to the stately dahlia with its deep tones of wine red and maroon, the rich golds and maroons of the marigold. Zinnias, with their wealth of color, now bloom in the garden, and the green foliage has now deepened into the various hues of autumn. We may well choose the colorings for our winter surroundings from the palette Nature now lays before us. The transition without makes necessary a transition within.

The fall clean-up of the house to some of us suggests pandemonium, but, if we go about it methodically and with a definite idea of what we wish the result to be, the process, instead of being work and drudgery, will result in play and pleasure.

Most modern houses and well-preserved houses of an older period have splendid attic and store rooms and dry cellars. In the clean, dry cellars much of the strictly summer furniture may be stored after brushing it carefully and covering it with sheets of unbleached muslin. The summer rugs may be rolled on long poles which may be purchased for that purpose. An outer wrapping of newspaper must be tightly tied around them and they may be disposed of in the attic. Curtains and bedspreads must not be put away dust-laden or soiled. All the draperies which permit of laundering must be carefully washed without starch and put away rough-dry. Curtains for each room may be folded and tied into packages. One may have sheets of black silesia, sateen, paper muslin, or any inexpensive material to wrap the curtains in; or one may make the material into bags. The sheets will be just as convenient to use and much less trouble to make. Each package should be labeled "Library," "Dining-room," "East Guest Room," "South Guest Room," etc. This will save much confusion in the spring when we are again taking out the summer hangings.

Cretonnes and light silks, which have been used for overdra-
Many dining-room suites show the influence of Chippendale’s Chinese manner, as evidenced in this well-made buffet

peries, if they do not permit of laundering, should be thoroughly brushed, and disposed of in the same manner. The black wrappings will, beside keeping the curtains clean, prevent them from becoming yellow, and protect them from any further change of color than they have suffered from exposure to the sun during the summer.

Everyone has not the imaginative power to go into a dismantled room, or entirely bare house, and picture it in his or her mind completed. With this gift of seeing the end from the beginning, at least in things material, if a careful survey of the whole house is made, planning the color scheme, furniture and arrangement one room at a time, a mental picture of the whole house completed will result. When one has this mental picture to follow, it is like having a set of working drawings to the mechanic. Each step is clearly before one in the essentials of the case. The detail will take care of itself, when the setting has been prepared.

Ceilings, walls, woodwork and floors must first be considered. There is an almost endless variety of charming wall treatments. The canvas now being used is most beautiful and most satisfactory. Some of the decorators give the wall a very beautiful effect by laying aluminum paint upon the canvas. Over this the paint is put, mottling the color until the various tones used are harmoniously blended. The aluminum undercoat gives a luminous appearance to the wall. When the canvas is merely painted, the effect is dull. Light colored or rich wall effects may be had, rough or smooth canvas may be used, or the treatment of the wall may be a mottled plain tone, or a design giving the effect of old velvet may be stencilled upon the prepared canvas. Another very handsome wall covering for living-room, hall, dining-room or library, is a very heavy grass cloth called Orimona grass cloth. For years we have had the light-weight grass cloth imported from Japan; the Orimona grass cloth is something new and much handsomer, and is also much more expensive than the lighter quality of grass cloth known to everybody. It is made of many grasses, bunched together and interwoven with a double thread. Orimona grass cloth is made in a number of excellent colorings—soft browns, tans and greens.

There are innumerable new and original ways of treating the walls of your rooms, beside the well-known silk hangings and papers. If one wishes something unusual for the treatment of the walls, there are endless suggestions which will be furnished by the up-to-date decorator. [Other hints are given on page 218 of this issue.]

Much of the woodwork in the new house is finished in antique ivory, gold, white or gray. This antique finish is much softer and more harmonious than a hard plain color.

The architect of today is giving especial attention to the large living-room. Hardly a house of small or large cost is planned without one room of very ample proportions. This large livable room is the room above all others where solid comfort is going to be enjoyed. It seems best in planning the living-room to follow no particular period. Walls and floor covering, woodwork and ceiling having been chosen of some soft rich tone, chairs and divans of American or English make of generous propor-

A bedroom set of the season in white enamel. The design is freely modern, but is based on the work of Robert Adam and Thomas Sheraton

The so-called Mission or craftsman furniture, of simple sturdy lines and soft brown tones, continues to be the only suitable furniture for some rooms.
tions are more inviting than some more classic and less comfortable furnishing would be. Nearly every American family has some heirlooms, old pieces of mahogany, or family portraits that most appropriately fit into this nondescript room. When I say nondescript I do not mean that there is no relation of one thing to another. There must be the most perfect relation of color as a background where the beloved objects, rich in the associations of the past, or long-hunted-for and much-prized objects of art, may be shown to the best advantage. The new pieces that are introduced into this room must be chosen to correspond with the old.

Wing chairs in many luxurious shapes are much in vogue today, and they invite to comfort and conversation on a cold winter's evening. One may buy them in a number of models, covered with tapestry or velvet, if for living-room or library; or cretonne, linen tapestry, or dainty silk damask if for a bedroom. Some of the new upholstered chairs are made with a removable cushion and seat allowing of a very thorough cleaning. They are called sani-

Almost all the rugs and carpets being shown this fall have a very small pattern, such as in this Oriental, or else are in plain colors.

Tapestries are largely taking the place of velours and velvets for the coverings of furniture.

Almost all the rugs and carpets being shown for the fall and winter furnishings have a very small pattern or are entirely plain. Handsome French Wilton rugs and also domestic Wiltons are manufactured in plain colors with a border of two deeper tones. A very handsome double-faced Smyrna rug is also made in a variety of soft colors. Either of these weaves can be made to order in just the color one wishes to employ in one's color scheme at a slightly greater cost.

Most of our waking hours may be spent in the living-room, but a good third of our lives is spent in the bedrooms. These rooms, therefore, deserve most careful attention. Furniture for bedrooms is largely of the Sheraton and Adam styles, with panels of caning introduced. Circassian walnut is the popular wood of the moment. Though one sees articles supposedly made of Circassian walnut at comparatively low prices, these low-priced sets are made of gumwood or hazelwood. Genuine Circassian walnut is high-priced. This popular wood is

There is a pronounced tendency to return to the roomy, luxuriously upholstered seats and couches of the last generation.

made up in bedroom sets of various styles with cane panels. The soft browns of the wood are most beautiful, and can well be introduced into very beautiful color schemes where tans, yellows and brown are used. A blue, also, is most harmonious with this soft, gray-brown wood. Many bedroom sets are enamelled, and there is nothing prettier than these pieces of furniture of exquisite proportions in the softest shades of French gray, delicate yellow, and tan, and white. Some of the gray enamel sets have a trimming of white and charming designs of morning-glories in soft violets painted in medallion-shaped forms. The walls may have either gray or violet covering, the woodwork should be white, a rug of plain gray or violet may be used, and there are innumerable soft hangings of silk in violet tones that are like the gray-violet bloom of a plum. Another set of bedroom furniture which one of the stores is showing is enamelled in soft yellow. On this set is painted a design of yellow wild roses. What possibilities for a yellow room! Other bedroom sets are painted white or cream and have in medallion shapes the daintiest of designs, festoons of forget-me-
Valances for over-curtains are being made plain, rather than plaited, and shaped on a frame to be less popular than the more fragile mahogany pieces of Sheraton and Chippendale types, the Sheraton’s simplicity of line seeming to have preeminence in favor just at the present time.

This preference for the more fragile type of furniture to the heavier Colonial pieces may have its practical inspiration, due to the conditions imposed by apartment house living. However, one cannot decry the substantial Colonial type for people whose rooms admit of the use of these handsome but more cumbersome pieces of furniture. Copies and modifications of old English models are also much in vogue for dining-room use.

Craftsman furniture continues to be popular. It has many points in its favor. Its straight lines, substantial proportions and soft brown tones make it a desirable style for some types of rooms. Many fabrics and leathers are made in soft tones of brown, which harmonize with the fumed finish of the wood; for the person who is not entirely sure of the blending and harmonizing of colors and the right proportion of lines, craftsman furniture is a very safe style with which to furnish. The housekeeper likes it because it shows the dust very little. One woman told me she had to dust her mahogany set six times a day, so she got a Mission one for it.

The window draperies in vogue call for three sets of curtains. A sash curtain, which reaches only to the sill, inner lace curtains, reaching to the floor, and silk, velvet or tapestry overhangings. The valance, instead of being gathered or plaited, is now plain and shaped on a buckram frame. These valances seem a trifle more formal than the draperies used for some years past, but admit of much handsome ornamentation, or they may be quite plain, having a simple finish of galloons or fringe. Plaited or gathered valances are of course still being used, but the straight valance is employed in the more formal homes and more pretentious house. Fillet and Cluny laces continue to be much used in the more expensive curtains, while soft imported and domestic net, plain or with dainty applique designs, is to be used in the less elaborate homes. Of these nets there are many of charming dainty patterns. The general consensus of opinion is that fabrics, velvets, damasks and tapestries, which will be in general favor this season, are of small designs. Some very handsome velvets of Genoese and Florentine design are also being shown.

Handsome fabrics, such as tapestries, damasks and velvets, are comparatively high-priced, though fortunately for the person of moderate means, there are always good things of moderate price to be found if one but has the patience to look for them and the discrimination to know the good things one sees regardless of what the price may be.

Unfaded fabrics have gained much popularity during the past year or two; made of cotton and silk in an almost countless number of weaves and designs of light or heavy weight, there is hardly a room so pretentious that some of the heavier qualities of these Scotch fabrics may not be appropriately used. For the home of moderate cost there are almost endless possibilities. From semi-transparent weaves that may be used as curtains, to very heavy fabrics suitable for portières and upholstery, all are exceedingly effective. Each weave and pattern comes in a number of exceptionally good colors, so

(Continued on page 270)
The Last Word On Spring-Blooming Bulbs

THE TESTS TO DETERMINE WHAT BULBS WILL BLOOM—NEW VARIETIES AND STRAINS INTRODUCED FROM HOLLAND—THE BEST TIME TO PLANT TULIPS, DAFFODILS, NARCISSUS AND CROCUSES

by Chester Jay Hunt

Photographs by Chas. Jones and R. R. Raymond

Too frequent, indeed, is the gardener's lament that the beds and borders are not what they ought to be. More often than not, the attempt to be relieved of responsibility for this condition brings forth against the seedsman or nurseryman the accusing excuse of poor seeds, weak plants or worthless bulbs. It is irksome to shoulder bravely the results of our own mistakes and confess an ignorance or a carelessness which has undone all the painstaking labor of the grower who has produced a perfectly good plant or bulb for us to mistreat.

Yet, in the case of flowering bulbs, there may sometimes be cause for complaint. Nearly all bulbous plants which flower early in the spring are prepared during the previous year for their daring of delayed frosts; and whether a bulb will flower satisfactorily or not, depends upon the nature of the season of growth, as well as upon a proper ripening after growth has ceased. The former factor is wholly in the hands of the gods and the weather man; the latter is to some extent under the control of the grower.

If at fall planting time the bulb of a hyacinth, tulip or narcissus be cut through from top to base, the promise of success or failure for the coming spring may readily be determined, for a miniature flower, perfect in all its parts, will be found at the base of the stem. In fact, the bulb itself is but an enlarged development of stem or leaf structure, designed to provide nourishment for an early growth too rapid for the roots alone, and to protect during the winter the flower already formed. After blossoming, the plant sets to work to form a new bulb, which will blossom in its turn if conditions have been suitable for maturing its growth.

It is possible, however, to determine in a great measure from the outward appearance of the bulb whether it is what it should be, without having to be so inquisitive as to spoil our toy by taking it apart to see the wheels

Number the Poeticus varieties among this year's plantings

Basal rot is found among the Holland varieties of Horsfieldi, but these from England are generally free from it

The bulbs of the best Barrii class of narcissus are small
go round. A first-class bulb should be comparatively heavy and quite solid, without a sign of being soft or flabby. A firm pinching of the bulb, both at the base and just below the top, will give evidence of any soft spot, while the selection of a firm, heavy bulb of average size as a standard, and judging others by balancing them in the hand, will give an idea what the bulb should be. A clean, close skin in the case of tulips is desirable, though many sorts among the late tulips form a very thin and delicate skin which easily comes loose. If the skin of a tulip comes off, it will not injure the bulb appreciably unless it is to be out of the ground some time; the skin protection is then a great help in preventing the bulb from drying.

Size is by no means a criterion, for many varieties never make a large bulb, and very often an extra large bulb is a sign of old age and an approaching breaking up. With a discreet knowledge of varieties, the size of a bulb will help a good deal in determining its quality. It is useless to ask for large bulbs of a variety that does not run to size; on the other hand, under-sized bulbs of a sort which should be large means that one is paying for first size or "top root" bulbs and getting only second sized ones. For instance, among hyacinths the blue Grand Maitre makes a very large bulb, while Roi des Belges, a handsome red, is naturally small. Crimson King, Thomas Moore and La Reine are tulips with small bulbs; Cottage Maid, Keizerkroon and Belle Alliance are examples of sorts with large bulbs. In the narcissi, the trumpet sorts give large bulbs as a rule, while the Poeticus type and most of the Barrii and Leodii class are small. With the daffodils a rather particular knowledge of characteristic size is of great value in purchasing superior bulbs, for the diversity among varieties in the matter of size is rather marked, and whether a bulb throws one flower or three good blooms is frequently an important matter when the bulbs are used for forcing. Even large bulbs of narcissus Emperor will often give no more than one flower, and this tendency of different varieties to give few or many flowers ought to be considered before the dealer is blackguarded for furnishing poor bulbs.

For formal bedding, second size bulbs of hyacinths are as satisfactory as the larger ones, provided they are planted a little closer, and where large quantities are used the cost may be reduced in this fashion. The spikes may be a little thinner, but a splendid display of color will be afforded just the same. Big hyacinth bulbs are somewhat inclined to come green at the top of the spike, probably because the truss is too heavy to develop fully.

It is usually easy enough to determine whether a bulb is sound or not. Tulips are sometimes prone to a dry rot which makes brittle, empty cases of the bulbs. A firm pinching pressure will cause such a bulb to collapse between the fingers, but this difficulty is seldom encountered among newly imported bulbs. I have noted it more often among bulbs kept a second year, and the single early tulip Proserpine seems most susceptible to it. Occasionally hyacinths give signs of decay due to disease, but the growers

(Continued on page 272)
A Shaded Tulip Border

AN AMATEUR'S SUCCESSFUL EXPERIMENT IN MAKING A GARDEN BEAUTIFUL DESPITE UNFAVORABLE CONDITIONS—A ROW OF TULIPS SHADING FROM ALMOST BLACK TO BRILLIANT YELLOW

BY ZULMA DEL. STEELE

Photographs by the Author and Chas. Jones

E VERY garden, be it large or small, has its own particular problems which must be worked out as individual taste or preference suggests, and adapted to the necessities of location, size and surroundings.

Many decorative effects can be undertaken in the large garden where shrubs and trees form a background, which are quite out of the question in the small suburban garden bounded on three sides by fences.

In our own garden, a plot measuring about thirty-five by eighty feet, in the suburbs of New York City, we find it impossible to have large shrubs, as they shade the space desired for flowers.

Picket fences separate us on either side from our neighbors, and a high close board fence determines the end of the garden. Against this fence in the centre, we have a latticed arbor, with a box-seat six feet long. This was built by a carpenter from our own design. It provides a convenient resting place, and the box-seat is useful for holding the spade and fork and other garden tools. Rambler roses and clematis paniculata form a thick leafy canopy overhead and give a bit of welcome shade when the sun is hot. The arbor is stained in dull green and the back of the seat bears the following legend painted in dark letters on the green background:

"A World of Peace shut in.
A World of Strife shut out."

The borders are laid out in curved lines, starting at each end of the arbor and continuing around the garden.

As this little plot is the work of our own hands, we have solved some problems, made some discoveries and tried some experiments, which may be interesting to other garden lovers.

The question of tulips puzzled us not a little. All the garden magazines and books said "Plant your tulips in clumps against shrubbery," but we had no shrubs, and we could not afford to give the space to large groups or masses of the Darwins where they could lie undisturbed from year to year.

Finally one of us exclaimed, "Why not have a tulip border close to the lawn, where the bulbs would not interfere with later planting, and our sweet Alyssum border could be planted right over them?"

This having been agreed upon, the next thing to be considered was the color. A border of one color would be monotonous, even if we could agree upon a color; and a mixed, unnamed border was too dangerous an experiment to consider, with the risk of seeing scarlets and pinks in deadly warfare.

Finally light dawned, and order resolved itself out of our chaos. A shaded border it should be, for which we could select and arrange the colors. Many delightful hours were spent in studying catalogues and reading descriptions of colors and shades.

We decided to put in the Darwins, because this variety does better if left undisturbed in the ground from year to year, and also because it is a late blooming tulip, and does not shed its petals, individual flowers often lasting for nearly a month. When necessary to complete our color scheme, we would fill in with the late flowering cottage tulips of the tall varieties, which bloom at the same time as the Darwins.

We decided to begin with the darkest tulips at the end of the garden, starting at the arbor seat and continuing the color, uniformly, down each side of the lawn.

Close to the arbor at each end of the seat, we started with that prince of black tulips, La Tulipe Noire, made famous by Dumas' novel of that name, and said to be the blackest of all tulips, the high lights reflecting deepest maroon.

Then followed the Sultan in maroon-black, and others shading into dark maroon, and then into deep blood-red.

We then began with the darkest cardinal red, shading down through several tones to the most vivid scarlet.

Then to unite our color scheme and connect with the orange tones, we used a scarlet with orange centre, and a vermillion striped with gold, which brought us naturally to the clear orange of Mrs. Moon, followed by the yellows, shading down, through several gradations, to the pale lemon color in Vitellina, which as it grows older changes to creamy white.

Next to this, bringing us to the centre of the garden on either side, and where the curves were fullest, came the whites: Painted Lady, cream white, and next to her the White Queen delicately shaded with pink.

From this point on, our color scheme changed, and leaving our reds and yellows at the other end of the garden, separated by the whites, we began to shade into pale pink, rose, and deep crimson.

This brought us to the end of the side borders, and as we had a little scroll-like terminal bed which ended the border, we planted around that the shades of lavv-

(Continued on page 250)
TO the old mural decorators who laboriously traced out their work by hand, we owe the inspiration which today is so splendidly expressed in the finer wall-papers. Putting aside considerations of permanency and looking only at the artistic results, one must concede that there is little loss of beauty and great gain in economy by the modern way. And there is practically no limit to the range of these modern wall-paper creations. They are architectural; they are pastoral and scenic; they are historic, periodic and national; and they are skillfully imitative of leathers, fabrics and even metals and ceramics. One can choose between the unconventionality of Nature itself or the strict precision of monastic illumination. Every color and the finest of color is brought to perfection; and even the absence of color, that is to say black, appears in form as pleasing as it is surprising. In a word, one can make his interior walls respond absolutely to his will; and if he cannot live in a palace, his surroundings may be at least palatial. Nor is the expense necessarily in proportion to the richness of the effect; because in the last analysis the achievement depends upon the taste and skill with which papers are selected and applied.

Reference has been made to the black papers. These are the great outstanding novelties. The black is used as a body or background to the design, as white has been used heretofore. The superimposed pattern imparts the necessary glow of color and light. The figure shines out something like a diamond on a black gown. Further light is imparted by the use of such papers in panels, where the surrounding treatment can be as bright as desired. And bright draperies are essential in all cases. Of the three examples shown, one presents an interesting Chinese Chippendale pattern; another a soft-toned tapestry; while the third created a sensation at the recent wall-paper exhibit at Hamburg, where we understand it received a first prize.

The nations are attractively represented in characteristic designs. Anyone familiar with Portuguese decoration will at once recognize the scroll in the specimen illustrated. Particularly admirable are the graceful perfection of detail and the exquisite coloring. The greens, blues, reds, mauves, browns, etc., are a delight to behold. Special interest attaches to the simple Dutch paper. It bears the name of Queen Wilhelmina, for whom it was first made. The tones adopted by her majesty were Delft blue with miniature roses sprinkled between the stripes, the rose being the national flower. In this country it comes in vari-

Two bedroom papers—a Directoire design in mulberry and white on old blue ground, below which is a Louis XVI pattern

There is something startling about this vigorous Jacobean pattern and its quaint detail. It needs to be carefully handled

The Portuguese paper with its characteristic scroll work and a bedroom paper originally made for Queen Wilhelmina

The New Wall Papers

by Lydia LeBaron Walker

Photographs of rooms by courtesy of the paper manufacturers
The tapestry effects are found again this year, and with even more harmonious colorings. The French touch is easily recognized in the room photographed. It appears in the cut out border especially, with its garlands and ribbons. The French linen to match is one of the most exclusive importations in the country.

The transition from national to periodic papers comes naturally. In this connection nothing could be more striking than the Old English paper in Jacobean style. At first one can hardly repress a smile at the fantastic improvements that the artists of old King James imparted to Nature. Painting the lily or gilding refined gold would present no difficulties to them apparently. Yet it must be admitted that the paper grows on one. You begin by wondering if you like it and conclude by admitting that you do. Certainly it is full of character, and it is what we may call companionable. It is particularly adaptable to bedrooms in houses of Tudor architecture. There are cretonnes to match. The Directoire or Jouy paper also is interesting and typical. The pastoral medallions belong to the few years between the revolution and the Empire when taste had swung away from royalistic embellishments, and when art reflected the simple pleasures of the people. The other French paper is a straight Louis XVI, with the usual Marie Antoinette ribbon. One of the charms of this design is that it is executed in the desirable mulberry tone.

The past season has witnessed a growing feeling toward out-of-door papers. Above the peacock paper, now found in great variety, is one of the trellis and arbor papers to be used above a simple side wall. It is one of a number of similar outdoor subjects.

This short section of a forest frieze gives only a faint idea of its effectiveness. The tree frieze shown at the top of this page is decidedly inexpensive, yet its drawing, perspective and coloring merit praise. The trellis and arbor idea illustrated is very ingeniously produced by a simple side wall and a gorgeous arch-and-rose crown. Birds, especially peacocks, are prominent in the finer decorations.

Of all the new papers the most elegant are the imitations of leather. The appearance and even the "feel" of leather are marvellously approximated. These goods being nothing short of magnificent, their dignity calls for a worthy apartment. They are especially appropriate for handsome halls, libraries, living-rooms and dens. They convey an impression of stability and seasoned age. All the appearances of stained, hair-brushed, hand-tooled and other leather treatments are produced.

The imitative impulse is not confined to leathers, but extends to fabrics; and the success is about as great in the one case as in the other. This is strikingly illustrated in the engraved Japanese burlap paper. Not only the appearance but the actual texture is approximated. Its unique silver finish takes beautiful lights. The greens and mulberry tones in the cut-out border are exquisite. A dainty fabric effect is presented by the rayure or moire example. It gives the idea of blue and white silk stripe with embroidered baskets. English chintz papers also belong to this class, and are delightful for bedrooms. One of the latest fashion impulses has been toward Paisleys and

The season's most interesting innovation is the black background on which delicate colorings show up far better than on the traditional light background. At the left the tapestry idea is carried out; in the middle a fantastic Chinese Chippendale pattern is seen, while the illustration at the right shows a paper that received first prize in a recent wall paper exhibit in Germany.
There is a great variety in the fabric effects this year. At the top is a free design after the English chintzes; below it is a dainty moiré; in the lower left corner is a quaint approximation of an old sampler stitch; at the top right is a Paisley binder; a cut-out frieze is provided for the narrow striped side wall paper, and there is cretonne obtainable for the hangings; in the lower corner is a Japanese burlap effect.

Cashmeres. This form of decoration is now found even in wall-papers. Paisley hangings also may be had in cretonnes. It strikes a rather pleasing note in a bedroom carried out in the old style, to employ these papers and hangings.

Mention should be made of the paper designed especially for the dining-room. It is of a Wedgewood or ceramic design in Delft colors. The treatment suggested would be to apply it for the lower two-thirds with a plain Delft blue above the white plate-rail. A few pieces of Wedgewood come in very nicely.

The metal-toned papers are somewhat akin to the leather-finished papers, and rank among the very handsomest. To the stained effects of the design are added the sheen of bronze or other metals. There is sufficient life and color, so that the paper is not dependent upon any angle of illumination. The finest of these metal-toned creations has the quality of not tarnishing, which adds to its value and durability. The general uses of papers of this character are similar to those where leather effects are employed.

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The Twelve Best Perennials to Plant Now

SOME OF THE VERY BEST FLOWERS THAT THE AMATEUR SHOULD CONCENTRATE HIS ATTENTION UPON THIS FALL, THAT THE PLANTS MAY BE WELL ESTABLISHED BEFORE SPRING

BY H. S. ADAMS

Photographs by X. R. Graves and Chas. Jones

O NE of the hardest things to "drum" into the head of the average grower of perennials is that when spring ends, the planting season is not over. Far from this being the case, fall offers a boundless, and certainly a most interesting, field of gardening endeavor.

Spring, like time in general, must be taken by the forelock. When it comes to the matter of planting perennials, the only part of the year in which you can do this is fall. The reasons, though so frequently overlooked, are obvious enough. In the first place one of the little axioms of the garden is that the planting that is done in the fall will not have to be done in spring when there is always too much work out-of-doors, no matter what pains have been taken to discount the exigencies of the vernal season. Then, too, perennials planted in the fall have ample time to get a good root growth before winter sets in and thus are firmly established in the garden when spring is at hand, and are able to forge right ahead. If not put into the ground until April or May they have to take time to acclimate themselves. There may be only a brief setback, but now and then the readjustment is so slow a process that a season's bloom is lost. Finally, some of the most beautiful of the perennials flower so early in the season that in their case fall planting is imperative if satisfactory results are wanted the first year—and, of course, they are.

Here then are three unassailable reasons why the amateur should not rest from his labors in fall; but, on the other hand, should be planting now against spring. All three need to be borne in mind especially by those who are saying to themselves that they are "going to start a hardy garden next year." Start now and when next year comes you will be actually under way.

The word start is used advisedly. In these advanced days of potted perennials, it is possible to start and finish a hardy garden in the fall of the year. Except in the case of young plants from seed or cuttings, however, it is wisest to leave until spring the perennials that come into bloom in October.

Which perennials are the best to plant in the fall? That is about as puzzling and as arbitrary a game as making a list of the best books. All sorts and conditions of tastes must be considered; there are questions of color, weight, form, fragrance and what not, to be taken into account and then there is the seasonal idea—some, for reasons of convenience, prefer a spring, summer or fall garden. Under the circumstances the only thing to do is to strike a sort of average and suggest a list of unquestionably reliable perennials, iron-clad as to hardiness, and offering no cultural difficulties—a list of plants that no one need regret making a permanent investment. Here it is:

| Arabis albida | white | April—May |
| Alyssum saxatile | yellow | " " |
| Primula veris superba | " | May |
If blue is preferred next to arabis nothing is better than *Phlox divaricata*.

*Dielytra spectabilis* pink May

*Iris Germanica* yellow, purple June

*Dianthus plumarius* pink, white June—July

*Delphinium formosum* blue June—July—August

*Phlox paniculata* pink, white July—August

*Veronica longifolia subsessilis* red and yellow August

*Gaillardia grandiflora* pink, white August

*Lilium speciosum* pink, white August

*Boltonia asteroides* white August—September.

The plant that heads the list, because of its blooming season, has the common name of rock cress, but is almost invariably called arabis. It is among the most valuable of the early spring perennials and should be in every hardy garden. The little blossoms begin to appear in April and soon they are so numerous as to form a sheet of white. It is a plant so low of growth that it should be placed on the edge of the border, and is all the prettier if allowed to sprawl over the garden path, which should be below the level of the bed—a good rule in the case of all the carpeting plants. New growth sets in immediately after the flowering period, and the foliage is presentable all summer. When a plant is three years old it is apt to be rather scraggly; so I prefer to keep a fresh stock going by taking cuttings in June. These cuttings root easily and bloom the next year, making good-sized plants the year following. There are two species sold, *A. albida* and *A. Alpina*, and you may get the one for the other without being any the wiser. The double kind is much handsomer than either and better for cutting, though the effect is less snowy.

Quite as indispensable to the spring garden is the rock madowort, or “basket of gold” *Alyssum saxatile*. It lends to the border a mass of the sunniest shade of yellow—a color always appreciated when the garden year is young. The plants branch freely after the first season’s blooming and become quite sprawly, but will last for years if they are on well-drained ground and are not allowed to get tangled up with a rake. Plant it next to arabis for a charming combination or, if blue is preferred, there is nothing better than *Phlox divaricata*.

I confess that I don’t like to single out any hardy primula; I am so fond of them all. But, everything considered, I feel that I must choose the glorified cowslip known as *Primula veris superba*. It is fully entitled to the adjective superb, nothing else doing justice to its trusses of pale yellow blossoms with orange centers. In effect, if not in fact, it is a polyanthus. This is by no means a common perennial. Its hardiness and ease of culture, not to mention its...
Larkspur will flourish in any garden, but good rich soil and no disturbance accomplish best results. The blue perennial varieties appear in June that after the second year they should be separated into as many parts as there are crowns. Separate with a sidewise pull in order to avoid tearing the tangled roots.

The old-fashioned bleeding heart (Dicentra spectabilis) loses its foliage in midsommer and is dormant in fall. If planted then the shoots will be stronger the first spring. Another point in favor of fall planting is the fact that bleeding heart roots, unless potted, are dug up by nurserymen and stored for the winter, not because they are not hardy, but for the reason that they make such an early start. This causes early sprouting, and as the shoots are very brittle they are apt to break and injure the plant’s immediate efficiency. The bleeding heart is one of the perennials that should be let alone for years. It is also one that does well in partial shade. A small plant will have a leaf-spread of more than three feet across in a few years, so it is best to give it plenty of room and utilize the space around it for snowdrops, scilla, chionodoxa, crocus or other early spring bulbs. Don’t be discouraged by your first sight of a root of bleeding heart; it looks hopeless, but wonders will come of it with proper care.

A more satisfying perennial than the ordinary Iris Germanica would be difficult to find. The blossoms are not only glorious in their color tones, but are exquisite beauty, recommend it generally, however. The plants bloom freely. They increase so rapidly that after the second year they should be separated into as many parts as there are crowns. Separate with a sidewise pull in order to avoid tearing the tangled roots.

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varieties, for example, is better than the violet species with purple falls. Nor is any superior to that other old-fashioned flower-define that is so faintly suffused with blue as to take on a sort of pearl color. The latter, I take it, is properly I. Florentina, but is generally listed under the head of German iris. Three other admirable varieties are Mrs. H. Darwin, white, the falls veined with maroon; Mme. Chereau, whitish, the edges of the petals feathered with blue, and I. pallida Dalmatica, a delicate blue iris of the Germanica type.

Time was when the grass, or June pinks (Dianthus plumarius) were in almost every garden; more particularly the double ones, white or pale pink. These two remain the best, though there are other good double ones and no end of single ones. I like them

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Few flowers approach the splendor of color and airiness of petal displayed by the annual poppy

Larkspur seems best in the blue shades and should be massed to secure the most brilliant effects

The colors of the California poppy range from cream through the orange shades to vermillion

Pansies will almost grow themselves, but the best blooms are the rewards of care and attention

Annuals That Do Better When Fall Sown

A POPULAR GROUP OF ANNUAL FLOWERS THAT ARE HARDY ENOUGH TO WEATHER THE WINTER AND COME UP EARLIER AND MORE LUXURIANT IN THE SPRING

BY E. O. CALVENE

Photographs by N. R. Graves and Chas. Jones

IT is just another of the garden's little ironies that we never find out until the warm spring day when the seed is triumphantly borne home and there, on the packet, it states at us, "for best results and finest bloom, seeds of this should be sown in the fall!" Sometimes, indeed, it has the audacity to say "the precious fall" which is surely nothing short of criminal.

Of course the only annuals that will go through the winter are the exceptionally hardy ones, and these must be protected if growth above ground has advanced at all, or else they must be wintered in a cold frame. Some biennials which are usually treated as annuals, and regarded as annuals generally, are also sown in the fall, but even including these the list is not a long one. At least, there are not many that are worth while, although it is likely that one could find fifty things that might be treated this way, if the effort were made and there were any reason for doing so. Only those, however, which are definitely better for fall planting will be considered here. This list contains such examples.

Annual larkspur (Delphinium Ajacis), California poppy (Eschscholzia Californica), pansies (viola tricolor), annual poppies (Papaver Rhoeas and somniferum), sweet peas (Lathyrus odoratus), pheasant's eye (Adonis aestivalis), the so-called Flos Adonis (Adonis autumnalis), and catchfly (Silene) make up a fairly popular group, which, for one reason or another, should be sown now if they are intended to grace next summer's garden.

Larkspur, whether annual or perennial, is surely one of the loveliest flowers in the world, and in the blue shades which alone seem typical to me, it is unrivalled by any other annual. There are pinks, buffs, fawn and white for those who want variety, but a mass of the various dazzling blues by themselves is far better than a mixture. Have the other colors, too, if they seem desirable, but the "blue flower"—keep it apart from the rest, in the purity of its radiant sky color.

Annual larkspurs like a cool soil that is moist, and though they may bloom from seed sown in the spring, the seed is so slow in germinating that fall sowing is recommended. Prepare the earth by deep digging and enriching, and sow late. They will not sprout until spring, so protection is unnecessary, other than the light covering of earth that is put over them when they are sown; four times the seed's diameter is the rule for out-of-doors. Thin out the seedlings in the spring, so that they are six inches apart, and as the plants grow, thin them still more, if it seems necessary in order to give each room to develop. They should not stand distinctly apart from each other, but some varieties require more space than others. Just how much room to give each must be determined by their growth; none should ever be crowded. Their height is from one to two feet.

The California poppy is offered in many varieties by seedsmen, the colors ranging from cream or cream white through yellows of many degrees, down to orange and finally to vermillion. All of these are (Continued on page 260)
How to Measure Your Own Garden Area

A SIMPLE DEVICE WHEREBY ONE CAN COMPUTE THE SURFACE OF IRREGULARLY BOUNDED AREAS—THE PLANIMETER, A USEFUL INSTRUMENT IN ESTIMATING THE HOME GROUNDS

By Arthur W. Dean

The prospective builder is often desirous of knowing the acreage of his real estate and is in considerable difficulty in finding this out, especially where his land is of irregular boundary. Perhaps a garden surrounded by a wavy path is to be filled with loam, or a large space of lawn sodded. Such a proposition is either regarded as extremely difficult for the lazen to solve, or is given up as utterly hopeless. Among the curious instruments of the architects' craft, however, there is one which renders such problems comparatively simple, and of accurate solution. This is the planimeter. If one is not readily available it is an easy matter to make one from the following illustrations.

All that is necessary to make a planimeter is a decimal rule and stiff, thin cardboard—squared surveyors paper makes the work still simpler. Take a piece of this cardboard or the surveyors' paper ten inches by five and use it for the calculations.

If we could discover some way of making a measure of varying form so that it might be applied an equal number of times to the area in question, our difficulty would be at an end. But it is possible to construct a figure having such a constant measure of area. In this case it is a rectangle which is capable of infinite variation of base and altitude. This is the planimeter.

The first step in its construction is to lay off a constant rectangle of convenient size. In this example 5" by 1" are the dimensions. Divide this in two by a perpendicular line (the long dotted line of Figure 1), for the two rectangles, 2.5" by 1" (A and B) thus made, are necessary when using the planimeter from a central point. Each of these rectangles then contains 2.5" square inches of area. With the decimal rule mark off tenths of an inch upon the perpendicular and run lines parallel to the base through these points. Take the point 12/10" above the zero point N (Fig. 1), then plot the width or base of a new rectangle of equivalent area and 12/10" altitude. By simple division we find this to be 2.08" and we let a dot on the first line, 2.08" from the perpendicular, represent the terminus of this new base. Succeeding points will be 1.78", 1.51", 1.39", etc., respectively. Proceeding similarly along the perpendicular at every 1/5" we plot bases of rectangles equivalent to our constant. After 40/10" have been marked off in this manner the variation in width is found to be so slight that it is only necessary to add 5/10" to the successive altitudes. When the 100/10" point is reached, carefully connect the dots by a curved line. This curve is the hyperbola, and geometry can prove the products of each of these bases and altitudes to be equal.

Simply reduplicate the area bounded by the curve, on the other side of the perpendicular and the whole figure is complete. Since the card is to be used from a centre point some notch is necessary to hold it against the pin, so a little superfluous edge is left and a cut made up to the base line as at N (Fig. 1). Cut out along the lines and the planimeter is ready for use.

Find the approximate centre of the area to be measured and place a pin in the plan at this point. With the base resting on this pin apply the planimeter as shown in Fig. 2, marking a dot where either edge cuts the boundary of the surface to be measured. Slide forward until the back edge touches the last mark and make another dot until the perimeter is divided all around in this manner. If lines were drawn from these marks to the centre the plan would contain a number of triangles equal in area—in this case 2.5 square inches. Where the figure has a straight base line the planimeter is moved along it, base to base, and the resultant divisions will be rectangles, therefore, of twice the size of the triangles. In this instance the whole constant area of 5 square inches is used. Simply multiply the number of triangles by 2.5" or the number of rectangles by 5" and you have the desired area.

For illustration let it be supposed that the planimeter has laid off thirty-four divisions on the perimeter with a remainder approximated to be 4" of the average of the divisions on each side of it. The area of the figure would then be 34.4 x 2.5"—86 square inches. Assuming that the plan to be plotted is 4 in. to the foot, we must multiply by the scale area or 16, which equals 1340 square feet. In computing Fig. 3 the principle is exactly similar, except constant 5 square inches is used instead of 2.5 square inches. Used in this manner the planimeter enables one to figure out irregularly bounded areas very easily and with sufficient accuracy.

Fig. 2. When the planimeter is used from the central point mark the divisions made where it cuts the boundary.

Fig. 1. The numerals at the right denote the length of the successive bases of trial rectangles, those on the left, the altitudes.

Fig. 3. When used along the base line each division is equivalent to the whole area of the constant, or A plus B.
Furnishing and Decorating the Nursery

THE MODERN IDEA IN CREATING AN ENVIRONMENT FOR THE CHILD—WALL PAPER AND ARTICLES OF FURNITURE THAT BRING THE DELIGHT OF A NEW TOY

BY SARAH LEYBURN COE

FURNISHINGS for the modern child's room, like everything else that belongs to that important personage, are as complete in the smallest detail as skill and ingenuity can make them, and every feature of a well-appointed bedroom may be duplicated in miniature for the youngsters.

The wall-papers and draperies especially designed for nurseries and children's rooms are in a way more distinctively juvenile than the actual pieces of furniture, and are a most important consideration in fitting out such apartments. If one does not care to go to the expense of furnishing a nursery completely, paper and curtains that will leave no doubt as to the identity of the room may be had at small cost, and from this simple touch the scheme of decorations and the furniture, to say nothing of the cost, may be indefinitely extended.

Strictly hygienic parents who scout the idea of wall-paper as being unhealthy and will have nothing but painted walls in a bedroom are confronted by a bare expanse that may be sanitary, but is neither attractive nor interesting for the child. With walls treated in this way a decorative frieze may be used with good effect. The friezes, which come in panels varying in depth from fourteen to nineteen and one-half inches, are printed in gay colors on backgrounds of blue-gray, ivory-white, drab and other neutral tones that can be matched exactly in the color of the walls. The designs include processions of Noah's ark inhabitants, farmyard animals, chickens and ducks, Normandy peasants going to market, toy villages with stiff little soldiers and prim-looking trees, hunting scenes, and a row of Dutch kiddies indulging in a mad race across the paper.

If wall-paper is used it also matches the background of the frieze, the paper being either in a solid color or with a figure so inconspicuous that it gives the impression of a single tone.

One of the new papers for children's room is a reproduction of the quaint Kate Greenaway figures that are quite as fascinating to little people in these days as they were years ago. The background is a pale yellow and the figures are printed in rather delicate colors, each group representing one of the calendar months. The effect is particularly dainty and the designs are diverting for the children without becoming tiresome from too great contrast in color. Another paper that shows groups quite as charming is printed from designs by Boutet de Monvel, the famous French illustrator of child life.

A new idea, and one that is proving popular, is a decided departure from the conventional wall-paper, with its figures at regularly repeated intervals. This consists in first putting on the walls a paper of solid color to be used as a background for single figures or groups that are cut from friezes and pasted on to suit

These friezes and the ones at the top of the page are four of a number of similar designs covering a variety of subjects. They are printed in gay colors on neutral backgrounds which may be exactly matched by the wall paper.
one's individual taste. The figures, of course, must be quite large, in order to be effective, and in some favorite groups cut from a frieze showing little Dutch girls and yellow chicks the latter are even larger than life. For nurseries, when the children are very small, the figures are often arranged in a frieze just above the foot-board, so that they come on a line with the child's eye, and are therefore vastly more entertaining than when placed at the infinite distance of the top of the wall.

Blue and white seems to be the favorite combination of colors for nursery draperies, and among the all-over patterns are a lot of roly-poly children picking gigantic daisies on a pale blue ground, and also a Delft design on a white ground covered with black cross lines that are far enough apart to give a tiled effect. A number of other colors and patterns may be had, as well as the gay printed borders that come two strips to a width of the material. When figured wall-paper is used, draperies of solid color or with the printed border are rather more satisfactory, as one set of children or animals tumbling over the walls, and another set chasing across the draperies create a bewildering impression that is anything but restful and quieting for the small occupant. The borders are particularly attractive for curtains made of plain scrim or some soft white material, and are stitched on in strips or cut out and put on in silhouette.

Floor coverings especially suitable for children's rooms are to be found in the more or less recently revived rag carpet rugs, either plain or with figured borders. Almost any of these rugs with their decorative strips showing queerly constructed landscapes are suitable, but most appropriate is one that has a solemn procession of geese across either end, or another that is ornamented with a family of black and white bunnies lined up against a red brick wall. They come in various sizes, from the small hearth rug up to the one that is large enough for the center of an average size room.

A new rug for nurseries that is rather more practical than pretty is woven in the same way as the rag rugs, but instead of cotton materials, strips of oilcloth are used, rolled so that the glossy side is uppermost. The idea was first employed in making small rugs for bathrooms, as they are waterproof and easy to keep clean, but they are quite as serviceable and sanitary for children's rooms, and are cleaned by wiping off with a damp cloth. They are made in different sizes, and in a mixed design, like the ordinary rag rug, or with white centers and borders of solid color.

In the way of furniture, chairs and beds are to be had in a much greater variety than the other pieces, and the miniature Morris chair is no doubt the most attractive piece of furniture that is made for the little folks. It comes in almost as many different styles and sizes as the grown-up variety, and may be had in light or dark wood, with cushions of velour or leather or figured cotton material, and is a perfect reproduction of the large chair.

Little sets consisting of table and two chairs, one straight the other with arms, are decorated with juvenile figures in color, and may be had for prices that are quite reasonable. They are especially useful when no attempt can be made at arranging a regulation nursery. One of the most serviceable of these sets is of dark wood with leather seat chairs and a table of good size, the top of which is hinged and may be raised, disclosing a receptacle for toys or books.

Small pillow and wicker tables and chairs are made in attractive shapes, many of them copies of the larger pieces, and are used either in the natural color or stained to harmonize with the color scheme of the room. Less substantial than the pieces made of solid wood, they are rather more practical for older children than for small ones who are no respecters of furniture, and while designed for use all the year round, they are particularly suitable for

(Continued on page 252)
Restoring Old Shrubs to Vigor

HOW TO MAKE THE DERELECTS OF OLD GARDENS FLOURISH AND BLOOM AGAIN—THE WHOLE MATTER OF PRUNING AND TRANSPLANTING SHRUBS

by Grace Tabor

Photographs by H. H. Saylor

The shrubs most likely to be found growing where old gardens have been, or around old houses, are lilacs, the old Carolina allspice or sweet shrub—Tartarian honeysuckle, snowberry, privet or prim, as some know it, the fragrant syringa or mock orange, snowballs, “bridal wreath,” rose of Sharon, barberry, and last but far from least, the delicious, bitter old boxwood. These are the shrubs therefore to which special reference is made in all that follows.

Of them all the boxwood, elusive, uncertain and difficult to establish upon occasion, yet often thriving lustily under the seemingly adverse conditions of old, neglected dooryards alone does not show neglect. Gaunt and twisted and “skinny,” the bare branches of the other old bushes are lifted piteously from the tangled vegetation; but the boxwood is superior to all this. Nothing undertakes to choke it, or to encroach upon its rightful territory, for it bears itself with a severe dignity that holds even the most lawless weed at a distance; and instead of growing gaunt and shivery and naked, it grows rotund and snug and more and more contented-looking as time passes. So with boxwood, all there is to do is cut away any dead wood, trim the grass at its feet and let it go on just as it has been doing, all by itself. It is very much above the ministrations of man.

With the other things there is work enough, however, to satisfy the most energetic—and work that may begin at practically any season, for the first of it is simply a house-cleaning sort of job, preparatory to the actual task of renovating. First of all the ground around, up to, and within the branches, must be laid bare. Every weed and blade of grass must be raked and scraped and cut away; and this may, of course, be done at any season. It is just as well, however, to let it go if winter is immediately at hand, for the removal of such protection as dead grasses and stems from the roots of the shrub is not wise, especially as the plant has grown used to having them there. But autumn is not too late to get at it, for the winter mulch will take the place of this mulch of Nature.

Go over the ground with grass shears and cut everything down—every little blade of grass that springs up between the shrub’s branches and every fugitive, tiny weed seedling. Then dig over the entire surface and root out everything that has been cut off. With an old dense shrub that has stood fifty years this is not the task of a few idle moments. Among its branches, between and against them and sometimes twining around them, all sorts of persistent things will have established themselves; and these will resist stoutly the effort to dislodge them. Not another thing should be done, however, until they are dislodged, for they must come out before the shrub itself can have anything like its proper share of nourishment from the soil. Even the tiny grass blade is a robber—every single one counts against the work of rehabilitation.

When this basement cleaning is completed, look the specimen over carefully, taking each branch in turn and following it from its top to the ground to see exactly its condition. There may be an immense number of branches, crowding and rubbing against each other so that every one is bruised and injured whenever there is the slightest wind, or there may be very few branches, long and straggling, showing a great deficiency in nourishment, light or space, or all three.

When the former condition exists it is likely that the branches are simply a profusion of water sprouts or suckers. These rank growths sprouting from the roots, from the branches down near the ground or around the crown of the shrub, and they hardly seem to be a part of the shrub proper. Their leaves are often of unusual size compared to the leaves of the shrub in its normal condition—just as the leaves of very young growths are likely to be—and they bear every evidence of receiving all the vigor of the plant, while the old top dwindles and withers, starving to death.

This growth of suckers is especially likely to occur when large branches have been ruthlessly pulled from the bush, as is the case so often with old lilacs and syringas. Picking armfuls of bloom amounts to a heavy top pruning, and heavy top pruning always tends to encourage—or rather to force—the production of wood
to take the place of that lost. Water sprouts are the shrub's efforts to produce this wood in a hurry, to get back the equilibrium between roots and top of which it has been robbed.

Half of the delight of an old place is in its huge old bushes; the sacrifice of these great tops is therefore the last thing in the world one wishes to contemplate, yet when growth has stopped in them and begun anew at the base of the shrub, it looks very much as if trying to save them were a hopeless task. Fortunately, however, cutting back vigorous growth will usually stimulate growth in less vigorous parts, provided that the new shoots which will surely make their appearance after such cutting back, are nipped in the bud as soon as that bud appears low on the old trunks or main branches. This does not mean that new leaves and the little shoots which start out along the branches in an orderly manner, are to be destroyed; these are the desirable responses to pruning. The sprouts which are not wanted are those which rise from the crown of the plant, or very low on its branches. A season or two of constant watchfulness against these is required—indeed, vigilance always is necessary, even with young shrubs, to keep this sort of growth from sapping the vitality of the specimen.

With an old shrub that is overcrowded, first cut out every water sprout—every branch or young shoot that rises at or near the base of any of the shrub's old branches. Cut these off close up to the branch whence they rise, making the cut which severs them parallel with that branch and so close that it leaves absolutely no stub. After the young suckers are removed, take out any old branches that are crowding, or that are over long, and thereby out of proportion to the rest of the shrub, or that seem particularly weak and unpromising. These should also be cut out at the point whence they rise; usually this will be at the ground. Those which crowd the center of the bush especially should be sacrificed. Some can always be spared, and it will not be apparent that they are gone on an old bush, for the center must be opened up to the sun so that light may stimulate an even growth throughout the entire crown.

After this is done cut back a few inches the tips of those branches which are left. Then wait, as far as pruning goes, until you see what a season brings forth. Some shrubs respond differently than others; each is a problem in itself, and after all, their renovation is only a preparation for Nature, as far as we are concerned. We cannot do very much of it ourselves, and what we do we must do without presumption and in moderation, waiting to see how she is affected by our help.

Apply a fertilizer which will encourage the growth of branch and wood and flower, a fertilizer rich in phosphoric acid. Coarse ground bone furnishes the best and most directly available form; four pounds of this mixed with one pound of muriate of potash will give a quantity sufficient to use under four shrubs each having a spread of eight feet. Spade this into the soil over the entire root area; this is equal to the spread of the branches. Add a thick mulch of manure over the plant's roots when frost has come, but not before. Spade this in when the spring comes.

When the first spading is done, let it leave a saucer-shaped depression around the shrub. This will hold the water and encourage the leaching down of the fertilizer direct to the roots which are to be fed, instead of allowing any of it to go to waste.

During the early summer following this first pruning and fertilizing—about the middle of the next June—go over the bush again with the pruning shears, if it needs it. It does need it if it shows a disposition to put forth new leaves and shoots only at the tips of its branches; otherwise it does not. Every branch that has not clothed itself fairly well with new shoots must be headed in to a point below the first leaf or first shoot that it does show, to induce branching still further down. For the tendency is always to grow at the extremities, and the only way to overcome the long-leggedness resulting from such a tendency is to reduce the extremities, to cut away the branch itself far enough down to force its growth out at the desired point. Fertilizing and cultivating and general pruning may quicken a shrub to such a degree that very severe cutting back may not be necessary—that is what we hope and why we wait a season, but if a season's growth does not show that they have done so, it is useless to wait any longer. Rub off all very low-growing sprouts perpetually and promptly, watching out for them in the spring following the first work especially.

It is a practically universal rule that weak plants are benefitted by severe pruning, while strong plants are better for less. The reason lies in the necessity for restoring equilibrium between root and top which the plant is under. Normally this equilibrium is perfect, and a shrub or tree has just enough roots to supply its top with the nourishment and the moisture which that top requires, and just enough top to make use of the nourishment and to transpire the moisture which its roots supply. When,

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Rough boughs fitted together in a natural manner seem a proper support for the twining arms of the wistaria.

There is a dignified decorative effect to a smooth lawn, especially where there is an extended landscape to be seen beyond.

The irregular flagstones in this pathway artistically simulate an old garden.

A seat is really an essential part of the garden make-up. Here the substantial bench seems to invite one to enjoy the garden's beauties.

TWELVE GARDEN EFFECTS

The least expensive things are often the most satisfactory. This simple arbor seat is the most popular spot in its garden.

The English frequently bound their lawn terraces with flowers and plants. The green stretches make a frame for the masses of color.
One of the real old-time gardens. The small beds, each with but one kind of flowers, are framed primly with box

Although thatched roofs are unsanitary on our houses their picturesqueness may be preserved in the rustic summer house.

Where porch space is at a premium the detached arbor with a paved floor and low wall is a successful substitute.

**WORTHY OF EMULATION**

The pergola is too seldom seen well clothed with vines. Uprights and beams are of locust.

No garden is complete without its private nook. The semi-circular white bench gives many varying views over the garden.

The lily-pool finds no more appropriate edging than the bank of iris, which is always at its best near water.
What Varnishes Really Are

SOME ESSENTIALS FOR THE PROPER KNOWLEDGE OF VARNISHES—THE TESTS FOR GOOD MATERIAL—PROPER USE AND APPLICATION

by Katharine Newbold Birdsall

ONE might almost as well go into an apothecary shop and say "Please give me some medicine," as go to a paint shop and ask for "some varnish." For unless one uses the proper kind of varnish in the proper way, the results will be anything but satisfactory. With no knowledge of the subject, one might think that a very fine varnish at a high price could not fail to be good for one's needs, no matter how modest those needs might be.

This is a fallacy, however, for it is worse than useless to apply a fine piano varnish to a floor.

A knowledge of the essentials of varnish is indispensable to the house owner as well as to the house builder, unless he approves of leaving every decision in the hands of others. In this case, our advice is: be sure the others have the requisite knowledge!

A painter is not always an expert varnisher, although a few painters may have a thorough understanding of the grades of varnish, their uses and methods of application. Varnishing is a trade or art in itself, and the employment of knowledge of the subject, coupled with good judgment, pays.

The two important kinds of varnish are spirit and oleo-resinous varnish. The principal spirit varnish consists of a solution of shellac in alcohol. Shellac is a resinous substance, a form of lac, which is used as an ingredient of laquers, dyes and sealing-wax, as well as of varnishes. Lac is produced on various trees by a scale-shaped insect, the female affixing herself to the bark and exuding this resinous substance from the margin of her body. When this is melted and reduced to a thin crust it is termed shellac. The banyan or Indian fig trees, those wonderful specimens whose branches, drooping, take root in the ground, sometimes providing shelter for thousands of men, harbor most of these lac producing insects.

The rule for making spirit varnish in America is to dissolve five pounds of flaked grain shellac in a gallon of alcohol. This is rather heavy, however, for average use; and the rule reduced to three-and-one-half pounds is best for common usage.

There are two kinds of shellac, orange and white; the white being bleached with that powerful bleaching agent, chlorine gas, which somewhat destroys the quality. White shellac is necessary for use with white paint, but in all other cases the natural or orange shellac is preferable. Unbleached goods are, naturally, always stronger than the bleached.

The best results for orange shellac varnish are secured when it is carefully dissolved in alcohol, 85 per cent. or stronger, in an earthen jar. The dry shellac should be gently dropped into the alcohol at night and carefully covered without stirring or even shaking. The next morning it may be gently stirred with a wooden stick—never metal. Stir for a couple of minutes once an hour until night, when it will be ready for use.

White varnish is made in a different manner, the white shellac needing at least 95 per cent. alcohol, with mechanical agitation from the start.

Orange shellac resin will keep indefinitely, but the bleached more resin, the harder and more lustrous the varnish, and the quicker to dry.

The resins are formed in large lumps on trees; but instead of being procured from the living trees, they are usually secured from the earth where the ancient trees have fallen, decayed, and long since been buried. The action of time and the earth improves and hardens the resins.

Light colored oleo-resinous varnishes are more costly than the dark, due to the scarcity of the clear, transparent resins. For every use but on or with white paint, however, the dark colored varnish is acceptable.

Oleo-resinous varnish is harder to make than spirit varnish; the resin is melted over a hot fire and when it is at the temperature of melted lead, the hot linseed oil is added. The mixture is cooked for several hours to thoroughly blend and the turpentine is finally added to thin it to proper consistency. The resin loses over a fifth in melting. Oil of a weight equal to that of the melted resin will, when mixed, form a good, hard furniture varnish, smooth and lustrous. With double the quantity of oil, the durability is increased, and the varnish is suited to interior woodwork. If more oil yet is added, it will make a good outdoor varnish—which will take too long to dry to be used indoors.

If oleo-resinous varnish is prepared accurately, water will not affect it; but if incorrectly mixed or cooked, it may absorb water to its detriment.

A well-known varnish test is to cover a board with the varnish, let it dry, and then leave a wet cloth or sponge on it over night. If the varnish turns white by morning, it shows that water has been absorbed; if after the water has dried the white is still visible, it is a sign that water has injured the ingredients, showing some defect in the materials or making. This condition indicates a varnish which should be avoided.

Before venturing very far with varnishing, it is well to have it firmly fixed in the mind that an outdoor varnish is quite different from one used indoors. Also that on all surfaces near the doors and windows which are directly exposed to the effects of the sun and the elements, an outdoor varnish should be used. These surfaces comprise inside blinds, window-sash, sills, jambs, outer doors and railings, etc. These parts should be finished with a weather-resisting varnish, like that used on the exterior woodwork of yachts—spar-varnish.

For indoor trim, the wood is first carefully prepared and a "filler" used to fill the cracks and make an even surface. For

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The Fall Clean-up in the Flower and Vegetable Garden

THE IMPORTANT PROVISIONS TO BE TAKEN IN THE FALL THAT WORK FOR GREATER SUCCESS IN THE SPRING—SOME VALUABLE GARDEN SECRETS

BY F. F. ROCKWELL

Photographs by Chas. Jones, H. H. Saylor, N. R. Graves and Others

As far as the appearance of things goes, springtime is the all-important and only important time for work about the place. It seems in accordance with the gardening operations of Nature to simply let Jack Frost step in and take possession without paying any attention to it. As a matter of fact, Jack is something of a landscape artist himself, and while the pictures composed of green things growing, and over-running brooks remain the emblem of youth and life, good people who no longer "trail clouds of glory" find sometimes a stronger appeal in the somber tints of Autumn.

But there are two things we are apt to overlook: first that not all of Nature's performances are apparent on the surface, and what may seem to us but the blowing about of dead useless leaves is really very efficient mulching; and if you look in the woods and swamps you will find Nature's crop of spring-flowering bulbs all nicely started. Then, too, the majority of the things we use to make our homes more beautiful are grown out of their natural environment, and having given them artificial conditions we must supply artificial care. The bed of azaleas cannot be left to itself, nor should gladiolus bulbs remain in the ground although they may seem to have died down and prepared for winter in a very natural way of their own.

One of the common mistakes in regard to such work is the idea that all hardy things must be set out in the spring. And as the spring is a very busy season, when everything else is demanding attention, and nothing wants to wait—why whatever can be put off is put off, and consequently is not done at all. Such work, for instance, is the planting of new shrubs.

No class of ornamental plants is less appreciated, or I should say, less utilized, than the hardy shrubs—particularly the hardy flowering shrubs. We admire them tremendously in parks or get most enthusiastic over their beauty in some large estate, but somehow we don't seem to realize that they are not expensive to buy, need comparatively no care and deserve a place in our own yards, where they will grow as well as upon the finest estate.

The soil requirements of shrubs are not exacting; good drainage is the most important factor. They are adapted to a very wide range of usage as backgrounds for the hardy flower border, to make an informal hedge or dividing line—between lawn and vegetable garden, for instance, as a screen for some undesirable outlook, or to break the sharp line between tall growing trees and the flower beds and borders.

Few, indeed, are the places which would not be improved by a few shrubs, and when it is considered that even the best varieties cost only twenty-five cents to a dollar each for good strong plants which will make an immediate showing, there seems absolutely no reason why they should not be used much more universally than they are.

The time for planting hardy shrubs in the fall is just after the first frosts—about October first. But order now. Nurseriesmen will ship on any future date you direct, or hold your order subject to shipping instructions.

Also get the ground ready now. The small-growing sorts should go about three feet apart; the larger ones five or six. Most catalogues give information as to size. Pick out the places where you need shrubs and spade up thoroughly, incorporating with the soil manure—either from the stables, or one of the prepared sorts now on the market—and bone dust. Of the lat-
ter two to four quarts per tree, if thoroughly worked through the soil, will pay for itself many times over in the rapid healthy growth induced. In hollows, or on ground apt to be wet, it will pay well to furnish additional drainage by digging the holes several feet deep, and putting in two feet or so of small stones, broken rock or something of the kind, covering this with old bags or meadow hay to prevent earth setting into the chinks when first filling in the holes. If it is dry when setting out, water in the holes when the earth is half filled in—not on the surface.

All the care required by most of the hardy shrubs is a slight yearly going-over to keep in good shape—no pruning—and an occasional cultivation around the roots to keep the soil crust broken up. While most of the hardy shrubs do not need protection, it will be a good thing to give them a mulching around the roots with old manure late in the fall, especially for the first few years until they get their full growth.

Directions for pruning and restoring old shrubs will be found on page 228 of this number.

The list of hardy shrubs is so varied that no attempt to go over it here is possible; but in passing I want to call attention to a few exceptionally attractive sorts or new varieties. Among the deciduous shrubs besides those which everybody knows, such as the hydrangeas, are the splendid varieties of althea and azaleas. For that hedge which you have been contemplating and which would look so much more attractive than the present fence, *Berberis Thunbergii* is the peerless shrub. For seven or eight dollars you can get fifty strong three-year plants, furnishing a beautiful, effective hedge seventy-five to one hundred and fifty feet in length. Personally, I would rather not crowd plants in hedges. Let them have a chance to attain some individuality. Be sure to include at least one of that old sweet-scented favorites, the strawberry shrub (*Calycanthus Floridus*). Plant it near the house, where its fragrance may enter every open window in the spring days. For an individual specimen, at a little distance so that its full effect will be had, put a smoke tree (*Rhus Cotinus*). That will cost you the sum of twenty-five cents! Its relative, *R. Glabra*, the sumach, with its beautiful colors in the fall will be worth while, too. Then there are the beautiful flowered deutzias and weigelas—a whole flower garden in a few beautiful little trees. (Half a dozen of each, in varied colors, would cost, for the lot, $2.50 or $3.00). And then there are the spiraeas. Few people realize that there are more than one or two varieties. At a quarter each you can afford several of the many sorts—and include "Walluf," the new crimson spiraea.

Among the hardy evergreens there are the azaleas, rhododendrons, laurel, ericas (heaths). The azaleas, both deciduous and hardy, are the most beautiful, but at the same time the most likely not to do well. Unless they can be given plenty of water they should be mulched for moisture in dry hot weather, and for protection in winter north of the southern New England States. Covering with light pine boughs or something similar will protect the buds from the injury likely to result from premature starting in the spring.

The lily-of-the-valley shrub is another beauty. *Japonica*, with its dark green foliage and pendant racemes of beautiful white blossoms is not only very attractive, but very hardy.

The coniferous evergreens are very varied, and with their beautiful forms and variations of light and dark green, golden and silver-blue foliage, certainly offer the best of material for creating the winter garden pictures. These are more expensive, costing from $1.50 to $4 or $5 each. But if only one in every two or three years can be afforded, they will make the foundation for the most effective and permanent ornaments in the entire garden.

The question of fall pruning ought to be considered—of roses especially. Most of the pruning required by roses will be accomplished by the spring cutting back and by cutting the blooms in summer. But where strong new growth has been made, and the canes are likely to be whipped about by the wind, they should be cut back after the leaves fall, to two and a half or three feet.

Do not be in a hurry to put on the winter mulchings; all mulching of hardy plants is not so much to protect from frost as to prevent alter-
nate freezing and thawing. In November, after the first severe frosts will be time enough. Use leaves or rough manure to the depth of three to six inches, according to climate. Where severe winters are encountered they should be further protected with corn stalks, bog or pine boughs. For the smaller growing sorts, such as the Teas, a few wooden stakes with twelve or eighteen-inch chicken wire surrounding the bed, and filled in with leaves held in place by boughs, is a very neat and effective plan of mulching.

Fall is the best time to prepare the new rose garden. The plants should not be set until spring, but they will take hold very much better in a fall prepared bed. Select a well-drained spot in the lawn with good rich heavy loam, if possible. Dig out twenty-four inches deep, loosen up the soil below that, and fill in six inches with cobbles, clinkers or any good drainage material. Fill in with the best of the soil excavated, sods first, and mix with a heavy dressing of manure—cow manure being preferable—to within two inches or so of the surface level. Then add six inches of good clean loam. By spring this should have settled to an inch or two below the surface and should not be made higher if rain is depended upon for the water supply. The beds should not be more than five feet wide, to make care and cutting convenient. For the same reason long beds are preferable to large round ones.

If the hardy perennials have been planted in a mixed border and properly selected, there will still be many blooming in October, such as fumias, chrysanthemums, golden glow, Japanese anemones (wind flowers) and other late stayers. So not much can be done until severe frosts have killed the soft growth, which is not usually until after the first of November. When the proper time arrives, cut the old stalks off to within several inches of the ground and burn. (It is not advisable to add them to the compost heap, as they are likely to contain disease germs or insect cocoons or eggs.) Do not cut off too close to the ground, as the stubs give the roots a chance to ripen off naturally, and also help to hold the litter-mulching in place during winter.

If the bed has become foul with weeds or grass, now is the time to clean it out—don’t wait till spring.

After the ground has begun to freeze, put on the mulching—litter or rough strawy manure to the depth of two or three inches. A heavier protection is likely to cause premature growth in the spring, resulting in injury from late frosts. If possible, put the mulching on when the ground is dry—a few warm days, and moisture covered in sometimes causes trouble from rotting. In removing this covering in the spring, it is best to do it gradually, so as not to leave any new growths which may have started exposed to unfavorable changes in temperature. Don’t be tempted to begin taking it off the first warm day. Wait until some of the late frosts are over.

There are several important lines of work to be looked after among the flowers in the fall if one would have the greatest success with them. In the first place, there are those which should be started for next year, some to be sown or planted where they are to bloom, others to start and winter over in frames. Two of the most important of the latter are the pansy and English daisy (Bellis Perennis). For best results these should be started in August, but if one can give them the protection of a frame, and seeds are sown at once, good strong plants may be had before the ground freezes in a tight frame. They like cool weather, and will start more rapidly now than six weeks ago. The ever admirable and desirable hollyhocks may be sown in a frame and wintered there without transplanting. A selected list of annuals and of perennials will be found elsewhere in this number and the reader is referred thereto.

Secondly, there are the flowers which should be propagated now, either to furnish new plants for next summer’s garden, or plants for the winter window garden inside the house. Most of the flower garden plants are increased readily by cuttings, and it is nothing but ignorance of the simple process of rooting them which causes the loss of so many choice flowers every autumn. How often, for instance, in a lot of seedling petunias, are there a few of ex-
Planting the House Border

THE PRINCIPLES OF PORCH BED PLANTING—HOW TO OVERCOME DIFFICULTIES OF SOIL AND LOCATION—WHAT VINES, EVERGREENS AND SHRUBS ARE SUITABLE AND HOW THEY MAY BEST BE GROWN

by Warren J. Chandler

Photographs by Camillus Phillips, August Patzig, N. R. Graves and Others

In the developing of landscape features on the home grounds every property has its distinctive possibilities. Where one lends itself to sunken gardens, approached by well-graded terraces or slopes surmounted by pergolas, another is entirely unsuited for such treatment, and yet may be as attractively embellished.

There is one trying problem, however, common to all properties, wherein the solution resolves itself into a few general treatments.

That to which I refer is the improving of the grounds immediately surrounding the house, including, of course, porch beds, which are usually a problem in this connection.

The real reason why this portion of the property demands the greatest thought is because it must be presentable in appearance at all times. We overlook the shabby appearance of the rose garden in October, the pergolas in April and each of the other features which at stated times during the year makes its special show, but the planting around the house should always be attractive, a pleasing frame at all times.

It has been the practice for years to depend on bedding plants to serve the need, but in spite of their showy appearance from early summer until autumn, they are the result of considerable care and expense, leaving for the winter a bare, unsightly void.

In endeavoring to satisfactorily dispose of this question several important conditions have to be taken into consideration.

Many houses of late design have overhanging eaves, which are a menace to plant life, making it almost impossible to plant in the ground directly under them, unless it be one or two kinds of dwarf growing perennials. The planting line ordinarily must commence beyond the line of the eaves.

Another problem almost invariably faced is that of good soil. It is usually the case that the soil immediately surrounding the house is either a fill made of all the refuse ground—old lime beds, sand or clay from the cellar excavating—or the grade has been so great that the top soil is entirely gone, leaving a barren sub-soil in which it is impossible to successively grow plants.

The ideal soil for beds around the house is a heavy rich loam, containing considerable humus, the latter to give it not only partial drought-resisting properties, but also to make it highly productive for plant life.

In endeavoring to reach a satisfactory conclusion as to the best plants for this class of planting, we must confine ourselves to those which give the longest period of display.

The broad-leaved evergreens are unquestionably the first and best group for using in base plantings around the house. Not only are they effective out of flower as well as when in bloom, but are in most cases of dwarf, bushy habit of growth, which is just what is needed for such purposes. Use the hybrid rhododendrons and edge them with Leucothea Catesbaei, Andromeda japonica or the Mahonia aquifolia, the holly-leaved barberry, and a most pleasing effect results. Of course, to have success with such a planting, ideal conditions are necessary.

The evergreen-leaved privets, Ligustrum japonicum and Ligustrum lucidum, are becoming popular and will succeed as far north as Philadelphia under favorable conditions. These are admirable for plantings of this kind.

The Azalea amoena and similar kinds are fine for dwarf plantings of this character, and are also used in conjunction with the other plants mentioned. Care is necessary in using Azalea amoena as its magenta or claret shades “fight” with scarlet, pink and other similar colors.

Many beautiful results are possible from the coniferous evergreens, though a careful selection in this case is absolutely necessary. The retinispores, or Japanese cedars, are admirable for this use. Of course, they
grow rather quickly, but as they lend themselves readily to shearing they may be kept to almost any size. Among these *R. scari-*

*rosa* may be particularly recommended, because of the steel-blue color of its foliage. The full, pleasing style of *R. plumosa* and its golden form, *auric*, are also worthy of mention.

There are many kinds of dwarf arbor-vitae which are well suited for bedding, particularly *Thuja pumila*, *T. globosa*, *T. Hoveyi*, and the dwarf golden Chinese one, *Biota nana aurea*.

The Irish, Swedish and Chinese Junipers are all fine for bedding purposes, particularly where one's taste runs to the tall, columnar style of evergreens. Colorado blue spruce is frequently used also, but its life in a bed must be short-lived if it is to be cared for, as it will not stand very much pruning, and makes a quick growth compared to the others mentioned.

This condition holds true of spruce and firs in general. Pines are out of the question, unless it be the dwarf mountain pine, *Pinus Mughus*, as they are coarse in appearance and grow too rapidly to be feasible for bedding.

Next in value and importance to the evergreens are the shrubs, which, though clothed in foliage barely nine months of the year, are not really objectionable to look upon in winter, especially when there still remain bright berries or attractively colored stems. There is a wide selection of shrubs from which to choose. Of course the spring blooming kinds predomin-

The shaping growths of arbor vitae and dwarf cedar can be well used in odd corners and angles and they thrive well in such places. George Nichols, architect
What Can Be Done in Finishing Inexpensive Woods

ECONOMICAL EFFECTS WHICH MAY BE HAD BY THE USE OF COMMON WOODS TREATED AT HOME—SOME POINTERS FOR THE MAN WHO WISHES TO BUILD EFFECTIVELY AND AT MODERATE COST

by Louise Shrimpton

Photographs by George A. Daskam and G. E. Doust

INTERIOR woodwork in the small house may be individual and distinctive as in the large one. If economy is a chief consideration, delightful results are gained by the use of cypress, hard pine and other comparatively inexpensive woods, with whitewood or poplar for white-painted woodwork. Plain oak and chestnut are not prohibitive in cost. Home builders, if interested in chemistry or of an artistic bent, may enjoy experimenting in stains, testing their color properties upon different woods and superintending the finishing of woodwork, or even doing much of it themselves.

A scheme for the style and color of furniture, woodwork, wall coverings and draperies should be carefully planned as a preliminary step. Simplicity is desirable in a small house scheme, and elaborate period styles, even if possible from the standpoint of cost, are scarcely practicable. A stately Adam drawing-room cannot very well be crammed into a small house, and Louis XVI styles seem a trifle absurd. Our own Colonial attempts at bringing the classical back to life resulted in charming cottage and farmhouse woodwork and furniture, much more helpful to the builder of a small house. If no traditional type is followed, but simple modern furnishings are preferred, then flat unfinished moldings, wainscoting of planks of varying width fastened against the wall to a height of several feet, or wood strip combinations, may be used. Whatever the style, the woodwork should be interesting. One reason for the over-crowding of houses with bric-a-brac and furniture is perhaps the lack of interest in the background of rooms. Doors and window frames, designed for their places, and showing the natural grain of the wood, may be as interesting as bits of tapestry, still keeping their place as part of a wall. In white painted woodwork, paneling should show good space divisions. Carefully studied in a large house, the woodwork of a smaller one is often left to the builder or contractor, with the result that stock moldings, unfitted to their places, are used.

The style of wood trim decided upon, a choice of woods must be made. Each has its peculiar properties. Among those suitable for the living-rooms of a small house is cypress. It is plentiful, popular for exterior trim, and beginning to be appreciated for its possibilities in interior work. A smooth wood, with beautiful grain, taking on refined color effects, it is used to advantage where gray greens or browns are desired in the wood trim, with wood or wicker furniture stained in corresponding tones. It can be obtained for from sixty to sixty-eight dollars a thousand feet, the price depending on the quality of the wood.

Hard pine makes unusually pleasing trim for the living-room if stained in a cool color that counteracts its over-hot tones, and allows the real beauty of its grain to be seen. It can be had for forty-five dollars a thousand.

Whitewood is quite satisfactory stained in dull soft colors, though it lacks beauty of grain. It is often used for woodwork that is to be painted white. The cost is forty-five dollars a thousand.

Plain oak, desirable for the living-rooms of a house on account of its beauty of grain and soft texture, lending itself to refined color effects, costs from seventy to ninety-five dollars a thousand. Where quartered oak furnishing is used, perfect harmony is gained by the use of plain oak as woodwork, treated with Montana fumes and stains.

Chestnut, costing somewhat less, is often substituted for the oak, as it takes a similar finish and has a vigorous, sweeping grain that commands it for use in large rooms.

Gumwood, costing about the same as hard pine, is especially attractive.

This interior by Parker & Unwin is typical of the English idea that wood itself has a decorative value

An American adaptation of the English idea shown opposite. Woodwork here takes the place of wall decoration
in its smooth sheen and satin finish of surface. It is condemned by many contractors and lumber dealers, however, since it "buckles" and does not "hold," though these undesirable results do not invariably follow its use. Quarter-sawn red gum is recommended by experts.

Basswood is inferior and not to be recommended for interior woodwork.

While "stock" doors are as a rule pretentious in style, a good and simple pattern is occasionally to be found on the market. Birch doors are quoted at three dollars and a half a piece, net. Fir doors at two dollars and a quarter a piece can be used with pine woodwork, stained to match.

In butlers' pantries and kitchens, the woodwork, ordinarily of hard pine, is now often given a coat or so of linseed oil, instead of the old highly varnished finish that made it so uncommonly ugly. An occasional oil rubbing cleans the wood, or warm water is used. Sometimes a light coat of stain with wax finish is substituted. If paint is employed it is white, pale gray or a pale but warm yellow. Dark paint makes a dreary workroom, and the old reason for its use, that it does not show dirt, seems to the modern housewife shockingly unhygienic.

Two unusual sources of supply for woodwork for the small house are the neighborhood trees of suburbs or of countryside, and the wrecking firms of large cities. Trees that are sacrificed to make room for buildings may sometimes be purchased by the homebuilder, who superintends their cutting into lumber, and uses them for the wood trim of a room, thus getting individual effects and perhaps a rare wood at small cost. It is not possible, of course, to obtain great oaks such as Miss Jekyll, the English garden expert, placed rough hewn as ceiling beams in her home. But a living-room and library in one of our Eastern towns have paneled doors, built-in furniture and other woodwork of butternut from an old butternut grove in the district, the mellow golden tone of the oiled wood possessing great beauty. A house in the Middle West used to be a striking example of the utilization of material near the site, and if still standing is greatly inflated in value, with its high wainscoting—as well as clapboards—of black walnut. Old cherry trees may give a unique quality to a room, and local woods that would be scorned by the "trade" and burned for firewood on account of defects of grain, are utilized by clever home-builders.

For the small house in Colonial style, mantelpieces, doors and paneling from old houses may be picked up at wreckers' estab-

(Continued on page 262)
The house is built after the Colonial style, and the ordinary running bond is used: but even though its lines are rectangular variety and color are obtained by the use of marble keystones and window ledges, and brick quoins.

The home of Edw. T. Hapgood architect Hartford, Conn.

A corner of the living-room with glass doors divided into small panes.

The dining-room fireplace and paneling is white, contrasting with the dark woodwork.

The kitchen end of the house is screened in by a dignified lattice which conceals the maids' porch from the garden.

The veranda occupies a corner of the porch front and opens on the living-room and reception-room. It may be closed during the winter.
The antique carved stone fireplace forms a very high opening such as was common in the best work of former times. The size and furnishings are suggestive of ease and solid comfort.

The architect has preferred size to number of rooms; though few, each is extremely large.

THE HOME OF
EDW. T. HAPGOOD
architect
Hartford, Conn.

A point worthy of notice is the large amount of closet space allotted to each room.

Mr. Hapgood has not cut up his ground floor into numerous rooms. This corner of the great living-room serves as his library. The other end is used more as a sitting-room.
Lightening the Housewife's Burden

There are countless little ways in which the cares of the housekeeper may be made lighter and her work more easily performed. Much depends upon the manner in which the house is arranged and a little extra expense in providing conveniences for doing the housework is well worth while.

Take, for instance, a little cupboard in the kitchen wall to conceal the electric meter, which must be read every few weeks by a representative of the electric company. Such a cupboard occupies but little space and with it the man who reads the meter does not walk through the house to the cellar or the garret, tracking mud or sand over the floors and rugs.

Let there be a transom over the kitchen door. It is a convenience which too few women understand. If properly adjusted, it will allow the entrance of just enough air to keep the kitchen comfortable without creating a draft and will permit the escape of odors much better than a window, because it is near the top of the room. It is better that it should open from the top than from the bottom.

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Castors

Too few housekeepers appreciate the value of high-grade castors. It often pays to have new castors put on heavy pieces of furniture which are frequently moved about—such as beds and chairs—choosing those kinds which run easily and which will not mar the floors or injure the rugs. When castors of the right sort are used, a heavy chair can be moved with the pressure of one finger.

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A Folding Desk

A mahogany folding desk that makes an attractive piece of furniture open or closed, is a novelty that will be found useful on account of the ingenuity of its fittings and the small amount of space that it may be made to occupy.

Hardly more than a writing portfolio in size when closed it is so arranged that when open it forms a writing desk large enough for all practical purposes. The fittings are unusually complete and there is the additional advantage of a special place for each of the articles, so that they are not so apt to be mislaid as in a desk.

There is a blotting pad of generous size, a large pocket for private papers and letters, and places for note paper and envelopes. On one side is a calendar, on the other a memorandum pad with address book and note book. The ink well is in a little square leather box that is stationary, and the top is of the safety variety, such as is seen in writing cases for traveling use, while in small pockets are the stamp box, sealing wax, scissors, paper knife, eraser, lead pencil and all of the little things necessary for a complete desk.

For the guest room where a writing desk is a necessity, even though it may not be used to any great extent, the folding desk is particularly serviceable, as it is dustproof when closed and always ready to use at a moment's notice, with all of the needed articles at hand. Not the least of its advantages is that it occupies so little space when closed, and it is therefore most desirable for the small room in which the amount of furniture must be limited.

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Considerations for the New House

In one well-arranged house which I visited, there were a number of closets in the basement, which were designed, I learned, to accommodate the window screens. There they were stored out of the way, properly numbered, and placed in order, so that they could be quickly put in place in the spring.

It is also an excellent plan, when a new house is built, to have a small cellar, with cement floor and walls, built just outside the main cellar and near the furnace or heater. This little auxiliary cellar is for
the coal and is filled through an opening in the top. If there is a stout door between the coal cellar and the general cellar, all the dust and dirt will be confined to the former, and not escape into the house. This plan has given the greatest satisfaction whenever tried and involves but little extra cost.

It is feasible in most houses to construct a laundry chute from the bathroom or some other convenient place on the bedroom floor to the basement. It is a great convenience to be able to dispose of the soiled linen in this way.

**A Fireplace Help**

If there is a large fireplace, much work may be saved by having an opening in the bottom with a chute leading to an ash pit in the basement. Then, by merely pushing a slide aside, the debris may be whisked out of sight without effort or dust. It should be borne in mind, however, that a bare hearth makes a poor fire and that ashes assist the draft and form a pleasing glow beneath the logs. It is now possible to purchase a kitchen range with a similar attachment, which saves much dirty work and all the carrying of ashes. In order to be satisfactory, the fireplace should have a damper so that the draft can be regulated at will.

**A Handy Ice-box**

A COUNTRY house at New Canaan, Conn., designed by Frederick Mathiesius, Jr., architect, has an ice box or built-in refrigerator with several unique features. It was arranged with doors at three points so that the ice man, the kitchen maid and the butler can have access to it without encroaching upon each other’s precincts and is really in three distinct divisions. One is the ice chamber proper which can be filled with a four days’ supply from the porch. It is placed for this purpose at one end of the rear porch in a corner between the kitchen and the butler’s pantry. The kitchen end faces on the passageway from the kitchen to the butler’s pantry and at its right is the second story stairway which breaks and turns to the left with a landing half way up. The butler’s section of the ice box is underneath this landing on the pantry side and back of it, also under the landing, and adjoining the back of the kitchen portion, is the ice chamber. The kitchen portion is 3½ and 6½ feet high, an altitude unattainable by the butler’s section and the ice chamber, because of their situation under the stair landing. Their height is four feet, the surface area of the butler’s section is two by three feet, and that of the ice chamber a trifle larger. There is a free passageway for the circulation of the cooled air direct from the ice chamber throughout the other two sections and the melted ice drains away from the bottom of the ice tank, allowing no opportunity for it to reach the food storage chambers or their contents. Nor is it possible for any of the contents of the food chambers to be reached from the ice chamber or taken out through it.

In the top of the butler’s section is a drawer with its own ice supply and waste-pipe, designed to hold bottles of cool beverages where they can be reached conveniently by the owner when the butler is off duty or busy elsewhere. This drawer is a pet contrivance of the owner who says that it enables him, whenever he pleases, to put his hands without assistance from a servant on a well cooled bottle “without exploring among the food supplies and without upsetting cream pitchers or rubbing my sleeve through the butler.”

All the interior portions of the ice box are lined with white clay tile, ideal for this purpose because of their cleanliness; their natural coolness, and their capacity for catching and radiating the light entering through the doors.

While the convenient placing and design of this ice box were made possible only by the location of the stairs to the second story between the kitchen on one side and the butler’s pantry and dining room on the other, it is seen that no disadvantage arose from this planning, but that on the contrary several distinct advantages were acquired. Nor has this particular house any unusual characteristics essential to the introduction of the feature. On the contrary, the same thing could be planned for in any new country house.

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As shown in the plan, each department has its own entrance distinct from the others; thus the iceman cannot disturb either the food or the cold bottles.
October

TODAY the garden is in the height of its glory; the geraniums were never brighter, the begonias have become a miniature forest, the salvias are lines and circles of fire amid the somber colors of late autumn.

To-night—who knows—winter may fling the first line of his advance guard across the land, and tomorrow of all summer's widespread armies there will be left only black ruin.

And what have you done to provide against these disasters, to protect at least a few of your garden favorites from the universal destruction? A few wholesome plants in the house, like minstrels in a besieged castle awaiting relief, will make the long attack of winter pass more quickly, and to the dreary days will lend a spirit of cheerfulness that cannot be duplicated.

If it is worth the time and attention we spend on it to provide a flower garden in summer, when every corner and bank by the roadside offers its quota of blossoms, how much more worth while is it to make an effort to securing a flower garden in winter, when every green leaf is prized.

There is another reason, not less important than that of having flowers in winter, for saving some of the plants from Jack Frost. We want a supply for next summer's flower garden, and not only for economy's sake but also to be sure of keeping specimens of our favorite plants we must propagate them ourselves. Especially is this true of such as are raised from seeds—petunias, snapdragons and many others having beautiful unnamed mixed hybrids.

Save Part of the Flower Garden

THERE are two distinct ways of carrying plants over. In some cases the plants themselves can be saved—although as a rule new plants give better results—or you can root cuttings of the old plants, and thus make them over into new ones. In some instances the old plants are saved in order to furnish material for cuttings early in the spring. Where this is done the plants are usually just carried through the winter in an almost dormant condition and started into growth by giving more warmth and moisture, in January or February.

Simple as it may seem to dig a plant up out of the garden, put it into a pot, and bring it into the house, not one plant out of fifty so treated, in the ordinary way, will survive. In the first place, it is impossible to take up a plant so growing without badly mutilating its roots—no matter how careful one may be, many of them will be broken and bruised. The plants at the end of a summer's season of blooming are more or less ripe and woody—there is not much active new growth—which is a very unfavorable condition for handling and potting. And in addition to this, the environment indoors is usually much less favorable than that from which the plants are taken. In connection with the shock of moving, it usually proves fatal.

If you have garden plants you desire to save, take every precaution you can. In the first place begin operations as early as possible—the longer the time between taking the plant up and bringing it inside the better.

Make a clean, deep cut around each plant with a knife or a sharp spade, leaving a ball of earth about the size of the pot in which it is to go, or a little larger, as some of the earth will probably get knocked off in the process. If the earth is dry, get it into good condition by watering thoroughly for several days in succession. Cut the top of the plant back severely. Do not let buds and flowers tempt you to try to save it all, or most likely you will lose it all. Some soft-wooded plants, like petunias, should be almost entirely cut away, leaving only the stubs six or eight inches long. Geraniums and other stronger wooded plants should be cut back one-third to one-half. If the weather permits, leave the plants in the soil for several days after this pruning of roots and branches. Then take them up with as little pulling as possible; it is always better to cut roots off clean than to pull them out. Pot the plants up, using soil such as is recommended below for potting cuttings, and see that it is packed firmly into the pot. Give a thorough soaking, and put them in the shade—under a tree or on a corner of the veranda—for several days. Within a week or so they should be sending up new growths, and emitting new white rootlets. Keep them outside as long as possible without risk of freezing, and when you do take them in, be sure to give all the air possible during mild days. By taking pains many of your favorites in the flower garden can be saved.

How to Take Cuttings

THERE will be many plants, however, too big to take up, or in excess of the number one has room for. These
need not be lost if you will take the trouble to learn the art of rooting cuttings. It is not a very difficult operation, but if you have never done it, be sure in attempting it to keep track of all the details involved. A cutting is a piece of the plant—usually the end of a shoot or branch or new growth—about two or three inches long. In taking a cutting be sure that the wood is of the right condition of firmness, neither too hard nor too soft. This condition is determined by the snapping test. When the shoot is bent between the fingers it should snap, making a clean break. If it bends or doubles up without breaking it is too old, or too soft, and will not root readily. Take the cuttings off clean with a sharp knife, cutting a little on the slant and preferably just below a joint, but this is not, in most cases, imperative. Remove the leaves from the lower half and shorten back, or cut off the outer halves of the remaining large leaves. This will give you nice, clean, stubby little cuttings, all ready for the rooting medium.

How to Make Cuttings Root

THE simplest and surest way to root cuttings, where only a dozen or two are required, is by the saucer system. Your outfit will consist of a large soup-plate (or any other deep glazed earthenware dish) and some clean, gritty medium-coarse sand. Fill the dish two-thirds full of sand, and make as wet as possible without having water stand on the surface; insert the cuttings around the edge as close as they will go without touching. (A double circle may be put in by placing a small inverted saucer or a block of wood in the center of the dish.) Place the dish in a warm light place, such as a sunny window. Be sure to keep the sand saturated until the cuttings root; that is the whole secret of success.

When more cuttings are to be rooted, take a flat (about 12 x 10 x 3 inches is a convenient size); put a layer of sphagnum moss or leaf-mold in the bottom and fill with gritty sand. Wet this down thoroughly and insert the cuttings about an inch apart in rows two to three inches apart. Keep where the night temperature will be as near fifty to fifty-five degrees as possible, and shade on sunny days from nine to three o'clock, as the sand will not be as wet as that in the saucer system, and the cuttings must not be allowed to wilt after they are put in it. If the weather is very hot, spray or sprinkle the tops of the cuttings two or three times during the heat of the day, to prevent wilting. In cold weather the cuttings will root more quickly if the box (or plate) is kept where the bottom of it can receive some direct heat, as on bricks over a radiator—care being taken, of course, not to let the sand dry out.

Potting Off the Rooted Cuttings

WHEN the roots are from a quarter to half an inch long, the cuttings should be transferred to pots. For the soil use a rich garden loam with enough leaf-mold and sand added to make it both light and friable—so that it can’t be squeezed into a ball in the hand. If you cannot obtain leaf-mold, some old spent manure, such as has been used in a hot-bed, will make a good substitute. Use a two-inch pot if possible. Don’t stick a little cutting into a three or four-inch pot and expect it to thrive, because the soil will not dry out quickly enough, and will get sour. If large pots must be used, put three or four cuttings in each, around the edge. It will pay to get small pots and do the job properly.

Take the cuttings carefully from the sand, don’t pull them out. Fill a pot level full with soil, make a hole with the left forefinger and with the right hand lower the cutting into place. With the thumbs and forefingers enough soil is crowded about the cutting, which is put in to about half its length, to hold it in an upright position. Then give the pot a couple of sharp raps on the bench or table to compact the soil, which is further compacted by an even pressure with the thumbs. If the work is properly done, the cuttings will stand up firmly in the soil.

The potted plants are given a thorough watering, and placed where the holes in the bottoms of the pots won’t get clogged up, a flat full of coarse gravel or pebbles is ideal for this. For several days be very careful to shade during the heat of the day, and if the weather is very hot, be careful also about letting the little pots get dry out, as they will very quickly if left in the bright sunshine. New pots should always be soaked in water until they cease to bubble.

When first potted off the little plants may be placed close together. In a week or two, if they come along nicely, they will need to be spaced. Never let them get crowded. A few days neglect may mean the drawing up choice specimens into useless leggy plants. In a few weeks, if all goes well, your dozen or more little plants will be ready for re-potting, which condition will be indicated by the small white string-like roots that have come through the soil and ramified about the balls of earth inside the pots. Shift without delay to pots a size larger, using the same soil except that a quart of bone flour, or fine ground bone, should be added to each peck of potting soil. Remove the plants by inverting the pot and knocking the edge sharply against the edge of a bench or table. Fill the new pot about a third full of soil, hold the plant in position in the center, and fill in around the ball of roots with new earth, rapping the pot smartly and using the thumbs, as before, to make the soil compact. The surface should be about half an inch below the rim of the pot, to leave a space to hold water when the plants are being wet.

Pots four inches and up in size will require “crocking,” that is, giving extra drainage by having pieces of broken pots or other rough material placed in the bottom to keep the hole open.

Give all the air possible without chilling.

A Persistent Dahlia

IN the summer of 1908 our dahlias were so prodigal with foliage and so stinky with blossoms that we got discouraged and left the tubers in the ground to perish with the winter’s cold. Imagine our astonishment, the following spring, on seeing a supposedly dead cactus dahlia push its young shoots as bravely through the ground as if it had had the customary winter storage and May planting out. Unless it accidentally got some of the leaves from the neighboring bulb bed, it had had no protection whatever; though doubtless the southern exposure and the fact that it was close to the stone wall of a warm cellar had not a little to do with its survival. Having shown this extraordinary determination to live, this dahlia was left to its own devices and at the time of writing is blooming well after its third consecutive Connecticut winter in the open ground.

H. S. A.
EDITORIAL

THE COST OF HIGH LIVING

IT is a fortunate thing that an official census is taken but once in a decade. As it is, the statistics that flow in a steady bewildering stream from Washington would easily supply editorial subject matter for twice that period of time. With the assurance that we purpose no such utilization of the wealth of figures served up in such varied form by the Government, let us look for a moment at the relative prices of commodities:

<table>
<thead>
<tr>
<th>Commodity</th>
<th>1900</th>
<th>1910</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm products</td>
<td>190.5</td>
<td>164.6</td>
</tr>
<tr>
<td>Food, etc.</td>
<td>104.2</td>
<td>120.7</td>
</tr>
<tr>
<td>Clothes and clothing</td>
<td>106.8</td>
<td>123.7</td>
</tr>
<tr>
<td>Fuel and lighting</td>
<td>120.9</td>
<td>145.4</td>
</tr>
<tr>
<td>Metals and implements</td>
<td>120.5</td>
<td>128.5</td>
</tr>
<tr>
<td>Lumber and building materials</td>
<td>115.7</td>
<td>152.2</td>
</tr>
<tr>
<td>Drugs and chemicals</td>
<td>115.7</td>
<td>117.0</td>
</tr>
<tr>
<td>House furnishing goods</td>
<td>106.1</td>
<td>111.6</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>108.5</td>
<td>133.1</td>
</tr>
</tbody>
</table>

Standing forth in bold relief in the list is the increase in the price of farm products. Supplementary figures show that the increase in the prices of the finished products—flour, cotton cloths and the like—is not so large. It would seem, therefore, that the farmer is coming into his own—in fact, that he already has it in his pocket.

MAKE THE LAND PRODUCE

HERE is an obvious moral in the paragraph above: Grow your own vegetables. In the suburbs and in the more distant countryside the development along the lines of small building plots is constantly encroaching on the productive land of the market gardener and farmer. The soil that yielded potatoes a decade back is now supporting lawn. Eight of the typical 50 x 100 ft. suburban lots are approximately equivalent to an acre. Taking two-thirds of each plot for the house, lawn, paths, etc., there is left a third for the vegetable patch. One-third of an acre, under intensive cultivation, can be made to produce all the vegetables, potatoes excepted, that twelve people can eat in a year. In other words, then, every eight suburban plots that are not made to produce, sacrifice the vegetable food of twelve people. This is an economic waste of such proportions that, if observed in a man’s business, it would be a matter for constant study until rectified. Because it occurs in connection with our home life it passes unnoticed.

However, it is not strictly our mission to attempt a reduction of the present high cost of living. We might even view with equanimity this economic waste in the thought that another form of return was being paid on the land investment—the invigoration that comes from life away from the city—a dividend of health. What really does bother us in this matter is that the dwellers on those much-discussed eight suburban plots are missing something in this life that is really too worth while to be missed. They are not getting their money’s worth out of the land—not in tomatoes or beans, but in the actual rejuvenescence of mind and body that comes only to him who digs in the soil. And the by-product consists of vegetables such as cannot be bought from the grocer or the dusty, jouncing cart of the haystacker—vegetables in the varieties that are too tender and short-lived for marketing, vegetables that have a flavor above all others because you have raised them yourself.

MAKING EVERY PROSPECT PLEASE

THE first of September last, in the State of New York, was made a day of joyful work by the Good Roads Committee of the Automobile Association of America. On that date a new law went into effect in this State, prohibiting the destruction or defacement of milestones, guide posts and public property of like character, and prohibiting also, without the owner’s written consent, the defacement of trees and buildings with advertisements. Fifty or more automobile clubs took part in the wholesale destruction of such disfiguring signs as had not been removed before the law went into effect.

The campaign against this particular form of defacing the countryside has been waged for some years by individuals and organizations who preferred Nature unadorned. It has remained, however, for the rapidly swelling ranks of the automobilists to push to a successful conclusion this one engagement on the long firing line. We trust that the noise of battle may be heard afar off, inspiring other States to join the crusade. The ultimate result is not for a moment in doubt—the billboard as we now know it will be consigned among other relics of barbarism within a generation. If we could but make clear to some of our erring brothers the fact that an advertisement defacing a beautiful landscape is the worst possible boomerang against the advertiser and his product, we could hasten the coming of that day.

AN OCTOBER OPPORTUNITY

OCTOBER is a month of renovation inside the house. More and more general becomes the custom of freshening up the interior decorations and furnishings for the winter months. New wall papers and hangings, new rugs and new furniture for a room or two, give a new opportunity for rectifying old mistakes in color or arrangement, or of laying the foundation for some new scheme of both. To but few of us comes the opportunity of furnishing and decorating a whole house at one time. Even when we have been in the habit of furnishing our rooms, there are the inevitable handicaps or restrictions imposed by furniture that is too good to give up, rugs that still have many years of service before them, hangings that show no signs of wear, pictures that have been given us in misguided generosity. All have their claims upon us, so that the new house is often disappointing in its perpetuation of past errors. For most of us the problem can be slowly but surely solved by consistent efforts to do a little at a time along carefully planned lines towards an ideal. It is no great hardship to any of us to bring one room up to the standard each fall. Even if the more important rooms have to be completed through inter-family holiday gifts, or the rug problem has to go for another six months, a big stride toward the ideal can be made now. The important thing, of course, is to keep at it. The temptation is strong to lie back on our oars and let things go for another year, but the accomplishment of part of the task is worth some personal sacrifice right now.

TOKONOMA AND CHIGAI-DANA

WHILE we are at the task of making the interiors of our homes conform more closely to the ideal, let us profit by the custom of the Japanese in regard to the display of pictures and ornaments. One end of each of the chief rooms is formed of two alcoves, the tokonoma and the chigai-dana. In the former is placed the picture of the day, always a subject appropriate to the season or the activities of the host. In the chigai-dana is displayed the day’s selection of artistic treasures from the fireproof kura or “go down.” Only the mere faddist among ourselves would attempt to follow this doctrine of simplicity to the letter. For one thing, we have not attained to the delicacy of artistic appreciation that is the heritage of the unspoiled Japanese. But it should serve at least to modify our own carelessness in regard to our pictures and meaningless bric-a-brac. While you are refurbishing that one room this fall, try the experiment of taking out all the pictures and mantel ornaments and putting these back one at a time only as they seem indispensable.
There is nothing more fascinating to the average man or boy than

**Tinkering with Tools**

and for the man who is really handy with tools a present of one of our Combination Benches and Tool Cabinets will give him more pleasure than anything else you could select. It is a handsome oak cabinet containing 95 of the finest tools made and when open is a complete bench with vise ready for immediate use.

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This Christmas or this Birthday give him one of our Combination Benches and Tool Cabinets, or a smaller Tool Cabinet and a Manual Training Bench.

<table>
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<th>No.</th>
<th>21 Tools</th>
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Factors
Ambler, Penna.


What Varnishes Really Are

(Continued from page 232)

outdoor work, the surface is built up with varnish, successive coats being applied until all crevices are filled. Each separate coat is sandpapered lightly until the last, which is left to finish with its own natural gloss. The greatest enemy of varnish is sunshine; due to its powerful deteriorating effect, outside doors, etc., should be varnished yearly, while interior trim if well varnished in the beginning will last from ten to twenty years.

Varnish holds a unique place in relation to paints. Our usual thought of varnish is as a finishing touch; but contrariwise, the outside of a new house should first receive a coat of heavy shellac varnish. This is for the purpose of trying to stop up the knotholes in the wood. Even in dry wood, the pitch in the knots will often ooze out, and in time discolor and soften the paint.

The prevention of this oozing of pitch is a great house-painting problem. Nothing has yet been discovered which acts as a sure preventative; varnishing is the best known treatment (unless one will leave the house unpainted for a year to give the pitch a chance to harden or wash away in the rains). After the varnish is dry, the paint is applied.

Varnish is frequently used as a constituent part of paint for interior woodwork, instead of as a finish. A quick-drying oil paint is generally used, to which a portion of varnish has been added, replacing the oil, forming what is known as a glass or luster finish. This makes a serviceable finish. For a finer finish enamel paint is used, of which varnish is the vehicle or liquid "spreade".

A good general rule for the drying of varnish, and also of paint, is to note the time which elapses from the application, when it is a liquid, to the time it becomes firm, but is still sticky. Before applying another coat allow for drying at least five times the number of hours this setting process has consumed; for instance, if "set" in ten hours, fifty hours at the least should elapse before the second coat is applied—much longer in the case of quick drying shellac varnishes. This rule should be lengthened wherever possible, for the longer the coat is left to dry, the better for ultimate effect and service.

In using varnish over a wood stain, the same method of application is used as over any plain woodwork. The use of a water stain to dye woodwork is very effective for large or open grained woods. The stain merely dyes the wood, and after its application the grain is filled with a colored paste. "Filler" or "flying" effects are secured in this way, as the filler is a different color from the background, but a harmonizing one. The transparent varnish is applied over the stain and filler.

As before mentioned, varnishing is almost a fine art, and too much attention cannot be paid to details. But if directions are carefully followed, results are sure to be satisfactory.
It is stated by expert varnishers that wood to be varnished should never be oiled before filling. Varnish acts as a preservative, filling pores of the wood and making them air tight—unless it should crack and admit moisture. Therefore the important thing is to apply a good varnish that does not crack.

The finishing of inside woodwork is of course a much more particular process than that for outside.

A good house varnish should be dry to the touch over night at summer temperature in dry weather, and should stand a week before the second coat is applied. With a thin soft varnish the application is best made by first brushing quickly with the grain of the wood, then against it, and then with the grain again. This insures uniformity in the coating.

The average person knows in a general way the difference between hard and soft wood; but nothing regarding the grain. In varnishing and painting the differences of grain are important, and the terms "open grain" and "close grain" are used. All woods are of course porous; those having small pores are "close grained," like pine, cypress, cedar, birch, cherry, maple and whitewood. The "open grain" woods, such as chestnut, oak and ash, have large pores. Good results are more difficult of achievement in finishing open grain woods—hard and soft—than in the close-grain. The reason is obvious; open grained woods have the grain carefully filled with a "wood filler" or "primer," a sort of paste paint or shellac. This filler is usually thinned with turpentine, and the mixture is almost colorless; if desired to stain the wood the filler may be colored with an oil stain. The filler is thoroughly rubbed in with a stiff brush, and the surplus removed with excelsior by rubbing against the grain. Use wood sticks to clean out corners; never steel tools. The filler should be allowed to dry at the least twelve hours.

If the pores of the wood are not well filled before applying the varnish, they will show through all subsequent coatings, and the finish will be uneven.

The first coat of varnish over a filler is apt to leave the wood slightly rough. There are several good methods of procedure after the first coat is applied. After it is dry, in from five to ten days, the first coat may be rubbed with curled hair or excelsior to remove the gloss before applying the second coat. The second coat is lightly rubbed with fine sandpaper or gloss paper after rubbing with curled hair. If the third coat is the last (four coats are better) the natural gloss may be preserved as a finishing, or it may be rubbed with felt saturated with water and powdered pumice to make a dull or flat finish, which is washed with clean water and dried with two rubblings of chamoni skin. The natural gloss finish is supposed to be more durable than the dull finish.

Another method is to use sandpaper on the first coat of dry varnish; the second to be rubbed with powdered pumice and water. Water helps to harden the sur-

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Factory: Astoria, Long Island.

A Shaded Tulip Border
(Continued from page 217)

ender, lilac, heliotrope and violet, from the delicately tinted Kate Greenaway to the deep bluish purple of Ronald Gunn, said to be the bluest of the Darwins.

We planted our bulbs on the 15th of November, making a trench six inches face, and the pumice cuts the gloss to insure the flowing of the finishing coat. Rubbing with rotten-stone and water makes a bright polish or finishing coat. For an “eggshell” finish, the final coat is rubbed with powdered pumice and pure raw linseed oil.

Even four coats of varnish make a sheet only as thick as writing paper. It takes from six to nine hundred coats, experts say, to build up a surface an inch thick.

All ready-made varnish leaves the factory ready for use, and if good results are desired, the goods should be used as received. Sometimes varnish in a barrel will get a little heavy by standing when the vent is left open, permitting evaporation. In such a case a small quantity of turpentine, added at least twenty-four hours before using, should not be detrimental; but thinning under other conditions is inadvisable.

Indoor varnish should not be applied when the temperature of the room is below 46 degrees F. Cold will chill it so it will not flow evenly, and its drying will be greatly retarded. Uniform summer heat of at least 70 degrees is desirable until the varnish has set. Exterior varnish should be applied before noon during cool weather, so it will set before the chill which comes at sunset.

A shellac finish is a handsome one, but as eight to twelve coats are required for a first-class job, it is expensive on account of the labor. It makes a handsome and lasting finish for interior trim, and also a good floor finish. Never use shellac about a fireplace where it will be very hot, as it may melt and blister.

Floors should be in perfect condition before applying the first coat of varnish. For every little scratch and imperfection will show. Wash as little as possible before the first coat of varnish is applied; sandpaper will answer better in most cases of new wood. If there are indications of sap, then a coat of shellac should be given the wood, which when dry should be well sandpapered to remove the shellac from the fibre, but to a very slight extent in the pores. The floor should be absolutely clean and dry before applying the finish and the room free from dust. There should be no sweeping anywhere in the house to raise dust, until the varnish sets.

In finishing old floors that have been waxed, the wax must be entirely removed. This may be done by cleaning the floor thoroughly with naphtha, using a stiff scrubbing brush.
deep, close to the edge of the lawn, and setting the bulbs six inches apart.

We had, as a rule, sixteen bulbs of a kind, which gave us eight on each side of the garden.

In the spring they all came up very evenly, and on the first day of May many of them were showing their color in good full buds. They grew rapidly and by the middle of May were all in full bloom, each plant holding its beautiful cup proudly on stiff, strong stems.

The garden appeared to be decorated with a line of many tinted electric lights or partly colored goblets of nectar. The flowers opened widely in the sun at midday and closed to oval cups at night.

In our case, we had only a single row of bulbs; the same color scheme could be carried out by multiplying the rows, making the border wider and shorter if desired, according to the space to be filled.

In many cases, also, we were governed by the price of the bulbs, as we had set a limit on the amount we would put into the border. Possibly some of the higher priced bulbs might have given a better result, but we were quite well satisfied with our experiment, and have the pleasure of knowing that it will increase in beauty and width with every passing year.

We succeeded in securing great variety in color, but so placed and arranged that the colors did not clash, and the effect was artistic and harmonious throughout.

The average height of the tulips was about twenty-five inches, but some varieties exceeded this. Several of the Dreams reached a height of thirty-seven inches, by actual measurement; and Baronne de la Tommaye and many others measured thirty-three inches and over.

Our little garden was full of color during the entire month of May, when the other flowers were coming on, and on the first of June many of the tulips were still beautiful.

Over and among the tulips we planted our sweet alyssum seeds for the white summer border, which was well under way before the tulips disappeared.

The following is a list of the tulips in order of planting, with color and price.

Darwins except where indicated.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Each</th>
<th>Price</th>
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<tbody>
<tr>
<td>La Tulipe Noire</td>
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<tr>
<td>Sultan, maroon-black</td>
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<td>King Harold</td>
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<td>Cardinal, deep scarlet</td>
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<td>Painted Lady</td>
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<td>Queen, white, tinted</td>
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<td>Gretchen</td>
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<td>Clara Butt</td>
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<td>Lavishness</td>
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<td>Baronne de la Tommaye</td>
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<td>Queen of Roses</td>
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<td>Edelweiss</td>
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<td>Sieraad van Vla</td>
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<td>Lavender Tans</td>
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<tr>
<td>Kate Greenway</td>
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<tr>
<td>Zephyr, violet rose</td>
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<tr>
<td>Rev. H. Elnake, vivid</td>
<td>2.25</td>
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The Orbit of Universal Service

In one year the earth on its orbit around the sun travels 584,000,000,000 miles; in the same time telephone messages travel 23,600,000,000 miles over the pathways provided by the Bell system. That means that the 7,175,000,000 Bell conversations cover a distance forty times that traveled by the earth.

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Washington, D. C........Southern Bldg.
Toledo, Ohio..........311-331 Erie Street
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Furnishing and Decorating the Nursery

(Continued from page 227)

summer rooms or to be carried outdoors.

In spite of the fact that the little white bed is always associated with the child's room in story and song, to say nothing of the popular imagination, there are various kinds of brass and wooden beds made in small sizes that are thoroughly in keeping with one's idea of a typical nursery. The white enamel beds, which may be had as plain or as elaborate as one desires, are always dainty, and have the advantage of harmonizing perfectly with furniture and hangings of almost every description. Brass beds have the same characteristic, but they are much more expensive than those of iron, and seem to require rather more elaborate surroundings. The newest brass beds for children are quite low, only about half as high as the ordinary bed, which is a distinct advantage, as it is much easier for the child to climb into, and less dangerous in case he falls out.

A recently designed wooden bed of attractive appearance shows severely plain lines in the head and foot boards, and in the sides long narrow panels are cut out, through which the covering of the box spring is seen. This bed is made only to order, and is intended for elaborately decorated rooms in which a definite color scheme is carried out. It may be had in any desired width and stained any color to match the other furniture, while the box spring and little pillow and mattress are covered with the same material as the draperies of the room.

Furniture of a special size for children's rooms is made in a design that is substantial and handsome, by the manufacturer of a well-known and widely used type. There is a wardrobe just five feet high, with compartments for hats, clothing and shoes; a bureau twenty-nine inches high, with a twenty-inch mirror on it; a bed with high sides, the simple decorations of which match those of the bureau; rocking chairs and straight chairs with leather seats, a settle and tables of different sizes and shapes. Nothing could be more attractive or complete than a room furnished in this way for a child of six or seven years who has outgrown the daintier surroundings of the nursery. It has all of the dignity of a well-appointed grown-up room, but with everything in proportion to the size of its owner.

Even washstand sets, suitable as to shape and decoration, may be had for the child's room in which no detail is to be omitted. They are little if any smaller than the usual sets, but the decorations are in keeping with those of the other appointments, and the pitchers are designed with a view to their being handled easily by small hands. They are not unlike milk jugs in shape, with a substantial handle over the top and another at the back, so that there is small chance of their slipping while in transit, and the mouth is a definitely

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MR. ERNEST GUILBERT, City Architect of Newark, N. J., began right by making all his window casements swinging out.
Then he equipped them with our famous “BULLDOG” ADJUSTERS in solid Brass to last a lifetime. Neat, strong and simple, and operated easily from INSIDE THE SCREEN with one hand.
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formed one that will not fail to pour in the direction intended.

For a comparatively small amount a room may be fitted up with enough distinctively juvenile furnishings to impart individuality and to give the child a sense of possession that it will never have in grown-up surroundings. Even though circumstances are such that it has not had an elaborate nursery, as soon as a child is old enough to have a room of its own there is no reason why the furnishings should not be in keeping, and with the expenditure of a little money a dainty and attractive room may be arranged. High-priced beds and other pieces of furniture are by no means necessary, and as is often the case, the most reasonably furnished room may be the most satisfactory if a little ingenuity and good taste are brought into service.

Thirty to thirty-two dollars can be made to cover the cost of wall-paper, curtains, bed and mattress, a rug and a bureau, all in sizes and designs suitable for children. The wall-papers in juvenile patterns are not expensive, and the cost of papering a room of average size would be about five dollars. A little white iron bed may be had for as low as five dollars, with seven dollars additional for the mattress, and a rug 3 x 6 feet in size with a decorative border is $3.50. A bureau of small size, such as comes in an inexpensive grade of the so-called antique oak, costs about $8.00. For the very reason that the furnishings of the room are only temporary, and soon to be outgrown and discarded, it is quite satisfactory to buy a cheap grade of furniture whenever possible, if price is a consideration. A small bureau is less expensive than one made especially in a child's size, and is equally practical if not so substantially made. Such a bureau can be done over in white enamel to match the bed, or in any dark color that may be preferred in place of the shiny oak finish.

For curtains that hang straight from the top of the window to the lower edge of the sash, scrim at twenty-five cents a yard would cost two dollars. Allowing four yards for each of two windows, and enough printed cretonne to make a decorative border, it would cost a dollar and a half additional.

These figures are the very lowest for which a child's room can be fitted up, but even with everything of the most inexpensive grade it will give more real pleasure than one on which a much greater amount has been spent if the room is non-descript in its furnishings and fails to impress the child with a sense of ownership.

Plating the House Border
(Continued from page 237)

around the porch and close to the house.

In determining on the grouping you will use on your grounds, the location of the beds should govern your selection.

"Hello dear! Been afraid?"

"No—not since you carried that little Key—and I have known the absolute security of a Yale Cylinder Lock. It's the most comforting thing we ever bought."

Yale Cylinder Locks and Latches furnish automatic security for all sorts of doors in all sorts of circumstances.

They are impregnable guardians of life and property.

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The evergreens, broad-leaved and coniferous, should have a north, northeastern or eastern exposure. This gives them shade from sun and also insures a maximum amount of moisture. As you get toward the south, southwest and west the shrubs and perennials will be found better suited.

Of course the final decision rests with individual conditions; rhododendrons will thrive on the south side in the event of their getting partial shade, though this is a contradiction to usual demands. Quite often there are angles formed by offsets in the house into which the setting of a plant is needed to soften the sharp appearance. Where the height of such plants is not restricted to a few feet, one may use with good effect the flowering English hawthorns, the Persian lilacs, Styrax japonicus and Viburnum tomentosum or plicatum.

When dwarf-growing specimens are needed the Japanese maples are admirably suited, also the spiraea Van Houttei, Regel's privet, etc.

As an additional feature possible to include in any or all of these groupings, the naturalizing of daffodils or narcissus along the edge is decidedly fine. They are up so early in the spring and give forth a wealth of bloom. Unusually good results follow the planting of them in the foreground of evergreens. The latter form a dark background for their bright flowers.

In establishing beds of rhododendrons and other broad-leaved evergreens much harm is frequently done by spading the ground. These plants root near the surface and such treatment destroys the feeding roots. The rotting leaves and wood in the mountains, where these plants grow wild, gives food without the disturbance to the roots to which I refer. Mulch the ground around these plants; let it remain or rake it off in the spring, and should a stirring of the ground be necessary use a fork and exercise care.

It is timely to dwell on the question of vines in this article, as they are a part of the exterior decoration of the house. Where clinging vines are needed for surfaces where there are no trellises, the selection is narrowed down to a few. The most popular and worthy vine is the Japanese or Boston Ivy, Ampelopsis Veitchii. It appears attractive fro spring until autumn, particularly during the latter season, when the foliage takes on such wonderful hues. The English Ivy is splendid for continual effect, as it has evergreen foliage, but unfortunately will not thrive in every location. Where good, deep, rich soil is to be had a north or northeastern exposure is favorable, but toward the south and west the winter siege of hot sun scalding is too much for the glossy evergreen foliage.

The small, evergreen-leaved Euonymus radicans is very effective and not as sensitive to the sun's rays as the English Ivy. It is slow of growth, though in time will make 30 or 45 feet of growth.

For the porch or trellis there are a num-
The New Wall-Papers
(Continued from page 220)
In this hasty review of salient new papers, we have not paused to consider details of coloring. Each season brings to the fore some favored tone, although it is not arbitrary. One chosen shade for the months ahead has been alluded to; it is a soft, warm, quiet mulberry. Happily it is apt to suit the complexion, a consideration to be thought of in wall-papers as in gowns. Blues also have been mentioned, and these enjoy growing favor. Yellows and browns are always good, while shades, like burnt orange, have a special decorative value.

Art in wall-papers has developed to such a degree that their hanging is no longer a simple matter. The use of papers together, the cutting out and applying of crowns and motifs, the adaptation of panels to wall formations and even pictures—these and other elements require a high degree of taste and skill for their proper handling. All of this tends to elevate this interesting and worthy craft in all its departments, not only in that of the designer and manufacturer, but in that of the paperhanger as well. No doubt very fine achievements along these lines will be witnessed in the future; but without going into them, we are sufficiently glad to avail ourselves of the charming opportunities of the present.

The Twelve Best Perennials to Plant Now
(Continued from page 223)
not only for their spicy June bloom, but because their bluish green foliage is beautiful even in winter. On slightly raised ground the plant endures indefinitely, but after a few years it is better to replace with new stock. For this I prefer cuttings, though seed brings new markings. After a while, cuttings will be so numerous that it will be possible to line a walk with the pinks, or make a row of them in the vegetable garden for bouquet use.

When the gorgeous spires of the tall

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den soil suits them, they prefer deep sandy loam with a little leaf mould. The soil should be about four inches over the bulb. Usually the bulbs are not to be had until toward the first of November, but it is far better to plant them then than in the spring after they have been stored all winter.

There are two boltonias, the white *A. asteroides* and the pink *A. latigluma*. The white is the better, but both should be planted for bold, tall effects. Before August is over they produce their green flower heads and presage the coming of the wild asters, which they greatly resemble. They spread very rapidly.

As to omissions, the peony, which is best planted in September, does not appear on the list because it was fully treated in the previous issue. Again, the invaluable Canterbury bell, foxglove and hollyhock are left out for the reason that they are biennials—ignorance of which fact causes many an amateur to wonder why they are lost after blooming. All the spring bulbs are fillers in any hardy garden scheme. They may be, and should be, planted in the spaces between the perennials. Finally, there are the tall-blooming perennials, the finest of which are *Aconitum* *autumnale* and the artemisia or hardy chrysanthemum. These should be planted in spring; a space may easily be left for them in the garden scheme.

Restoring Old Shrubs to Vigor
(Continued from page 229)

through neglect, a shrub finds its nourishment diminished by the depredations of weeds and grasses it promptly reduces its leafiness at the top. As the full number of branches are present just the same, this means that they cannot be so well clothed that many will be bare. And then gradually the whole plant grows weak from hunger. Its root activity reduces as well as its top, for there is nothing for so many roots to do; its vitality gets lower and lower, and by the time someone takes it in hand it has probably only enough feeding roots to supply a bush half its size. It is then truly a weak plant.

Severe pruning reduces the top to a size which the roots can once more take care of; enriching the soil stimulates the growth of more roots, and these in turn furnish so much building material that the top simply has to grow to make use of it. It is built up in spite of itself, fairly pushed out from below, unless the water sprouts which spring from the lower branches that are in a position to divert the upflowing life forces, are allowed to grow and to do just this.

Old shrubs which have not sent up these sucker forms of wood, but which have simply stood still—probably because no one has ever come by to pick their blossoms or no wind has ever broken down a branch—can only be thinned rather severely, cut back at their tops moderately and en-
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as a new tenant so often finds that they do. But the work of removing them is done deliberately and each step followed successively without skips. The moving may be done either in the spring before growth starts, or in the autumn after the leaves have fallen.

Begin digging on the line of a circle as large as the top of the bush to be moved, drawn from the bush itself as centre. Work in towards the shrub with a pick or a crowbar preferably, loosening the earth all around and digging it up and throwing it out as fast as it is loosened. If a shovel has to be used, hold it with its flat side on a line parallel with the radii of the circle rather than towards the bush. This prevents its cutting off the ends of roots, for these radiate from the plant of course, and the shovel blade strikes between them instead of across them.

When the roots are exposed work on down through them and around under them, tilting the bush gently back and forth to help in loosening them from the soil. Do not drag it out forcibly under any circumstances, but take time and do the work with a little loss of small roots as possible. These are really the most valuable.

The earth will yield more readily the day or two after a shower, but do not undertake transplanting anything immediately after a rain. When the ground is wet it is likely to cake into mud pockets around roots and leave them "hung" as it dies out.

If a receptacle large enough to take in the roots is available have it at hand, half full of a "puddle"—a mixture of earth and water the consistency of cream—into which to plunge them as soon as they are out of the ground, and carry the shrub to its new quarters in this receptacle. A very large shrub can hardly be handled in this way, however, so other precautions to shade and protect its roots until they are once more in the ground must be taken, to prevent them from drying out.

Dig a hole to receive it as large and as deep as the hole it came out of and of the same form, allowing for all root eccentricities and irregularities. Cut back the top as already directed in the reference to pruning, and cut off all bruised and broken roots. Set it into this hole, placing all the main roots in the same position they occupied—the position they will naturally take if not twisted or crooked—and throw the earth over and around the root mass by small shovelfuls. Work it under and through them by tamping it with a round-ended stick, taking time. Hurry is fatal, for hurry means lack of thoroughness.

When the hole is half filled, pour in water slowly, all around, to settle the earth. When this has leached down and is completely out of sight, go on filling until the saucer depression stage is reached. Pack the earth by tamping, then fill the "saucer" with water and leave for awhile. At the end of a few hours throw a half inch of loose earth over the ground all around, for a dust mulch, to conserve the water.

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You can now have wonderful raspberries from June to October by setting out the plants in the fall.

St. Regis produces continuously from June to October—large, firm, bright red, with a flavor like the best of apples. This gives you the advantage of the smaller fruits in the spring and the taste of the apple at the end of the season. The fruits are large, firm, and delicious. They are early and so productive that you will have enough to feed your family and have surplus to sell. The plants are hardy, will produce for years, and require no care except a good mow in fall and some manure in spring. The bushes are strong and thrive in any good soil. They are shipped bare-root and are ready to plant when received. These raspberries are the largest, finest, and most delicious ever introduced, and the plant is not likely to be bettered.

The ridge is sure to bear a good crop the first year. The fruit will be ready for the market by the middle of July. It is a fine market fruit, being large and of fine flavor. The bushes are strong and will thrive in any good soil. They will bear the same season and the succeeding one. The fruits are large, firm, and delicious, and the plants are hardy, ready to plant and sure to bear a good crop the first year. They are shipped bare-root and are ready to plant when received. These raspberries are the largest, finest, and most delicious ever introduced, and the plant is not likely to be bettered.

GLEN BROTHERS, Glenwood Nursery (Est'd 1886), 1808 Main St., Rochester, N.Y.
Flowers need not be expected after spring pruning on snowballs, lilacs, syringas, "bridal wreaths," honeysuckle, privet, nor indeed any spring or early-flowering shrub. Rose of Sharon will blossom after spring pruning because it is a late flowering shrub and the cutting away of branches in the spring does not take its flower buds; these not being formed until the summer during which they are produced. Spring-flowering shrubs, on the other hand, from their flower buds during the growth of the previous summer and hold them over the winter, or if they do not actually hold them over, the old wood of last year is the source of their rise when spring comes. For this reason there will be no blossoms immediately following the spring pruning of spring-flowering shrubs or the summer pruning of late flowering shrubs. A season will be required to start them going. This is really just as well, however, for blossoming is only an effort at reproduction, and shrubs that are in need of renovating are not strong enough to busy themselves with this right away because of the long neglect to which they have been subjected.

Annuals That Do Better When Fall Sown

(Continued from page 224)

harmonious in tone, therefore any mixture will be effective; or a selection to suit individual color preference may of course be made. Whatever the selection, plan to have the flowers in a large mass. The plants grow about one foot high and with them, as with all flowers, if not allowed to form seed, they blossom the more persistently. The seeds are very small and require only to be thinly broadcast upon finely pulverized earth, which should then be lightly raked. Sow late in the fall.

Pansies we all know will almost "grow themselves" if allowed half a chance to do so. But the finest blossoms, the true giants, are the reward of care and some definite planning and attention. They do not like heat, and the plants should be located in partial shade, in deference to this aversion. Seeds may be sown in the fall—October is the best time, except in very severe climates—in a good rich seedbed in the open, or in a coldframe. If they are started in the open it is well to transplant the little plants to the coldframe before very cold weather. They may be protected, however, if the bed is raised so that water will not settle on it, by covering them with dry leaves and holding these down with brush. Usually they will winter perfectly under such a blanket and start up early in the spring.

Sown at almost any season pansies will bloom, and bloom well, but the finest flowers are usually produced from the fall seedlings. I have raised beauties, however, from spring sowing, outdoors, and under conditions in no way unusual, unless
perhaps exceptionally favorable weather in that the summer was cool. But I have never done it more than once. The fierce heat of summer usually retards the development of the flowers so that they are tiny, if they come at all, and it affects the vigor of the plant generally to a considerable degree.

Give them plenty of moisture except during actual winter weather, and bear in mind that the finest strains of seed produce plants which bear the finest flowers.

No flower can approach the gorgeous splendor and wonderful airiness combined, which are the attributes of the barbaric poppy. The color range may almost literally be said to be from white to black. These are scarlets that blaze like fire; lavender and pinks are touched on the way; only the blue is omitted.

Plant poppy seeds where the plants are to grow; they have a long tap root and transplanting nearly always kills them. See to it that they have a background of green against which to flaunt their brilliance, and put them in sandy loam, in full sunlight. Their small seeds should be thinly sown broadcast, and the ground raked lightly over them, just as with the eschscholzia. Mulch them with leaves if growth is made before winter sets in; late sowing will not give them time for this, however.

The difference which fall sowing makes with sweet peas is remarkable and almost unbelievable. Instead of growing scraggy and ugly at the bottom the vines stay green and thrifty, and the blossoms are much earlier, as well as more abundant. Locate them where the soil is a clay loam if possible—and do not raise them year after year in the same place. Dig the earth out from a trench one and a half to two feet deep and a foot wide, and mix bone meal with it. Put back enough to fill the trench to within eight inches of the top. Sow the seeds in two rows on this, then fill on up to the top and firm the earth down. By June it is well to draw the top soil up about the vines an inch or so, but only the top soil ought ever to be disturbed. The usual withered and half dead condition at the base of the vines is due to the burning of the network of roots below the hot earth, when the sun is literally "scorching." Deep planting, by insuring great depth of root, avoids this, and it of course insure uniformity of moisture.

Give the vines a trellis between the rows or set up brush as soon as the plants appear in the spring, for they should have an opportunity to climb as soon as the first runner shows. Otherwise they grow branchy and ugly, distorting themselves in the effort to find something to cling to.

The well-known pheasant's eye which blossoms in June and the Flos Adonis, which blossoms during midsummer, are members of the same family and have the same tastes. A fairly good soil which is light rather than heavy, and rather moist, suits them; and they will do well in part shade or full sun. The seeds germinate...
slowly, which is the reason for sowing in the fall. They require no special treatment, but the slight covering before referred to is advisable for all autumn sown seeds. Plants of adonis grow about a foot high; the blossoms are red.

Catch-fly (Silene) should have its seeds sown rather early in the fall. In a sandy loam where there is full sunlight. The variety pendula is really a prostrate growing plant and, used in abundance, makes a good ground cover. Its flowers are rosy pink. *Silene Armoria* is erect, growing a foot to a foot and a half high; this has white or rose-colored blossoms.

Fall sowing for these annuals which will bear it, is a distinct gain for the garden in that it advances their flowering so greatly, hence there is a double reason for this forehandness. Annuals ordinarily come into bloom comparatively late because they must make all their growth of root as well as top after summer has actually come. Fall planting gives them the advantage of a much earlier start, as well as providing conditions which are generally more favorable to the particular requirements of the plants for which it is recommended.

What Can Be Done in Finishing Inexpensive Woods

(Continued from page 239)

Stains and finishes may be bought ready mixed at a paint shop, from factories where Mission furniture is made, or from wood finishing companies. They may also be prepared at home from chemicals, dyes, or pigments soluble in oil or water. Different woods take stains very differently; the amount of tannin or of rosin that they contain, and their softness or hardness, being factors that enter into the difference. It is thus advisable to try stain upon wood samples before using it upon woodwork.

An easy method to follow is to buy at a paint shop, colors ground in Japan, thinning them with turpentine. Coach colors are recommended. The colors most used mixed with turpentine for oil stains are burnt sienna, Prussian blue, Van Dyke brown, medium chrome, drop black, vermilion or madder. Black is found valuable in mixing greens, and a good green is made with two parts drop black and one part chrome yellow, toned with a little vermilion. Wood browns and a forest green may be procured ready mixed. A satisfactory brown is made from a asphaltum varnish thinned with turpentine.

Before applying the stain the wood should first be sanded with 00 sandpaper. The stain is put on with cheesecloth and

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rubbed off quickly. A coat of shellac, sanded a trifle, and later a coat of wax rubbed till a soft dull finish is gained, complete the treatment. It is possible, however, to get a good finish with merely a coat of wax over the stain. For a very fine finish several coats of shellac rubbed down with sandpaper are customary. Beeswax, melted, and mixed after removal from the fire with a little turpentine, may be used, or in its stead, one of the preparations of floor wax on the market. Oil stains have the advantage of not raising the grain of the wood, though they are not always permanent and may give a muddy look. Water stains require more skill to handle, and raise the grain, which then has to be sanded again, and touched up with stain, but they are permanent, cheap, and give clear results. If the wood is first gone over with a sponge moistened in water the raising of the grain may be avoided. Aniline dyes are sometimes used in turpentine and wax solution or in water.

Bichromate of potash produces on oak a warm brown, on ash a rich red and on black walnut a dark brown. Another way of getting a brown color upon oak is by adding to one quart of water two ounces each of potash and pearlash. This, brushed on the wood, must be used carefully. Birch, frequently dyed in doubtful taste to imitate mahogany, has its natural color deepened by a diluted sulphuric acid application. Care must of course be used in handling the acid. Its action may be stopped by the use of ammonia. Sulphuric acid brushed on gives gray tones to pine and to cypress. One part of acid to five of water being used. Gumwood is given a gray color by an iron rust stain made by leaving iron filings in vinegar for some forty-eight hours. This stain may be weakened by water as desired. As in the case of many other stains, its effects do not show until the wood is perfectly dry. A satisfactory light gray is difficult to get upon oak with oil colors, which give an opaque look to the grain, but from Germany, where the subject of stains and finishes has been entered into with characteristic thoroughness, comes an interesting receipt. The oak is brushed with a solution obtained by putting twenty grammes of sulphate of iron into one litre of water. In a short time a bluish gray tint appears as the result of the action of blue vitriol upon the tannin in the oak.

The method followed to obtain warm browns, greens and other dark colors upon oak and chestnut includes a preliminary treatment with ammonia fumes, which penetrate the wood to a considerable depth, preventing the light marks that come with hard treatment on poorly finished oak. Stain, a coat of shellac rubbed down with sandpaper and wax, are afterwards applied. To fume woodwork, after it is set up and sanded, a strong solution of ammonia, twenty-six per cent., is placed on the floor in open dishes. About a gallon might be used for a large room. The room is sealed, as for fumigating, as closely as possible, with strips of paper pasted

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American styles, are described and illustrated by the
Bazar's special contributors and artists. Here are fash-
ions for all tastes and purses: fashions for college girls,
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gives suggestions for the manufacture of unique Christmas gifts.

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the chubby, sunny babes Grace G. Drayton draws so charmingly.

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around doors and windows, and is left
for twenty-four or even forty-eight hours. The
longer it is left the darker the color
obtained. Care must be taken in opening
the room to avoid being overcome by the
ammonia fumes. Another method some-
times followed, but not so effectual since
it raises the grain of the wood and does
not penetrate so far, is to brush on a
strong solution of ammonia. It is not a
pleasant task for the workman, and doors
and windows must be left open. Where
woodwork will not receive hard usage, it
is sometimes possible to get a good color
without the ammonia by the use of stains
alone.

Filling in the pores of a wood to give
it a hard metallic quality is to be avoided.
A woody texture with a soft, not glassy,
surface, showing the quality through the
grain, is desirable. In some woods, such
as mahogany, cherry, cypress and gum-
wood, good effects are gained by merely
rubbing the wood with raw linseed oil,
giving it a soft dull finish in a natural
color that deepens with age. A pad of
soft cloth is used, and the wood rubbed
with a circular movement, as much oil
being rubbed in as possible. This method,
antedating French polishing, can be car-
ried on till the wood assumes a high polish,
but this is not necessary. If a natural
color is desired on oak, wax is better than
oil as a finish, but the molasses candy
color of unstained oak is deservedly un-
popular at present.

An interesting effect in a small house
interior finished in cypress is shown in our
photograph. The cypress was stained a
warm brown tone, finished by a coat of
wax without shellac. Small house interi-
ors finished throughout in cypress or pine
are not uncommon, with different stains
used to give variety.

The Fall Clean-up in the Flower
and Vegetable Garden
(Continued from page 235)
ceptional beauties which one hates to see
lost forever in the autumnal slaughter.
With a little skill in the use of the cutting-
box, new plants can be had easily. And
what is more, they must be exactly true
to the plants from which they are taken,
while if seed had been depended upon they
would likely have produced everything but
what was most wanted. October usually
furnishes the ideal conditions for making
and rooting cuttings of geraniums and
most of the other garden flowers that can
be increased by this method—the method
of taking the cuttings, the proper condi-
tion of the wood, the preparation of the
cutting-box, are all described in detail in
this month's Department (page 244).

Thirdly, there is the possibility of keep-
ing some of the favorites of the garden
for winter service in the window garden.
While cuttings may be depended upon to
maintain the stock for outdoor use next summer, most of the plants so started will not make very big specimens before next April or May, and it will therefore be desirable to save some of the large plants. If taken up and potted at the last moment, and brought directly into the house, not one in fifty would live; but if the plants are severely cut back, the roots carefully trimmed and proper treatment—which is described more in detail in the Garden Department—given, most of them will come through all right and repay very handsomely the trouble taken.

And lastly, there are the plants to buy for the house. Don't wait until Christmas, when the best of the florists' stock has been picked out and prices are abnormally high. There is no better time to get plants than now, and furthermore they will receive less of a shock in being removed from the greenhouse to your living-rooms, a matter of great importance.

First of all in preparation for this purpose, perhaps, come the ferns. There is no space here to go over the list, but I want to put in one word of advice: do not be content to take whatever a small local florist may have on hand, because there are a number of comparatively recent introductions which will please you better. Scottii is an improved form of the famous Boston fern. Whitmani is one of the most beautiful of the ophioglossum ferns, and well suited to house culture. Schizaeo is a planned form of this Scottii fern. Pteris Childi and Victoriae are beautiful new forms of the popular Pteris; and a great improvement on the universally favorite holly fern is Cyrtomium falcatum, the crested holly. All of these are well suited to withstand the somewhat uncertain conditions of house culture.

Then there is the beautiful Lorraine holly begonia, and azaleas, primulas, cyclamen, araucarias, among the winter plants one gets of the florist. If your local florist hasn't them, do not be afraid to order from one of the large catalogue firms. If you attend to it now there will be no danger of injury by frost.

Bulbs (and tuberous rooted plants such as the gladiolus, usually termed bulbs) include two general classes; those planted in fall and those planted in spring. Attention must be given both in the fall clean-up.

The fall-planted bulbs include two groups—the Holland bulbs, such as crocus, hyacinth, tulip, narcissus, etc., which bloom very early in the spring, and the various summer blooming lilies, such as Lilium auratum (the Japanese gold-banded lily) and its beautiful varieties. Both require practically the same treatment; soil well enriched with old rotted manure, and leaf-mould and sand added if the soil is at all heavy, and early winter mulching. Varieties and details of planting are described in another article.

The spring planted bulbs—areums, amaryllis, canna, dahlia, gladioli, tuberoses, etc.—are not hardy, and must

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We think that the apples grown in this orchard have a little the best flavor of any on earth. They are good because Dame Nature was thinking of apples when she fashioned this farm.

They are of cold and make a full-flavored fruit, and the bright sunshine and the summer lyes on the color so the apples are fair to see.

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F A M E U S E.—Of the varieties which we grow we prefer the Fameuse (Snow), for we think it grows to perfection with us. Normally this is considered an early fall apple, but here it often keeps until spring. You know it; an early red and white, fine-flavored, crisp eating apple.

Small, but full of spice.

McINTOSH RED.—This is another of the Fameuse group and perhaps the most popular. Dark red and of fine flavor for dessert.

BETHLEHEM.—Our best winter apple is the Bethlehem. This variety originated within thirty miles of this farm. It matures late in the fall, is a dark red color and one of the best of keepers, and as handsome a winter apple as one can see. It resembles a Northern Spy, and makes a splendid cooking apple.

NO HEAD.—The No head is another of our favorites. A late apple, it is streaked with red and makes a table fruit of quality. It is a good keeper and should please you.

We shall pack the fancy grades of these apples under our trademark of “Topsham Quality.” In Western style as near as may be, and will deliver them, freight prepaid, to either Boston or New York. We will appreciate a trial order, and ask for a check with the order. Our personal guarantee goes with every box of “Topsham Quality.” We wish to replace every apple that arrives in damaged condition, through fault of ours, whenever possible.

If you insist, we will sell you a barrel of our Northern One grade for $4.50, freight paid to New York. Our responsibility ends with delivery to the transportation company. We believe in our Fancy Grade and would rather sell it. We think you get more for your money.

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With their great, well-rounded, hydrangea-like clusters of snowy flowers, Phloxes make a grand showing anywhere. You have room for some of them in your garden. Phloxes are cheaper than Oriental Poppies; the Phloxes will not be ready until the other things are gone.

At Wyomissing Nurseries, I am growing nearly 300 kinds, all tall and dwarf. The copies touch every hue but yellow. Plant in October or November.

Irises, Peonies, Delphiniums, Etc.

These and many others of the noble perennials are included in my extensive collections. My aim is to grow so many kinds as to have them all on hand to offer as nearly complete a selection as possible. If you plan a garden with individuality, you can choose your own patterns. It is a pleasure to be able to offer such a choice of such great worth to you.

MY NEW BOOK

describing my Phloxes and other hardy plants in practical and beautiful illustrations from photographs made at Wyomissing—many of them in full colors; while the accurate cultural directions make it invaluable as a reference work. Free if you have a nursery garden or expect to plant one.

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be taken up after the foliage dies down in the fall. Dig them up without brushing, store in a cool, dry, sunny place (being careful to protect from unexpected frosts at night) until they are dry and well ripened, and then store, preferably in clean sand or moss, in a cool dry place, such as a cellar—but never expose to drying furnace heat. The callas and amaryllis are usually handled in pots or boxes, and may be kept in the soil, but should be dried off and rested after blooming. The turning yellow of the leaves gives notice that they are going on a strike for a while, and water should be gradually withheld, and the pots kept in a cool place.

The vegetable garden, too, demands its share of attention at the season’s wind-up, even though, with the majority of vegetable gardens, it has been more or less neglected for the last month or so.

First of all clean it up. Mow off and pull up all the big weeds and burn them. The best way is to throw them in piles at once, before the seeds get dry enough to catch on in handling, and then burn as soon as they will fire. Clean off every spot left vacant and cultivate it, or better still, plow it as deep as possible. The fall is the best time to turn up an inch or so of the subsoil to deepen the garden, as the action of winter rain and frosts will tend to break up the hard lumps and combine them with the old soil.

Where crops still occupy the ground but weeds are bad, as often happens in patches of late beets, carrots and other root crops, cut off the whole with a scythe several inches high and remove and burn, thus preventing weed seeding and making it easier to get out the crops.

Now rye on all spots as fast as broken up; even though so late that little growth will be made, the roots will prevent washing and puddling of the soil, and enough plant food will be saved and humus added to the soil to repay several times the cost of seed.

It is a very common mistake to allow the garden vegetables not used to rot on the ground, or in it. There is a great deal of unnecessary waste in this respect, for a great many of the things so neglected might just as well be carried over into winter, and would repay handsomely the labor of gathering and storing.

There is no better place for storing vegetables and dry frost-proof cellar, from which ordinarily all artificial heat is excluded. Where such a place is not at one’s disposal, a substitute may be had in partitioning off part of the furnace cellar, and providing ample ventilation direct with the outside air. Or a cold north room in the house, where the window can be kept open most of the time, will do excellently. In the latter case, boxes or barrels filled with sphagnum moss (obtainable for the gathering in many swampy places) make an ideal method of storing, as the moss is light (Continued on page 268)
BOBBINK & ATKINS
World's Choicest Nursery and Greenhouse Products
EARLY AUTUMN PLANTING.

The proper way to buy is to see the material growing. We shall gladly give our time and attention to all intending purchasers visiting our Nurseries, and invite everybody interested in improving their grounds to visit us. Our Nursery consists of upwards of 800 acres of highly cultivated land, and the various sections of Ornamental Nursery Products, placing us in a position to complete plantings and fill orders of any size.

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Try planting bulbs in our Prepared Fiber, instead of soil; you will find them much easier to care for. Just fill non-porous bowls, glassy vases or vases of glass with the fiber, and plant as usual. The plants grow anywhere—in tubs or columns, or in walls or corridors; there will be no damage from water.

The idea was a new one in America until introduced by us two years ago, but it has been practiced successfully in England for many years. To popularize this method we make the following offers of bulbs, etc., and prizes. For full particulars see page 20 of our Summer and Autumn Guide, described below.

SPECIAL OFFERS: 3 Roman or Dutch Hyacinths and 1 Art Jardiniere; or 6 Tulips, red, white or yellow, and 1 Art Jardiniere; or 12 Crousus, blue, yellow or white, and 1 Art Jardiniere; or 5 Paper White Narcissus and 1 Art Jardiniere; or 4 Narcissus Golden Star (yellow) and 1 Art Jardiniere; or 3 Chinese Sacred Narcissus and 1 Art Jardiniere, with sufficient fiber and charcoal to grow any of the above collections for $1, three for $2.50.

Details of Contest

To induce the growing of bulbs in our prepared fiber, we will award the following prizes for photographs of bulbs so grown and flowered, same to be submitted to us not later than May 1, 1912:

| 1st Prize | $10.00 |
| 2nd Prize | $5.00 |
| 3rd Prize | $4.00 |
| 4th Prize | $2.00 |

A Beautiful Catalogue of Beautiful Bulbs

Our amateur Summer and Autumn Garden Guide is that, and more. It contains an article especially written by Wilhelm Miller, editor of "The Garden Magazine," entitled "The Idea in Gardening"—also cultural instructions of whose how and best time to plant bulbs and seeds for winter and spring flowering.

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Cattleya Trianae
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Don't risk your handsome table when you can give it this sure protection for one quarter the cost of refinishing and polishing it after it has become scarred and stained by hot dishes and spilled liquids. Ask your dealer to show you the Peerless Asbestos Table Mat—you can tell the genuine by this trade mark. If your dealer cannot supply you write to us for nearest dealer's address and our booklet "To the Woman Who Cares."

CHICAGO ASBESTOS TABLE MAT CO.
Dept. 218 215 Loomis Street, Chicago, III.
and clean. In the cellar, clean coarse sand is generally used. This is for storing carrots, beets, parsnips and other root crops which would shrivel if left exposed to dry air.

In storing any fruit or vegetables always see to it that they are clean, dry and sound—the smallest spot or bruise is a danger center. Keep the temperature thirty-three to thirty-eight degrees, as even as possible. Give ventilation whenever possible. Watch out for rats and mice. Go over the garden and save everything worth saving.

Beans. Those still in the green state are delicious canned in modern glass jars. Those dried and partly dried may be stored vines and all, under cover, and later picked and shellled.

Beets, carrots and turnips store in sand or moss. Cut the tops off within an inch or two of the root, to close. Cabbage and cauliflower hang up by the heels, after light frosts in the cellar. Cabbage in quantity is trenched outside.

Celery. For keeping over winter, store in narrow boxes, on two or three inches of wet sand, pack upright, close together. Leave roots and earth on; store boxes in cellar—slight freezing will not hurt.

Cucumbers, melons, egg-plants. These cannot be kept over winter, but if very carefully gathered just before the first frost and stored in a dry cool cellar they will stay in good condition for some time.

Potatoes and onions. These are stored without any covering in a cool, dark cellar—potatoes usually in a bin of convenient size. The onions will keep better if stored in slatted barrels or boxes, giving free access to air. Be sure they are perfectly dry before putting into their final storing place.

Parsley. Put a few plants in a pot or box and keep in the kitchen window.

Squash or pumpkins. Gather before frost, cutting with small piece of vine attached, handle gently as eggs, and store in a sunny, airy place where frost can be kept off. Later store in a dry, dark place, with temperature as near forty degrees as possible.

Tomatoes. Just before frosts, pick the best of the unripened fruits and place some on clean straw in coldframe or greenhouse. Put others in straw in the cellar. By this method they may frequently be had before Christmas.

The rows of spinach, onions and borecole sow last month for wintering over should be kept scrupulously clean. They will not need covering up until November, but get your supply of mulching material ready to hand.

Put liberal dressings of coarse stable manure on rhubarb and asparagus beds. Put clean sand and earth on the sea-kale.

Fruit, as a general thing, is best where ripened fully on the tree, but the winter sorts, of course, do not ripen until sometime after being gathered.

You cannot be too careful in harvesting

(Continued from page 266)
**Tiles**

The Economy of Tile

When figuring on a tiled floor, do not forget that all other materials are perishable, but that tile is lasting.

You cannot wear out a tiled floor. Nothing can injure it. It is there to stay. A surface that will resist any kind of dampness or contamination.

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Dutch Bulbs and Plants
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The latest Dutch Bulbs you can buy—solid, sceptical, full of vitality. True to name and color—are described in our new Dutch Bulb catalog.

It is a book worth while reading—a book that tells the difference between the big bulb bolts which disappoint, and the small ones that are strong and last. It tells how to form bulbs, from the best varieties for every purpose, tells about the rarest European introductions in tulip, hyacinth, narcissus, etc. We welcome comparison between our Dutch bulbs direct from Holland and the best bulbs you can buy elsewhere. We know that results are not buying will bring in all your future orders.

Hyacinths, $2 per 100 up. Narcissus (Daffodils), 75c. per 100 up. Tulips, $1 per 100 up. Crocuses, 40c. per 100 up.

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The nearest approach to the hand-knotted Turkish rug yet produced in this country is

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with its high, luxurious pile, exquisite designs and soft, yet permanent colorings, imitating closely the priceless antique.

These rugs are unrivalled for living rooms, dining rooms, dens, halls, offices, libraries and public buildings.

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Blue Spruce—Junipers—Pines—Retinospora—
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THE great secret of the successful flower garden lies in the generous use of perennials well massed. Right now is the time to set out these plants in order to have a notable garden this coming season. Right here is the place to get sturdy plants that will come true to color and type, and at wholesale rates.

Get in touch with us at once to make sure of that distinctive garden you want for next year.

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of Auto tires; makes them look new, too. Abroad, everybody is using water point. Here they are using French’s London White Whitire (From J. Bofln) It’s a wonderful preserver. Discriminating Americans are strong for it. Quickly and easily applied. Can sufficient for 5 months, $1. Special Trial Can 25c. (This offer is limited) SAMUEL H. FRENCH & CO. 410 Callowhill St., Philadelphia, Pa.

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THE comfortable easy chair needed in your Bedroom or Living-room, the inexpensive, yet indispensable, tea-table or work-table that can be readily moved about, will be found among our new patterns in Hand-Wrought Willow Furniture or among the quaint reproductions of antiques which we have gathered together on our second floor. Sketch Sheets, showing our full stock of Hand-wrought Willow Ware, with price-list, mailed free on request. Selections returnable if not satisfactory.

Walter J. Brennan Company
Odd pieces of furniture, artistic draperies and gift articles not found in other shops.
436 Lexington Ave., Opposite Grand Central Station, New York

(Continued from page 268)

Putting on the Winter Garb Indoors

(Continued from page 214)

that it is possible to find fabrics of these lines to employ in almost any color scheme. The colors are practically permanent. Monk’s cloth, from the lightest to the heaviest weight, admits of many good treatments for window draperies and portieres. Stencils outlined in embroidery or simply the stamped pattern without the outline, or motifs cut from another fabric may be successfully applied to this mouch material.

The manufacturers of wall papers, rugs and fabrics are becoming keenly alive to the needs of an each year more discriminating public. The fall showing of fabrics and carpets gives one great hope for the artistic future of American homes. The subtle delicate shades would not be manufactured if they were not wanted, and they must be wanted by a large percentage of the people, to have the call for them penetrate the walls of the manufac-
**Bulbs**

**DIRECT FROM HOLLAND**

**Hyacinths**

**Tulips**

**Narcissus**

**Crocus**

**The Giant Darwin Tulips**

**THE FINEST TULIP GROWN**

**OVER FIFTY NAMED VARIETIES**

Paeonies in great variety from the largest collection. These and many other varieties of bulbs are found in our 1911 Autumn Catalogue mailed free.

**Fottler-Fiske-Rawson Company**

FANEUIL HALL SQUARE, BOSTON

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**The Montrose Nurseries are Offering**

A complete line of choice Ornamental Stock at very low prices considering the quality.

Large trees and shrubs for immediate effect.

Landscape work a specialty.

Illustrated Catalog free for the asking.

**THE MONTROSE NURSERIES**

Montrose, N.Y.

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**ROSEDALE NURSERIES**

Now ready for planting, to bloom from May to October, 1912; also a full line of superior Trees, Shrubs, etc.

Catalogue No. 30 on request

ROSEDALE NURSERIES

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Lest You Forget
about those TREES, EVERGREENS and
SHRUBS you intended planting.
SEPTEMBER and OCTOBER are
the best coming months to plant in.
WE OFFER SOME MORE
Bargains at Half Regular Prices
Large Box Trees
Large Blue Spruce
Rhododendrons
Lilacs
German Iris and many other varieties
Special Half-Price Bargain List
mailed free on application
LARGEST STOCK OF RARE TREES
AND EVERGREENS
Rose Hill Nurseries
NEW ROCHELLE, N.Y.

There is yet time
for you to plant our
PRIZE PEONIES
Let us send you our list of selected PEONIES, IRIS, and PHLOX with which we again
this year took eight first prizes out of nine entries made at the exhibitions of the Massachusetts
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We also have a choice collection of hardy, northern grown evergreens and deciduous trees.
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New York Boston
Philadelphia, Washington, Chicago, St. Louis, San Francisco, Seattle, Winnipeg, Minneapolis, Toronto,
Montreal, New Orleans, Quebec, Halifax.

The Last Word on Spring Blooming Bulbs
(Continued from page 216)
take extra precautions to keep their stocks in good health, and this trouble is far less
common than it used to be. The majority of the bulbs are tired and destroyed, by
shaking a thin slice from the side of the bulb at the top. This cut does
no harm to the bulb; the first yellowing
sign of decay is thus discovered, and all
affected bulbs are destroyed. The heated
scar from this cutting is plainly discernible
on many of the bulbs one buys.
Besides squeezing the bulb, a test with the nose is a valuable aid in determining
whether it be a hyacinth or tulip bulb, for when either of these two goes bad it can give
cards and spades to any potato that has
spoil.
Basal rot is more common among daffo-
dils than it ought to be, some varieties
being especially liable to the disease. The
trumpet sort of the Stedlelii is very likely to be
diseased in Holland grown stocks, but
those from England or Guernsey are not
so badly affected. This sickness may be
detected by examining the base of the
bulb. If smaller bulbs are attached, these
may be gently bent aside, or broken off,
when necessary, and if a brown discolora-
tion, soft to the pressure of the finger-
nail, is observed, disease is present.
The rot spreads from the base of the bulb
upward through its center, so that very
often a hasty examination will not reveal
whether the bulb be sound or not, but a
fairly hard squeeze will cause a badly
affected bulb to split open, and the brown,
rotted center will come to light.
It must be remembered, however, that
both the growers and the retail dealers
take every precaution to send out sound
bulbs, and that these hints are not meant
as a warning against a conscientious
trade, but rather as a safeguard against
the infrequent bulb which escapes the
watchfulness of the practised dealer.
Where a gap in the beds or borders can be
avoided by examining the bulbs to be
planted, the extra care is well expended.
Crocuses have a way of turning hard,
if left out of the ground too long; indeed,
they require to be planted as soon as they
are received, if they are to do well. This
hardening can be recognized by peeling
off the skin of the corms and nicking them
with a knife. All small bulbs shrivel very
rapidly, and they must be planted early.
Furthermore, it is scarcely just to the
manufacturers to expect that the
American climate will not have its effect
upon bulbous plants. A remark often
heard is that “my bulbs did splendidly last
season, but this year they have done wretchedly." Too many gardeners presume that their tulips and hyacinths will flower year after year under wholly un

congenial conditions. In Holland, hyacinths are grown in very nearly a pure sandy soil, where there always is water at only a short depth below the surface. In loamy soils it is impossible to keep them in proper vigor, and many of the bulbs soon disappear entirely. Tulips are grown in heavier soil, but in a climate very different from ours, and in the case of the early tulips, one year, or two years at most, is the limit for their healthy existence. The late tulips do better, but it is wrong to suppose that even they go on forever. A few of the Cottage tulips are fairly permanent, Gesneriana Spathulata being one of the surest in this regard.

Much depends upon the age of the bulb. Tulips and hyacinths break up into a number of small bulbs after a certain length of time, a result of matured growth of the parent bulb. Of course, there is no way to tell from the bulb itself just when this senile decay is going to set in, but most of the growers are careful to furnish stock which is still young and vigorous, so that breaking up is not likely to occur the first year after planting.

The question of cost bears a very intimate relation to that of quality so far as all bulbs are concerned. I am always prepared to see poor flowers when my friends urge me to look at some bulbs cheaper than they have ever had. Poor bulbs always cost as much to grow as good ones do, and this cost does not vary much from year to year. The best bulbs are in demand by those who know high grade stocks, and good prices can always be obtained for the pick of the crop. Second size bulbs are always less expensive, and the choicest quality does not often come to this country, because our American buyers have yet to learn that in bulbs, just as in other merchandise, the highest quality cannot be bought for the proverbial song, and they put up with an inferior grade because they are still unwilling to pay for the best. The Englishman has had his garden long enough to give room in it only to what is worthy of it, so he puts his hand a bit deeper in his pocket and orders the best that Holland grows.

I must not neglect the one word more to persuade the interested reader to select his varieties wisely. Many of the older varieties, among the hyacinths and tulips especially, have now outlived their usefulness or have been superseded by newer sorts. Why the older and inferior kinds still appear in our catalogues is something of a puzzle. Disappointment is surely in store for the purchaser who lights upon one of these passing favorites, for the fault of small business, wanling vigor or sallow complexion will be a glaring defect in what might be a wealth of beauty.

Nowadays that old standby in the early tulips, Belle Alliance, is passed over by those who come to see my tulips, and their attentions are paid to the glowing color,
the perfect form and greater size of Maas, Sir Thomas Lipton, or the very newest Brilliant Star. L'Immaculée appears quite outclassed by the White Joost van Vondel or White Hawk. Golden Queen causes such a good olderimg as the yellow Chrysorhyza to be utterly scorned, and Cottage Maid seems to be remembered only by the beauty the faded splinter had in her early teens, and the praise once lavished on her is now shared by Le Matelas, Pink Beauty and the delicate Queen of the Nether-lands. Everyone of these newer varieties is worth trying out with an idea to choosing varieties to take the place of these outworn sorts. When our own tastes are suited and we have found the best kinds for our purpose, we are more willing to give the dealers the dollars they are worth.

Hyacinths, daffodils and crocuses ought to be planted as soon as received, the daffodils being especially impatient of rest. The tulips should go into the ground at about the time that the leaves of the deciduous trees begin to fall. I have found that early planting of tulips is often disadvantage. Our cold spring follows, and the bulbs have started growth so promptly that they are nipped by frosts. If it is impossible to plant at the proper time, spread out hyacinths and narcissi in a cool, dry cellar, and keep the crocuses and tulips in the bags in which they are packed.

The bulbs of hyacinths and tulips should be planted six inches apart each way, and the daffodils from four to seven inches according to the size of the bulbs. In planting crocuses, scillas, Spanish irises and other small bulbs, the distance apart is not of such great importance. An effective way to space them is to take a handful of the bag and drop them where desired, planting the bulbs as they then are. A natural grouping is the result, and such a method, particularly when the bulbs are used for naturalizing.

Tulips should be set five or six inches deep, measuring to the base of the bulb; the greater depth is best for all the late kinds. Hyacinths do best at a depth of about six inches. Since the bulbs of Narcissi vary greatly in size, they may be planted at a depth equal to two and one-half times the length of the bulb, measured from its base to the neck, just where it begins to swell out into its rounding shape. All plants with small bulbs should be covered with three or four inches of soil. In very heavy soils an inch may well be taken from these figures.

A covering of some kind is advisable for all bulbs, not so much to keep out the cold as to protect them from the alternate freezing and thawing, which tears the roots and frequently lifts the bulbs quite out of the ground. For this purpose nothing is better than a mulch of some four inches of leaves, put on as soon as a thin frozen crust has formed over the beds or borders. This cover must be removed promptly after the approach of milder weather in March.
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When You Buy Your Dog

WHAT A PEDIGREE MEANS

I t has become an essential requirement to most American purchasers of dogs that there be a pedigree. This is regarded as an absolute proof that the animal is perfect in most points and has a career of great note before him. As a matter of fact to the ordinary individual the pedigree will be of little significance. Not that he is apt to be hoaxed by a faked up or doctored genealogy, for the registered pedigree is passed on by the Kennel Club and cannot be forged and it takes but little knowledge to recognize the genuine article. But the different breeders specialize in certain points of conformation, and breed for certain definite characteristics which are not evident from the pedigree. In most cases the list means no more than a mere list of names. These are valuable for those that know what Champion Poor Pat or any other dog looked like, and the success he had in shows, but otherwise tell nothing. If you are seeking to start a kennel or to breed show dogs, lay most weight on the individual's record, always being sure that he is not past his usefulness or going off as a ribbon winner. The best way is to purchase a brood matron of established reputation and you start on a level with the man who has success in shows.

WHAT TO LOOK FOR

Most people, however, are not on the lookout for show dogs. They seek a good pet or house dog. One cannot give general advice here because of the varying types of breed. There are, however, several suggestions to help the purchaser. If you are buying a breed that is large and heavy at maturity, look for the biggest-boned best knit puppies. They are apt to develop well. The head conformation is of importance also. In connection with this it is well to remember that puppies' heads grow larger and thinner as they grow to maturity. As a lean face is characteristic of fewer of the breeds, see that your dog has a head well developed before the eyes. In breeds of erect ears, avoid pups with small ears for they are apt to stand erect later rather than droop or flop over. Always look for good health and absence of marks or blemishes.

WHERE TO BUY

The fallacy that dealers are cheats ought to be understood now. Breeders of dogs for sale have an established reputation to uphold and cannot afford to resort to underhand practices. The Kennel Club has power, and uses it very quickly wherever evidence of dishonorable dealing is heard, so there is an added reason for honesty. In nearly all cases you can get the best advice and the fairest dealing with those whose trade is the rearing and selling of dogs.
Raising a Few Squabs

IT is quite possible for any man or woman with only a little land to raise enough squabs for home consumption, and even to swell the family income. Elaborate or expensive buildings are not needed. Many a successful breeder has kept his first birds in a barn or shed. Even when one purposes to go into the business in a commercial way, it is wise to begin with a few birds and increase his stock as he becomes familiar with the details of the work and develops his market. Many squab-raising ventures have failed because it has been undertaken on too large a scale at first.

Common pigeons do not give satisfactory results and it is a fatal mistake to begin with them. The most popular breed among squab raisers is the Homer. Pigeons of this breed are large, quiet, industrious and reliable. Of late, Carneaux pigeons have won considerable favor, but are not as abundant as yet. If the amateur begins with straight Homers he will not make a mistake.

The all-important matter is to buy mated pairs. Failure to observe this point has resulted in the wreck of many squab-rearing enterprises. Pigeons are not polygamous. They live in pairs, the same birds often remaining together for years. In a successful pigeon loft, every bird must have its mate. An old bird or two flying about and interfering with the domestic affairs of the mated birds may cause endless confusion and trouble. In order to make sure of obtaining mated birds, it is necessary to buy one’s foundation stock of a dealer or breeder who is thoroughly reliable, for it is practically impossible for the novice to distinguish between the sexes. It is well for him to have two small wooden cages with only a single partition of upright bars between them. When he is not sure that a pair of birds received from a distance are mated, he may put one in each pen. If, a few days later, he finds them billing and cooing, and kissing through the bars, he may feel safe in putting them with his working birds.

The pigeons on a squab plant must not have their liberty. The house where they are confined should have several windows on the sunny side and a pen to contain thirty pairs of birds should be about 10 x 16 feet. It is better not to keep the pigeons in larger flocks than thirty to a pen. Where there are several hundred birds, a long house is built and divided into pens of the proper size. Outside the house should be a covered yard or “fly” constructed of poultry wire, larger than the interior pen, if possible, and as high as the roof of the house. Such a fly gives the birds opportunity for outdoor exercise and causes them to be more contented.

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FROM THE PUBLISHERS’ DESK

The continued growth of our business and the enlargement of our activities have again necessitated our removal to larger offices. We are now at 31 East 17th St., overlooking Union Square, where we have quarters that have been arranged especially to take care of a business such as ours. These offices are not new to magazine publishing. It was here that Everybody’s Magazine was issued from the time it emerged from comparative obscurity into the limelight of public notice through the appearance of the Lawson articles on “Frenzied Finance” that set the financial world agog, aroused an enormous public interest in high finance, and started an era of so-called “muck raking” that has only recently seemed to subside. This periodical, merging with another organization, moved to a new building and made it possible for us to move into a workroom that had been arranged conveniently for exactly our business. We have the entire eleventh floor of the building, extending through from 17th to 18th streets. From our windows, with Union Square in the foreground, we can look off to the southeast and see the Brooklyn and Williamsburg bridges spanning the East River to Brooklyn; to the south the high ground of Staten Island is clearly in view, with the Statue of Liberty in the foreground, and to the west the Hudson River appears only a short distance away. It is remarkable how rapidly the different centres of New York have shifted and are shifting. On the other side of Union Square is 14th Street, that was originally a part of old Greenwich village, a tiny place far distant from the city of New York in Colonial times. Sixty years ago this was the centre of the finest residential section of the city. Twenty-five years ago 14th Street was the axis of the retail centre of New York, all the big stores being located on or near there. Fourteenth Street’s ancient glory as a shopping district has long since departed, for the stores have been rapidly going uptown, first to 23rd, then to 34th, and many of the finer shops are creeping northward on Fifth Avenue as far as 50th Street. The Union Square district has grown into an important wholesale section.

Our New Magazine

We were cramped in our old quarters in publishing House & Garden and Travel, and we needed more space to properly care for our business, but it was the advent of an addition to our periodical family that actually confronted us with the necessity of securing more room or being crowded into the street. We decided not long ago that there was a place for a quarterly periodical devoted to things nautical and marine, the result being that we announce the appearance on December 1st of the first issue of The Boat Buyer. It will be a magazine of value to the man who wants help in the selection of a boat, whether sail or motor, and in the equipment thereof.

Yachtsmen are like horsemen—they are always swapping their property. We shall aim to publish also in The Boat Buyer the best in sail and motor boats for sale and charter. We think that the average man buys his marine periodical for help in the selection and purchase of his boat and equipment rather than for anything else. The Boat Buyer will be published to satisfy this need. Send 50c in stamps, silver or any other way and receive The Boat Buyer for a year. As we have said, it will be issued quarterly—perhaps more often if it seems necessary.

A New Book of Travel

One of the most intensely interesting travel books that we have had the pleasure of reading is Dr. Leary’s “The Real Palestine of To-Day,” which we publish this month. Many books of travel are dry and dull, and it is hard for us to convey to you through the medium of cold type what a splendid book this is—teeming with human interest. Take our word for it, and get a copy. If you decide we’re wrong, you may return the book, and we will cheerfully send back the money. The price is $1.00 (postage, 8c).

Speaking of travel literature, have you ever seen a copy of our other magazine, Travel? One of our readers wrote us not long ago a letter which says:

“I cannot compliment you enough on your beautiful TRAVEL. I am a heavy subscriber to magazines and weeklies, and am in a position to judge the merits of TRAVEL. I think I am safe in asserting that TRAVEL ranks among the first, if not THE first, quality of paper, superb photogravures, high-class descriptiive reading—combine to make TRAVEL a most delightful guest in the home. I consider TRAVEL too exquisite to dispose of and it eloquently suggests binding into volumes. I assure you it is a treat to one who, like myself, is the almost daily recipient of magazines, weeklies, etc. You should have a tremendous sale.”

This seems to be the way our readers in general regard Travel. We believe you, too, would find it a welcome visitor to your library table. If you are not acquainted with Travel, we shall count it a pleasure to mail you a copy with our compliments.
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31 EAST 17th STREET, UNION SQUARE NORTH
NEW YORK CITY

EAST 17th STREET, UNION SQUARE NORTH

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31 EAST 17th STREET, UNION SQUARE NORTH
NEW YORK CITY
A modern Swiss châlet near Grisons, which shows the recent use of stone and concrete in connection with wood. Such types as this are well adapted to our western country, and seem peculiarly fitted for the outdoor life of the dwellers along the Pacific coast. There it is another example of the house which may be built to fit the surroundings.
It is interesting to compare this American adaptation of the Swiss chalet with a modern Swiss prototype on the opposite page. The roof lines and the sawed-wood porch rail are almost identical. Here battens, making perpendicular lines, are used instead of the horizontal boards of Swiss construction. Myron Hunt and Elmer Grey, architects

The Swiss Chalet Type for America

BY LOUIS J. STELLMANN

Photographs by the author and others

ANY type of architecture which has a genuine appeal to the public, must appeal to the heart as well as to the mind. I have heard it said that the appeal of architecture is through a combination of memory and symbolism: that is, it either reminds one of something one has seen or it stands for the traditions which the advancement of civilization has developed.

If one accepts this, architecture is removed from the sordidness of mere practicality and the commonplacery of pure expediency.
A Swiss mountain chalet, which has features evident in the two American adaptations below it. The dovetailing of the timbers at the corners is noteworthy.

This picturesque house shows how American ideas in plaster and timber may be applied to the chalet type. The enclosed balcony is an elaboration of the little balcony in the Swiss chalet above. L. C. Mullgardt, architect

It is too much to suppose that the Swiss chalet will become extremely popular outside of its Alpine home. There is too much complexity in the vastly predominant and populous lowlands to give it great vogue, too much tendency to improve on nature instead of cooperate with it, to scatter Swiss chalets through the land. And yet, in America, especially along the Western coast, the Swiss chalet is becoming more and more observed.

Probably there is no place outside of its native land where the Swiss chalet may be more advantageously used than along the Pacific coast hills, particularly those around San Francisco Bay, where many interesting examples are to be found.

Of course there is little snow in California except in the extreme northern portions. This brings us to a consideration of the fact that climate alone did not produce the Swiss chalet. Perhaps, indirectly, it did, after all, for the Swiss mountaineer is the product of the invigorating climate which the Alps provide. But, out of his rugged, honest, sham-hating, art-loving heart and brain has come that picturesque style of habitation which is as nearly distinctive as architecture may be. His love of out-door life produced the broad veranda, (forerunner, undoubtedly of the modern winter-and-summer-sleeping-porch), the wide eaves to protect this veranda and the court below, where he sat of an evening with his pipe. He courted the open at all times possible, this old Tyrolese, and the Californian is in agreement with him, as far as that goes.

But, more than all else, the Swiss chalet co-operates with nature. How many times does one see a house that seems a part
of its general surroundings? Usually the surroundings are fitted to the house with the inevitable result that an incongruity, more or less blatant, is produced.

Man cannot hope to compete with God as a landscape gardener or architect. The Swiss mountaineer felt this, even if he did not

know it. He made no attempt to terrace the eternal hills, to create false and artificial plateaux upon which to build a conventional dwelling. He made a partner of Nature and worked to their mutual advantage. Out of it came an architecture which, if primitive, was big, harmonious and wholesome to a wonderful degree.

The original Swiss chalet does not seem to have been built against a hillside. Apparently it was a crude log cabin, not unlike the huts of our pioneer ancestors, erected by Alpine cowherds for more or less temporary shelter. It differed from the American log cabin in the mortising or notching of the log ends and the rudimentary attempts to square and dress the timbers. Out of this, undoubtedly, developed the present elaborate system of dovetailing and fitting together the timbers and framework of Swiss houses, a practically nail-less construction scheme.

From the rough habitation of the cowherd was evolved the village house, slightly more pretentious but still of the blockhouse construction; and being adapted to the exigencies of hillside construction, it was so modified as to present the progenitor of what is now generally known as a chalet.

Following this came two evolutionary phases of building development in Switzerland, characterized, respectively as the Standerdwand or stand-wall and the Regal-bau or masonry construction. The latter however, is only an amplification or elaboration of the former. One, if not both, of these unquestionably inspired the steel-frame method of modern construction.

The "stand-wall" style of construction differs from the old block building and, for that matter, from most other methods of building, ancient and modern, in that the frame of the entire house is outlined by corner-posts and a skeleton roof before the walls are built. The original chalet, therefore, was built from the ground up, one timber being laid on top of another and dovetailed into a nice contact with ends that protruded beyond the intersecting unions. The second type of chalet was completed in outline and then filled in, as to walls and roof, with wood, plaster, stone or a kind of light brick as fancy or necessity might indicate.

Here it may be pertinent to remark that the foregoing refers to the characteristic holzbau or wood construction of Switzerland. In a country so prolific in stone, however, it is inevitable

Buckham chalet, designed by Frank May, shows a similarity to the Berne chalet in its tiers of balconies

The home of R. C. Hutsinpillar. A pure type of the lowland chalet, giving a good example of the use of projecting roof supports—a common feature abroad. Maybeck & White, architects
Porch roofs, cornices, doors, windows, often the entire front of a chalet will be encrusted with jig-sawn fret, grill and scroll work, incorporating religious or family mottoes, intricate designs and every sort of distracting embellishment. It reminds one not a little of a wonderful wedding cake or one of the marvelous performing clocks for which Switzerland is famous. But under it all is the solid worth, the wholesome, nourishing delicious product of the baker's skill; the exact and reliable chronological instrument, the house that satisfies body and soul.

It is this underlying theme that American architects have exemplified in Swiss chalet adaption. And, for the most part, the chalet has retained its individuality to a great extent. A number of Western houses are exact copies of existing Swiss chalets, notably the Reese house in Berkeley, California, which was designed by Maybeck & White from a small model of the Swiss prototype which Reese himself brought across the ocean. It is, as will be seen by observing the accompanying illustration, of the old block-bau style, with protruding timbers at the corners.

Alameda county, which includes Berkeley, Alameda, Piedmont and Oakland, and which abounds in hills, furnishes many fine examples of Swiss chalet architecture and a much larger number of less distinctive ones which are, nevertheless, of more than passing interest and display quite perceptibly their relationship to the architecture of the Tyrol. All of these follow the initial style more than the later ones, probably because the former is more original and picturesque than those which came after, and also, because the redwood of California is peculiarly adaptable to chalet building.

Especially is this true of interior furnishing. For in-

Continued on page 339)
Growing the Primrose

I KNOW of no flowering plant more apt to give perfect satisfaction in the winter window garden than the primrose. In certainty of bloom it far surpasses the time-honored geranium, and in ease of culture its requirements are of the simplest. Good garden loam, well mixed with a little sharp sand and some leaf mould, together with good drainage and not too large a pot, are all the soil requirements, and as it is not a plant requiring a large amount of sunshine it may be grown successfully in window boxes not specially adapted to the majority of plants—a north window for instance.

However, I prefer to grow primroses in an east window when practicable, but have had excellent success with them even in the trying conditions of a west window. Especially has this been the case with that variety known as Baby Primrose. One plant of this species made the remarkable record of blooming all winter in a north window. It was planted out in a north window box in the spring, and continued to bloom all summer and the following winter bloomed almost as freely in a west window, thus giving nearly eighteen months of continuous bloom.

Primroses may be grown very successfully from seed sown in the house in April in shallow flats, pricked out into larger flats as soon as large enough to handle, and when a couple of inches high potted off into thumb pots and plunged into boxes of damp sand in an east window. As often as the pots fill with roots the plants should be shifted carefully into pots a size—no more—larger, until by fall they should be well-grown plants in six inch pots, ready to give an abundance of bloom all winter.

Or if one prefers, blooming plants may be had of the florist in early winter, ready for immediate effect. The most satisfactory way to arrange the plants is to place the pots in window boxes, filling in the space between with sand kept damp but not wet, or if preferred sphagnum moss may be substituted for the sand. In potting primroses the crown of the plant should be somewhat above the level of the soil so that water may drain away from instead of toward the crown, as too much moisture is apt to cause decay at this point; for this reason the plants should never be overwatered nor should water be allowed to stand in the saucers.

As to temperature, the primrose is originally an alpine or boreal plant and still seems to prefer the cool weather. If kept in a room of about 50° F, it thrives best; when it becomes warmer, the blossoms do not last nearly as long.

Where selection is made of the fern-leaved varieties of primroses it will be found an advantage to place the pots on brackets at the side of the windows; this allows the large, beautiful leaves, which are easily injured, to droop in a natural manner, and as much of the beauty of the plant depends on the perfection of its foliage, this is of much moment. A box of the strong-colored red and the white primroses on the window sill, flanked with specimen plants of the fern-leaved on either side, make a beautiful window and one which is sure to excite enthusiastic admiration from all who see it. The varieties most successful for house plants are those of

Dutch Bulbs as House Plants

For rooms that have a cool temperature there are no better house plants than Dutch bulbs, and the fact that they succeed where it is not warm enough for more tropical plants, is by no means their only good quality. Their flowers equal or exceed in beauty those of any other house plant; they have the great advantage of being out of the way except during the period when they are objects of special interest—and after a season of forcing indoors they do good service as garden plants, where, being hardy, they do not demand the fussing necessary to keep more tender plants in proper shape for future results. Narcissi and other kinds of the polyanthus type have not the hardiness of the other sorts, but have been wintered over outdoors with extra protection.

Two or three bulbs of the same variety in a four or five inch pot give the most satisfactory results for amateur gardeners who

Table Showing a Succession of Bloom for Three Months at a Cost of Forty Cents.

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Table Showing Six Pots of Bulbs that Gave Continuous Bloom from Christmas to Easter.

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Table Giving History of Bulbs Shown in Accompanying Photo.

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Primroses are certain to bloom, and require little besides drainage and good soil. They do not need a large amount of sunshine. are doing things on a small scale. Woods earth, garden loam and sand, in about equal quantities, with a small amount of very old manure, make a good soil mixture. When potted the tips of the bulbs should be just covered. They are simply watered and set aside in a cool dark cellar until they have produced root growth of sufficient vigor. This point can be settled by making the soil moist enough to come out in a ball when the pot is tapped. If the roots do not show on the surface the plant must be set back for a longer stay in the dark. Bulbs need some moisture to develop roots, but should not stand in a soil that is really wet, as some kinds will mould.

When satisfactory root growth has developed the pots are brought upstairs to the light, and it is well to increase the degree of light gradually. For this purpose we built a home-made table with three shelves, the top one on a line with the window sill where full sunlight could reach the bulbs. The pots were first placed on the lowest shelf, near the floor, for a few days; then on the second one until the foliage had attained a natural green color, which showed that they were ready for the top shelf. This space-saving device also ensured a succession of bloom.

A moist atmosphere is beneficial to the bulb family. The buds sometimes blight if they are grown in a dry hot room. The flowers of some sorts remain in condition for a month if kept in a cool place. It is well to cut all flowers off to prevent the formation of seed pods, but, for the sake of next year's flowers, the foliage should never be cut or bruised. The best grade of bulbs will more than pay for their cost.

When the blooms have lost their beauty the pots should be set in a light cellar to ripen the bulbs. They will not require much water, as the idea is to dry them off gradually. When the leaves are entirely dry the bulbs are ready to store for October planting in the garden. A place that is mouse-proof but not air-tight, away from strong light and with a temperature of about forty degrees, will just suit them during the storage period.

For Christmas bloom some of the quick developing types should be started early: Chinese lily in water—soon after the middle of October; double Roman narcissus early in October; paper white narcissus, October 1st.

I. M. ANGELL

An Ideal Plant for the House

TIME and again I have been asked what I considered the best around plant for the house and without hesitation I have replied that nothing could equal the Kentias for first choice and the Aspidistra for second. Both of these are excellent for the house and will stand the rough usage to which all plants are subjected to a more or less degree, and look well under it. During the past winter I have been forced to revise my list of suitable plants and instead of topping it with Kentia I now write Grevillea Robusta with capital letters. This plant is an old one and for years I have used it for many decorative purposes with great success but never tried it under house conditions not thinking it just the thing for such purposes. The test that I gave it convinces me that it is an excellent house plant; that it is as hardy as either the Kentia or Aspidistra; that it is by far more decorative; that it is adaptable to many more uses, and that it can be grown by the dozen or hundreds with little labor and small cost. On the streets of San Diego it grows to a height of seventy-five feet adding to its decorative foliage effects great clusters of flowers, making a singularly beautiful street decoration.

To get a stock of these plants for the winter start the seed in the spring. Sow in shallow boxes or in pots and when large enough give successive shifts into larger pots as the growth demands. In transplanting from the seed boxes the plants are a little apt to be slow to start growth, but if they are not allowed to dry out they will eventually establish themselves. During the summer months they may be plunged out in the garden where they can be cared for by proper watering. In the fall pot them two or three weeks before taking into the house. To make a very attractive pot put four or five small plants together. Use rich loam with good drainage. A window box filled with small plants is to be recommended for inside use in a sunny window. Fern dishes with small plants look well on a table. It is however with the large plants that the best results are to be had.

If you have had good success with your seedlings, the plants should be about twelve to eighteen inches high by fall and these will continue to grow after being taken into the house. With the older plants the lower branches are apt to drop off but by pinching out the top of the plant a growth can be forced in the place of the lost branches; the second year should see the whole plant very much improved. Half a dozen two-year-old plants grouped in a large pot with smaller plants to hide any loss of leaves at the base will be attractive. In fact such an arrangement can be kept in good condition for season after season by judicious pinching and watering.

Two plants like this in a room will give an effect not possible with any other kind.

Unless sowing has been done in the spring the best way would be to buy a plant at a greenhouse and experiment with it the coming winter. The following spring if large plants are wanted for the fall sow early but for smaller plants make your sowing later. Many greenhouse men do not carry the Grevillea over the second season because of
its tendency to drop its lower leaves, but this is nothing against it, for as I said before, pinching will remedy this so that if you can buy two year old plants do so and fill in about them with smaller ones.

The Rubber Tree

NOT the best, but an excellent house plant is the rubber tree. Its recuperating powers make it a splendid plant for the woman who is apt to forget. It may be neglected for weeks whereupon with plenty of sunlight, water and warmth and a thorough rinsing of its leaves it soon flourishes again. Under this manner of treatment, however, the lower leaves drop and irregular branching is induced because of the sprouts that start readily enough during each period of tender care. Gas and dust must be present in very appreciable quantities to effect the plant seriously and ordinary room temperature is satisfactory.

With the loss of symmetry most of the indoor decorative value of a rubber plant vanishes. A rubber plant is at its best as an interior ornament when large, uniform leaves, free from blemishes, clothe a straight stem from its very base upward. The secret of perfect development is continuous growth. Careful watering, a uniform temperature and plenty of sunlight will do this. Spasmodic growth invariably produces an unsymmetrical plant. A plant set in a window should be turned, preferably one-fourth round each day, so that all sides may receive the same amount of sunlight. The tendency of plants to grow toward light is a distinct advantage to a rubber plant when it is used to decorate a sunlit corner. A plant thus placed will soon fill out the corner nor abate its vigor because of its one-sided development.

As to soil, the plants have little preference. The writer has obtained excellent results potting rubber trees in soil composed of equal parts of sand, ordinary garden loam and well rotted manure. This mixture should be perfectly dry and sifted through a screen of small mesh, a little larger than fly netting. In repotting, after removing as much of the old soil as is possible without injury to the roots or changing their relative position, this mixture is poured into place as one might pour sand. After this is firmed, the pot is then set into a basin of water which, working upward, will completely saturate the soil. Likewise with subsequent waterings, best done twice a week if the air of the room be very dry, set the plant into the bath or wash tub with the pot half immersed. There is no need of sprinkling, wiping both sides of the leaves at least every other day with a wet sponge affords all the cleaning necessary.

A rubber tree invariably outgrows its room, though the difficulty can be greatly helped by cutting off the terminal buds. This induces branching for which there is no alternative if the plant is to be held within bounds. The buds should be cut off squarely just above the leaf that grows out beneath them and the cut end seared to stop the flow of the milky juice. Where the cutting of the terminal buds is attended to soon enough, and the branches headed in when of the proper size, a very compact and well foliated tree results. With intelligent care a rubber tree remains fit for room decoration for many years.

The Care of Boston Ferns

OX a spacious north veranda of an old Southern home in the famous Bluegrass region of Kentucky, one may see in August or September five of the most magnificent Boston ferns that can be grown. They are all in fourteen-inch pots, and when looking from one to the other, you cannot tell which is the most luxuriant or the finest specimen. During the months we are out-of-doors constantly, they make this veranda a most charming spot and in winter add an attractive appearance to the dining room, with its large south and west windows.

When I came home from school seven years ago, with the time to really enjoy my Southern home, I began the culture of ferns with a very healthy small Boston fern I selected from those in the greenhouse. This the florist planted in a swinging basket for that season. I did not like it in the basket, so transplanted it to a pot very soon afterward, and with my care it made splendid growth. The next spring I divided it, making two, the next spring three, and now I have five as described above, and have given away many to my neighbors and friends. All the slips are bid for a year or two ahead, with a request for directions of "how to grow them."

In the mouth of March, during good weather, I have the best rich soil that can be found on the place, brought into an out-building to be used for my transplanting. It is usually found in some place where leaves have collected and rotted. Then shortly afterward I have the plants carried out from the dining room to this building; taking each one in its turn out of the pot, I shake all dirt off and cut out all of the old growth, leaving just the new, unbroken fronds. I have ready the biggest old cinders from the ash pile, to make a drain in each pot three or four inches deep. Upon this a layer of dirt is put. I first cut out, with a sharp knife, one-third of the roots with fronds attached, to be used for further propagation. The remainder is pressed together to get the plant in good shape and is put into the pot, filled in with the dirt pressed very firmly, and thoroughly watered. It is soon carried back to (Continued on page 334)
A fireplace in which the wrought-iron fixtures are eminently in keeping. Shown at either side are fire sets also in suitable style, which cost $9 and $11, respectively.

**Fireplace Fixtures**

**INTERESTING ARTICLES FOR USE ABOUT THE FIREPLACE WHICH ARE PRACTICAL AND AT THE SAME TIME DECORATIVE HELPS TO THE ATTRACTIVENESS OF THE HEARTH**

By Jonathan A. Rawson, Jr.

Photographs by Mary H. Northend and others

JUST as the fireplace itself claims and receives credit for combining in the largest degree the attributes of ornamentation and utility, so in equal measure are each of its special fittings and furnishings entitled to distinction of the same sort. Itself a decorative feature of a room and an eminently useful and comfort-giving one at that, it has a distinctive group of furnishings all its own, numbering not less than seventeen. Each of these articles was first made for practical purposes and became decorative later. No fireplace requires all of them to insure its serviceability, and, in fact, any hearth with so lavish an equipment would in these days of simplicity be sadly overdressed, like the shelf or table crowded to its utmost capacity with bric-a-brac of all sorts and conditions. Of the seventeen pieces, several are designed to do the same work in different ways, like the andirons and the basket grate, but even these are often combined with pleasing effect, the basket resting upon the rear extension of the irons behind the posts.

The fireplace should not be denied its own particular equipment. It is so much easier to have all the things right at hand, and then when to their handiness are added their decorative talents and their intimate memories of the past, their case is complete and their title established to places of honor and distinction in the best room in the house. The fireplace itself requires no champion or defender. Its subordination to the stove and the furnace as a heating power regardless of its mission as their occasional auxiliary, can never accomplish its banishment. On the contrary, it is nowadays often the axis on which the entire decorative system of a room or a house revolves, and we would almost as willingly plan a room without a window as an entire house without at least one fireplace. And as the fireplace is therefore bound to survive, its furnishings are bound to survive with it and retain with it the best traditions and associations of the early days. They shared the obscurity of the fireplace during its dark ages that followed the arrival of the first specimens of modern heating and cooking appliances, but there is no longer the danger that they will ever become obsolete or that in years to come they will be found only in the exhibition halls of the historical museums.

Fireplace furnishings defy classification. They can only be enumerated and even then it is not worth while to attempt their listing in the order of their importance, except the andirons which are first and foremost by every consideration. As the fireplace is the dominating presence of the well planned room, so the andirons are the presiding geniuses of the well furnished fireplace. The mantel, its shelf, the facing, the hearth, the underfire and the

These brush steel andirons, of an English type, hold a useful poker on brackets.
lining are integral component parts of the fireplace proper and are not to be classed as furnishings, but as elements of the thing itself. After they are in place, the andirons or some other device must first be installed to serve the same primary purpose, which is to raise the fuel from the underfire or floor to obtain draft and aid combustion. But we are more than likely to develop a strong preference for the andirons over and above any substitute that may be offered for them.

Broadly speaking, all andirons made to-day are either antique or modern. There is nothing medieval, because of the years of obscurity through which the fireplace passed. Andirons have very carefully defined classifications as to periods and styles and no mistake in room decoration is more repulsive to those versed in period work than to permit the andirons to be cut out of keeping with the period of the room. The good old-fashioned andirons with their fine simplicity of line are yet to be excelled in beauty and although much of the modern work is based on Colonial modeling, none of it is better than the original. Genuine antiques are becoming rarer all the time, but modern manufacturing methods make good the scarcity of originals by supplying the original forms with entire faithfulness, except that in the olden days the andirons were generally of solid material while now they are usually hollow, but every bit as good in service.

While brass was the correct thing for the andirons of the Colonial parlor or dining room, hand wrought iron served every purpose in the old New England kitchen fireplace, which, by the way, has given us the pattern for much of our best modern fireplace arrangement. In many instances these andirons were almost devoid of ornamental characteristics, but they were always graceful, no matter how simple they were. The steel andirons have various finishes, and while not as closely defined in their period affiliations as some of the others, they are still most practical and suitable for many fireplaces, particularly those constructed from modern rough surfaced brick in its numerous colorings.

Next to the andirons, the fireplace's tool set is perhaps its most useful companion. When complete the set consists of the stand, shovel, tongs and poker, and a long handled brush is sometimes added. The correct place for the tool set and its stand is just at the side of the opening, but those who want the tool set without giving floor space to the stand can accomplish their desire by using the old-fashioned jamh hooks, which are set in the brick work at the side of the opening. These hooks can be had to match many of the antique outfits, but never were commonly used with the brass sets. A good stand with its outfit is always ornamental and does much to add to the old-fashioned atmosphere. Period work is also carried out in the sets, but with less variety than in the andirons. In placing fire tools the jamh hook has a distinct advantage over the stand in that it requires no floor space and cannot be tipped over.

It is of course not necessary to buy the tools in complete sets, although they are usually found in that way. Among the separate tools that have recently become popular is a trident poker, 42 inches long, and made wholly of wrought iron, for $6, or with brass handles on iron for $8 to $12. Also long tongs and shovels for big fireplaces can be had as separate pieces. Since the biggest of the old-fashioned fireplaces were usually in the farm-house kitchens where iron was used for the furnishing, these larger implements are generally of that material nowadays.

It is doubtful if the fireplace has a more decorative companion than its screen, the chief usefulness of which is in keeping the faces of the tools from soiling the walls. It is often necessary to cut the screen in sections, especially to get the tools through.

There is a limitless variety of good Colonial patterns. Such andirons cost from $7.50 to $20; but there are also various mixed, carved and repousse andirons, some of which are genuine antiques. The old English seat fender with its upholstered top, is pulled out from the hearth and used as a settee.

A characteristic repousse brass wood-box, which is worth $23.50, can be matched with other tools.
Planning the House and the Garden Together

A PLEA FOR THE DEVELOPMENT OF HOUSE AND GROUNDS FROM A DEFINITE CONCEPTION PLANNED OUT IN ADVANCE—THE GOOD RESULTS OF CO-OPERATION BETWEEN ARCHITECT AND LANDSCAPE DESIGNER

by LOUIS BOYNTON, ARCHITECT

Photographs by the Author and others

There has been a great deal written about the planning of the house and about the arrangement of the grounds; and there have been endless pictures published of them—both together and separately. But while the fact that there should be an intimate relation between the house and its surroundings is more or less generally understood, some recent experiences of my own have brought it home to me that this is a point that needs emphasizing.

It does not seem to be commonly realized that the placing of the house on the ground and the arrangement of the grounds in relation to the house, should be a matter of design; in other words, that it should be the result of a perfectly definite conception arrived at in advance, and that the whole arrangement should be thought out quite fully when the house is designed. Nor is it commonly considered that the house and grounds should be designed as a unit and that neither should predominate.

Some time ago I was talking of this very thing with a friend who said: "Yes, I see. It is as if you had a stone of a certain shape and color; the setting should be designed to fit it." My answer was that was not at all my meaning. To my mind a much finer way would be to design or imagine an ideal ring, for instance, and then get the exact gem to take its place as a part of the whole and in relation to the desired setting. The stone and the setting should be of equal importance and the result of a preconceived idea. This, of course, does not preclude the possibility of getting very charming effects where one or more of the elements are predetermined.

I find that far too many people fail to realize that the man who designs a house has any interest or responsibility beyond the actual walls of the structure. It is common—perhaps

If house and garden were planned independently, a uniform whole such as this would be extremely difficult to obtain.

Mr. W. P. R. Pember, architect, has made the most of a lot 60 x 150 feet.

On this lot, 100 x 200 feet, the desired isolation between service yard and garden has been obtained. Louis Boynton, architect.
teresting problem a short time ago in a lot 100 by 200 feet which faced east with the narrow side towards the street. The house was to be designed for the conditions prevailing on the south side of Long Island where the prevailing southwest summer wind is a very important factor. Obviously, if the house were placed with the principal rooms toward the street, they would not get the benefit of the cooling winds of summer. In consequence it was so designed that the rooms faced for the most part toward the rear of the lot and gave on an enclosed formal garden 70 by 100 feet. This left a space 30 feet by 100 for clothes yard, garage, etc. As the house was about 30 feet deep this placed it 70 feet back from the street and left an ample space for lawn and carriage drive in front. Of course in planning a house which is large enough to allow of any departure from the stereotyped forms, the architect's first duty is to study the habits of the owner so as to provide the accommodation which will, if possible, exactly fit the needs of the family which is to occupy it. Exactly the same conditions should govern the planning of the grounds in relation to the house. If the house is to be used only part of the year, the character of the planting and the decorative treatment of the grounds must, of necessity, be vitally influenced by the season or seasons when the place is to be in use. If, as frequently happens in the suburbs, a place is to be occupied through the school year, and is to be vacant for three or four months in summer, the emphasis should be placed on the effects to be obtained in winter and the early spring and late fall. On the other hand, when the house is to be used largely in summer, the winter effects are comparatively unimportant. The cost of upkeep is also a matter to be carefully considered. It would be absurd to plan a place that would require two or three gardeners when the owner would feel that one man for a day or two a week was all that could be managed.

The Corey place at Newton (of which Chapman and Frazer were the architects and Mr. Stephen Child was landscape architect), is an excellent example of a sensible and artistic planning. Here the owner was an automobile enthusiast and drove large and heavy cars which demanded a carriage turn of sixty feet diameter. This, by the way, is the minimum size for turning a large automobile comfortably. A smaller turn would necessitate

It is very helpful to a layman to have a drawing made, almost photographic in its quality, showing the relation of the proposed building and its garden setting.

Two schemes for the development of an approximately triangular plot between two equally important streets. The scheme on the left shows the architect's method of securing individuality and a much more spacious approach. The owner, however, preferred the more stereotyped form to the right, having the house line up with the others in the block.
backing, which as a constant practice is injurious to a car. This place comprises about an acre and, as the plan shows, slopes considerably toward the south. It is the result of co-operation between the architects of the house and the landscape designer who had the grounds in charge. As the owner wanted to get an effective winter planting as well as to reduce the cost of maintenance, the planting was largely done with evergreens and the evergreen or hardy shrubs—that is to say, rhododendrons, barberry, and such plants as are effective and beautiful the year around.

Another very intelligent and effective example of such planting is Mr. Ellicott’s house near Baltimore. The place was designed by Ellicott and Emmart and is only about an acre in extent. As the plan shows, it is a pentagon with the street on the north side. The land slopes toward the rear giving a view across the river over the tops of a rather dense growth of forest trees. The principal rooms face on a broad terrace at the rear, beyond which is a semi-circular grass terrace with a small pool in the center. To the left of this terrace is a kitchen yard enclosed in hedges and to the right is a more formal garden from which a rose garden extends to the south. A careful study of the plan and the views of the garden will show a very skillful adjustment of the various levels. The shape and contour of the land allowed a successful use of more motives than would be generally advisable in so restricted a space. If the land had been flat it would have been necessary to try more uniform arrangements or the effect would have been crowded and fussy. To my mind the attempt to do too many things in a restricted space is almost as bad as an entire lack of imagination. The result becomes confused and nervous and lacks the effect of quiet placidity which should be the keynote of any good design.

Mr. Pember’s design for a place only 60 feet wide and 150 feet deep is an excellent example of what may be done on a small lot. In the first place the rooms are so arranged that the principal windows face with the front or the back of the house. The windows at the side are unimportant and the kitchen is placed so that it will not monopolize the rear and turn it into a mere “back yard.” The veranda is placed on the rear in such a way that it may be used as a dining porch. Back of this is a garden separated from the house by a terrace. This garden is designed to appear as large as possible. The central feature is a simple panel of turf extending to a semi-circular pergola with a pool for aquatic plants. This is backed up by a mass of hardy shrubs, which forms a background to the garden and cuts off the unpleasant features of the neighboring back yards. Beside this there is space for drying ground, coldframes and a small vegetable garden. Really this is a most successful use of a very limited space.

There can be no question that in the case of any of the examples given here the success of the place is the result of an intelligent planning, and that the relation between the house and grounds was most carefully considered as one problem at the outset. The result could not, save by the merest luck, have been achieved by building the house first and then wondering how best to arrange the grounds to fit the particular style and its position.

The placing of the house on the land: the study of the proper approaches; the consideration of the different levels and their possibilities in relation to the size and the points of the compass should all be clearly borne in mind at the time the house is being planned. The Architect’s drawing of a house at Garden City reproduced here shows the extent to which the consideration of the whole relation of a house to the grounds may be carried. At the time when the drawing was made there was nothing but a level lot to suggest the ultimate effect.

(Continued on page 334)
Homes That Architects Have Built for Themselves

THE CITY HOME OF MR. STOWE PHELPS IN NEW YORK—
AN EXAMPLE OF ADAPTING THE INTERIOR SCHEME TO
FIT A LONG, NARROW HOUSE TO BEST ADVANTAGE

by Stowe Phelps

Photographs by Henry H. Saylor

The small daughter of a well known architect once asked her father if he would buy her a pony.

"Why, dearie," he replied, "you must remember that you are the daughter of a poor architect." 

"Well, papa, if you ever got to be a good architect do you think I could have a pony?" which may intimate indirectly why an architect's own house may some times fall far short of what he himself would like to have it.

The architect has only one advantage in being his own client, in that he doesn't have his ideas frustrated by some other body's peculiar personal equation or bad (?) taste; otherwise the limitations and difficulties are about equal.

The first step is the choice of a site; or of a house, if alterations are contemplated. If choosing a house, an eye is naturally kept on the "possibilities" of the existing building, even if the alterations amount to leaving nothing but the original keyhole.

In my own case the conditions as found were promising. The house had four stories and basement, was 20 feet wide and 60 feet deep (which is 10 or 15 feet deeper than the average in New York) and it also had a low stoop, obviating the necessity of changes on this account. It was decided to have a living-room (to be used also as a studio) and a dining-room on the first floor, a library on the second floor, and the rest of the upper stories for bedrooms.

Now, the ordinary block house has a long thin drawing-room next to the entrance hall in front (with a facial expression much like a Pullman car), and a good large dining-room in the rear, usually all out of proportion to the size of the drawing-room. A butler's pantry extension usually projects out behind, taking off much light from the dining-room and much space from the back yard.

Instead of following this ancient and honorable custom, the dining-room was put in front (where the sun was), the pantry in the middle, and the living-room-studio in the back where it got the north light.

Putting the pantry in the middle is not liked by the servants, it is admitted; nor do they probably care for bedrooms on the top story. It is imaginable that they would consider an arrangement with the pantry in front and the dining-room in the middle of the house much preferable; but it seems unwise to encourage these sentiments unnecessarily.

The dining-room in front became the long, narrow room admirably adapted to an English style of decoration.
The studio, thirty-two feet long, serves also as a living room, and from the front to the commodious fireplace is furnished for that purpose. Work is restricted to the bay window and north light in the rear.

(12 feet 6 inches wide) which lent itself to an English type of decoration with a refectory table. The condemned pantry receives light and air from a shaft and from secret doors in the paneled wainscoting of the dining-room, which can be opened when that room is not being used.

The studio is 32 feet long, including the 6-foot bay window which is the full width of the room, and has a good “top” light for painting. So much for the general arrangement.

The woodwork in the first story throughout is cypress finished with one coat of stain. It was only after much searching that a stain was found that would give satisfactory results with one coat.

The dining-room is paneled with an Elizabethan detail, to a height of about seven feet, with the plaster left rough above, and has leaded glass casements, glazed with a very pale amber cathedral glass, which gives a warmth of tone to the room whether the sun is shining or not. The furniture is of oak, the table being arranged with extension pieces which can be fastened onto the ends and increase the length from six to eight or ten feet, seat-
A combination of restful and quieting green has been used for the color in the library upstairs, which is furnished with a collection of objects gathered from all corners of the globe.

Although there is a heterogeneous collection of various styled furniture, the whole is rendered harmonious by the use of kindred tones of browns, tans and dull reds.
The two-foot hedge of white feverfew can hold the garden boundary against the onslaught of the weeds, even such arrogant gentry as June grass and chickweed.

The Garden That Came

THE TALE OF A GARDEN AND THE SOURCES FROM WHICH EACH FLOWER CAME—HOW THE DIFFERENT CORNERS OF IT ARE MEMORABILIA OF PLEASANT EXPERIENCES

BY GLADYS HYATT SINCLAIR

Photographs by the Author

I TRULY believe that flowers are like cats and children: they run to those who love them and hide from those who don't. Or is it that only garden lunatics have eyes that will spy and hands that will minister to those plant strangers that would gladly dwell within their gates—and are so quick to share their treasures that all are glad to share with them? Anyway, it seems that when people ask me of my dearest garden dwellers, "Where did you get that?" I have always to answer, "Oh, that came from—" and it's usually a record of some most pleasant experience.

From where? Everywhere. My garden is like our grandmother's patchwork quilts or their daughters' autograph albums; a record (a living, growing one, thanks be!) of loving friends and happy visits and pleasant incidents. It is more: a missionary garden which has literally "rescued the perishing" and fed the "worthy poor."

For instance, the very fall that I left the old garden for the new—which was a potato field—the grandmothers of all this tribe of hollyhocks came from a railroad embankment where their roots had gone two feet down into the inhospitable gravel searching for food, while their starved leaves were about as big as the palm of my hand.

These hay-scented lady ferns that glorify my shady border came from the banks of Grand river in April, on the first one of a summerful of never-to-be-forgotten launch rides. My hardy roses, the shell pink blush, beautiful of buds and beloved of bugs; the ancient English York and Lancaster; the mosses and cabbage and brave old sweet brier, came from my husband's birthplace—the homestead his father cleared from the wild, thirty miles straight into the woods from the nearest store or post office. That flowering currant that flings its clean perfume at evening, this lusty bumpkin of a trumpet creeper over the arbor, and those monstrous "sugared lilacs" with their evergreen carpet of myrtle came, unmissed, from a mass of greenery that was doing its best to cover the desolation of a burned home, deserted these ten years.

The wild phlox that tosses its whorls of purest lavender through all the merry May, with arabis, poet's narcissus and English daisies for cheek-to-chin neighbors, came some hundreds of miles in a suitcase, souvenir of a canoe trip down Opie Read's paradise, the St. Joe river.

That two-foot hedge of white feverfew which can hold the garden boundary against the onslaughts of even June grass and chickweed, came in a letter, and the "fairy flax" that opens a thousand blue, innocent child eyes to me every summer morning, all came from a single plant sent me when in full bloom by a lady who wished to know its name. The spruce and jaunty cornflowers here and there came on the wings of a mischievous zephyr, and the lemon-lilies, forget-me-nots and iris came from my mother's old garden on the banks of the blue St. Clair, on my garden's first birthday—and my first.

These hardly chrysanthemums, golden and bronzy and snowy white, came from the yard of an old lady who called them...
artemisias. They were in exchange for Oriental poppies that I had raised from seed. That riot of bogus sunshine in front of them, the most frenzied supporter of the Rooseveltian baby-theories I ever saw, came two springs ago as California poppy seeds that had stowed themselves away among some violet roots.

The thrifty, neat clove pinks that have taken the contract to border every border I shall ever possess, once upon a time scrambled through the fence of a country cemetery and gadding gaily down the road to seek their fortune. Soon they met a Giant for whose seven bonny (laughters I had just planned and started a flower garden. The Giant persuaded the pinks to travel in his coat pockets, and half of them were brought to me as a thank offering, and half planted in the new garden to teach the seven daughters how to grow trim and fair and fragrant.

The Hall's honeysuckle vine on the trellis and my Frau Karl Druschki rose came as stems in a bouquet; the white clematis, Virgin's Bower, came with those dogwoods and that Judas tree, their feet in a picnic lunch basket, their heads trailing ingloriously. The biggest spiraea, Van Houtei, was one of a carload of whips sold to the school children at five cents each, while the wild grape vine on the back porch, the bergamot so valuable for sweet green in bouquets, and the flowering spurge, almost equal to gypsophila for fine white flowers, came all at once from a parched and dusty highway one sultry day in June!—because it was then or never.

The wild plum trees that shade the swing in the corner came with the birds, I suppose, long ago; and the ribbon grass that creeps about their roots flagged my attention with its creamy pennons beside a tumble down bridge and a crumbling cottage wall just out of town.

(Continued on page 333)
The Proper Finishing of Hardwood Floors

THE VARIOUS METHODS IN USE FOR THE TREATMENT OF HARDWOOD FLOORS—SUGGESTIONS ENABLING ONE TO BEGIN PROPERLY AND TO KEEP THE FLOOR IN GOOD CONDITION

The subject of finishing and caring for hardwood floors is one that is a little difficult to put in condensed and concrete form, because of the many different methods of finishing and the different conditions under which people have floors that need attention of this kind.

Beginning with new floors, the matter is comparatively simple and resolves itself into a choice of two or three different finishing methods and a variety of stains and color schemes.

The first essential in finishing off a new floor is to use what is termed a filler, and fill up the pores of the wood. There are several recipes for making fillers at home out of cornstarch, linseed oil, and things of that kind, but usually it is cheaper, simpler, and more economical to buy from a paint supply house a wood filler in paste form. To thin this filler for application to the floor one has the choice of using turpentine, benzine or gasoline. Really the benzine or gasoline serves best and is cheapest. Moreover, there is no practical difference between benzine and gasoline except the difference in the flashing point. You dissolve the filler in this until it assumes the consistency of an ordinary liquid paint, apply it to the floor, and then rub off the surplus filler as soon as it gets dry.

The best plan to handle this is with two at work, because benzine or gasoline evaporates rapidly and you must work swiftly. One spreads the filler and the other follows after with some cotton waste, rags, or excelsior, and just as soon as the liquid begins to dry, but before it gets hard, rub it well into the pores of the wood and scrub the surplus that is not absorbed.

There should be included in this filler whatever stain is wanted for the floor. Ordinarily, on an oak floor, not much stain is required. One can get some of the light oak stains that are furnished by the paint houses and add enough of them to the filler while it is in liquid form to give the stain required. Any stain may be added in the same manner; that is, any liquid stain, or one can take the dry powdered stains and add them to the liquid and get whatever color is desired.

After the filler and the stain is on the floor let it dry 12 or 24 hours, then begin the finishing process.

Here we come to the point where there is a choice of several finishes. If it is a floor that has been scraped on the surface and is intended for the parlor or dining-room, or for dancing, the best finish is to use two or three coats of shellac as a foundation on the wood and then finish with floor wax.

To do this, apply the first coat of shellac 12 to 24 hours after the filler has been put on. Then, let this stand for 6 to 12 hours, go over it with 0 grade sand paper, smoothing it off nicely, but not cutting it through. Then apply a second coat and treat it in the same manner.

If you have used your shellac rather thick and heavy, two coats will give body enough. If, however, your shellac has been thinned it may need three coats. Where one desires to avoid spotting with the shellac it is easier to make a good job of it by thinning it with wood alcohol and applying three coats.

After the top coat of shellac has dried thoroughly, and it is a good idea to wait two or three days for this so that the entire body may harden up well, go over it with sand paper as the others were and smooth it up nicely, using old rags or cloths, clean it off thoroughly and you are ready to wax.

There are a number of floor waxes on the market and you may use that which pleases you. The main point is to get one with "body." Perhaps the best method for applying floor wax is to take cheesecloth and double it to get a little more thickness, then make it into a sort of bag. Put a handful of wax inside of this and with it go over the floor thoroughly. You will find that you can work enough wax through the meshes of the cheesecloth to give a coating evenly all over the floor, and this prevents getting too much wax on in spots and unnecessarily wasting the wax. It should not require a lump of wax larger than an ordinary hen's egg to wax the floor of one good sized room thoroughly. If you think it is too light you can go over it again in a few days.

After the floor has been gone over with the wax and allowed to dry (some wax will dry enough in a few minutes and other wax takes 10 or 12 hours), it is ready to polish. For polishing one should use a weighted brush. There are two sizes of regular floor brushes for this purpose—one of 15 pounds and one of 25 pounds. The 15 pound brush is heavy enough and it is easier to use. Moreover, in case there is not a brush available of the regulation type, one can take soft flannel rags and by patient and persistent rubbing bring out an excellent polish.

The method described above is acknowledged today as being the most approved for finishing a hardwood floor, and to care for it afterward all that is necessary is to go over the spots where there is the most wear every week or two. Places near the doors and near the stairs need special care. Occasionally one can go over the whole floor. After a dance or reception renew the wax or is put on just before and only rub it a little. The idea is to keep just a thin coat of wax and renew it when it wears through. Never permit the shellac to wear. By keeping this up you can retain the beauty of your floor indefinitely. Perhaps
Once or twice a year, depending considerably on how much the floor is used, it may accumulate dirt and become soiled so that it cannot be cleaned up with the ordinary rubbing over with a cloth. Then, take benzine or gasoline and a rag, go over the floor and take up the wax. The wax will dissolve in the benzine or gasoline, and you can clean the wax, dirt and all, off thoroughly just as you can mop up the dirt and grease from linoleum with water and a rag. Then, let the floor dry out thoroughly, after which you are ready to wax again.

One should avoid using an ordinary broom on a wax floor, for it scratches. Make a bag of cotton-flannel, or some cloth that will draw over the broom, and use the regular rubbing brush. Or take a soft cloth of any kind and clean off the floor.

There are other methods of finishing hardwood floors, and even though the above is considered the most approved some may prefer one of the others. After staining and putting on the filler, instead of shellac one can use some of the hard floor varnishes of which there are several advertised now. Sand and smooth the first coat, then follow with the second, or thin the first two coats with turpentine and make a three-coat job of it. After applying the top or last coat it may be left in its natural gloss, rubbed down to a dull finish with fine sandpaper, or after being rubbed down to a dull finish given a furniture polish with rotten-stone.

As another alternative, one may put two or three coats of varnish on the floor and smooth it off with sandpaper and finish with wax just as was done when finishing with wax on top of shellac. This gives a higher finish, but it is not considered as good by expert floor people. Hardwood floor men will tell you that if you want a wax floor you should use shellac on it. If you don't want to wax your floor then use varnish.

There is another variation in the matter of finishing that the varnish men will advise you against, but notwithstanding this, it appeals to the writer. That is, no matter just what you use afterward, make your first coat on the floor of shellac. Put on the filler and stain, then a coat of shellac, no matter whether you intend to finish with shellac and wax or whether you intend to apply varnish. The shellac serves to seal in the filler and makes a body of ground work that is good as a starting point for any kind of finish and any kind of finish will stick to it.

The practice of the writer in work of this kind is to use a filler and a stain, then a coat of shellac. After that if the floor is to be waxed there come one or two more coats of shellac and then the wax. If it is to be varnished, the same order is used.

Remember, however, that you cannot reverse the matter; while you can wax on top of varnish or on top of shellac you cannot varnish on top of wax. The varnish will not stick, will not dry out as it should when applied on top of wax. It is possible that if you have wax on a floor that has been shellacked you can take benzine or gasoline and clean it off thoroughly. Let it dry and then get varnish to stick. It is well to remember, however that wax is simply a surfacing and finishing coat, and it may be applied on top of shellac or varnish, but it wears better on shellac.
The Making of a Walled Garden

THE FUNCTION OF A WALL IN RELATION TO THE GARDEN—VARIOUS SUITABLE TYPES AND THEIR MANNER OF CONSTRUCTION—HOW PLANTS ADD TO THEIR ATTRACTIVENESS AND WHAT KINDS TO USE

by Harold Donaldson Eberlein

Photographs by Jessie Tarbox Beals, the author, and others

The walled garden is no longer regarded as an exotic in America. Here and there architects and their clients have awakened to its attractions and each year more garden walls arise. Possession of a walled garden is not the exclusive prerogative of great estates.

The smallest country place may readily have one, and the question of construction, in many instances, may be considered a problem for "home made" solution. With a little thought and the aid of an intelligent workman the building of the garden walls is a comparatively simple matter. Care and foresight, to be sure, must be exercised in choice of location and exposure and the selection of the kind of wall to build.

Though perhaps there are not the same reasons in America for the walled garden as in England, or parts of Continental Europe, we have quite sufficient cause to regard it with high favor. Since it affords privacy, it provides at once an outdoor living apartment and a place for gathering together the choicest garden things that we would have always nearest us. It shelters the tenderlings of early arrival and more intensive care of the things within its limits is possible. It has too strong a hold on our liking to need an apology for its existence.

In choosing the site for the walled garden the two chief points to consider are exposure and the contour of the land. Where conditions permit it is best to face the garden to the southeast, south or southwest; this exposure will give the plants the full benefit of the spring sun and in summer the prevailing southwest breezes will add to the comfort of sitting there. By laying out the house and other buildings on the place. Rough-textured bricks, however, will be best as they give support to climbing plants and vines and reflect the sun's rays less fiercely. This may seem a trifling matter but it is not. In our climate it is of the first importance that garden walls exposed to the summer sun for any considerable portion of the day be covered with growths of some sort; otherwise the plants within the zone of reflection will be withered and scorched. The foundation may be of rough rubble or of concrete and should go at least two feet below the surface of the ground. A greater depth is preferable, for it is better to err on the side of precaution than to have mishaps. No structure is satisfactory that cannot defy all con-
In the cracks and holes of a rough wall, creeping plants take hold and grow vigorously.

The concrete wall should be of rough surface and is made attractive by vines and shrubs.

In water may be piped to a basin in the wall, ferns and mosses grow luxuriantly and make a most interesting garden feature.

ditions of climate and weather. Build the wall thick enough to be substantial and look well to the coping which, whether it be of stone, concrete, specially moulded brick or other material, should be, before all else, water tight so that no moisture may get inside the wall and start disintegration.

A concrete wall should have concrete foundations. Where buttresses or pilasters occur between panels staunch foundations should be provided at least two feet in depth. Under the rest of the wall the foundations need not be as deep, perhaps, because of the monolithic character of the material, but it will not be amiss to make them of unquestionable stability and proof against inroads of frost or burrowing moles. Above ground the surface of the concrete should be finished rough-cast for the same reasons mentioned in the case of brick walls. If you wish to train fruit trees or shrubs against the walls the espaliers should be made of bamboo or some sort of light woodwork and set far enough out (two or three inches) to prevent the bark from rubbing against the wall surface. Moreover, if the branches press too closely against the brick, concrete or stone, insects are very apt to find a harboring place there.

When we come to stone we can choose between walls built with mortar and those of dry construction (without mortar) and it must be said that frequently the latter seem preferable. The general appearance of the masonry in a mortar built wall is a matter of taste to be settled by the owner and cannot be discussed here further than to enter a protest against the rejection of stones for irregularity of color often the one feature which gives life and warmth to the whole fabric. There ought to be enough Portland cement in the mortar to prevent any softening or disintegration from the effects of the weather or the pull of vine tentacles. Mortar composed mostly of gravel with very little lime, such as is sometimes used in walls, is thoroughly unsatisfactory; it soon falls out and the wall disintegrates. The same general advice about substantial foundations applies here as well as elsewhere, and it is easy to obtain this without losing character in the wall.

To the dry stone wall belongs a charm denied all others. In the crevices between the stones all manner of rock plants will grow and many that ordinarily are not considered rock plants will grow there too. The whole wall surface may be instinct with life and completely covered with foliage and blooms, and even in winter it need not be bare. It can readily be seen how appropriate is such a wall for a garden enclosure.

A dry stone wall filled with rock plants is effective not only in gardens but for any terrace work. The stones should be set far enough apart to admit of inserting plants and sufficient soil must be put in the crevices for them to grow in. Retaining walls of dry
stone construction, where the moisture can penetrate the interstices from the supported bank, are still more successful as a base for planting than mere enclosing walls, which need more care and water, though even then the satisfaction gained is worth the trouble. The lines of earth connection in a retaining wall should be continuous from the bank so that moisture may work through and the plants be not wholly dependent on water from outside. The stones in a dry wall should be slightly tilted where the wall stands independently. This may be done by means of small wedged shaped stones. In this manner rain will trickle through the crevices.

Fall is the most suitable time for building dry stone walls. Then everything has a chance to get settled in place before winter. The condition of the ground and the delay in planting makes spring wall-building unsatisfactory. A properly constructed dry wall is proof against injury from the weather and when it retains a bank no frost action can make it bulge. The best foundation for such a wall, whether it be meant to support a terrace or merely to enclose, is made of concrete. For a retaining wall the depth and breadth of foundations must be determined by the requirements of the particular instance, in some cases where a steep and high hillside is to be kept in place a depth of $3\frac{1}{2}$ or 4 feet and a breadth of 5 feet being necessary. Ordinarily, however, a depth of 2 to $2\frac{1}{2}$ feet will be enough.

For building the part of the wall above ground it may be found better to employ intelligent laborers under the direction of a competent person rather than skilled masons. It is often difficult to persuade the latter, with their desire to do a "good job," to refrain from "dressing" the stone. Do not let them "trim things up." Make them put their hammers by, and, if one stone will not fit, get another. If the stones are "trimmed" the charm of the wall will be gone and it will look grim. Almost any kind of field stone or rough stone from a quarry can be used as long as it is properly laid in place. Few will deny the beauty of the old rough boulder walls between New England fields. In a retaining wall, which must be thick enough at the base (sometimes 3, 4 or even 5 feet) to sustain the thrust of the bank above, the large stones at the ground line, resting immediately upon the foundation, should be laid with their length at right angles to the line of the wall and their inclination nearly at right angles to the batter of the wall. This will keep the earth from washing out. Toward the top the breadth lessens greatly.

Whether the wall be a dry one or of mortared joints, the question of soil is important. In the former case a mixture of loam (Continued on page 338)
The ducks and geese are day migrants, flying seldom more than an hour at a time, passing from one well-known feeding stop to another.

The Migrations of the Birds

ONE OF THE MOST FASCINATING BRANCHES OF NATURE STUDY—WHICH BIRDS MIGRATE AND WHY—HOW FAR THEY TRAVEL AND HOW FAST

BY WELLS W. COOKE

BIOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF AGRICULTURE

Photographs by A. R. Dugmore, Scott & Van Altena and Julian A. Dimock

The mystery of bird migration has proved a fascinating subject from the earliest times. The birds were noticed to disappear in the fall and reappear in the spring, and not knowing where the intervening season had been spent many fanciful theories were advanced. Hibernation in trees or in the mud, and stories were current of whole flocks seen to disappear beneath the waves of the Mediterranean to winter in its depths. With the later years has come a fuller knowledge of the particular region in which each species passes the cold season and more definite information in regard to the routes employed in the spring and fall journeys. But the increase of knowledge has not lessened the interest in the general subject. More persons today are watching the birds and noting their times of arrival and departure than ever before. Indeed, the Biological Survey has received migration notes from more than two thousand different persons, showing how widespread has become the late development of nature study.

The ever recurring question of why do birds migrate arises at once in the mind of every student of bird movements. No definite and complete answer has been or can be given to this question. It can be stated, however, that some advantage must accrue to the individual or the species as a result of the long journeys or else they would long ago have been abandoned or curtailed. Birds are not instruments of fate; they can and do change their breeding areas and modify their migration routes correspondingly. Yet two classes of migratory movements can be distinguished. In the one the bird seems eager to migrate. Examples of this are to be found among the geese and ducks, the robin, flicker and some of the black birds. All these birds press forward in the spring as soon as the tempera-
tture rises above the freezing point and unlocks the ice-fettered streams, or the melting snows lay bare the fields to furnish adequate food supplies; and even some days earlier the tree sparrow and the horned lark have begun their northward journey. All these birds stay in the northland until driven south by the approach of the winter's cold, and when at last forced to move they retreat only far enough to the south to obtain nourishment through the winter and are ready at the earliest possible moment for the return. Such birds seem to consider the neighborhood of the nesting site as their real home, to be left with regret and to be revisited speedily. On the other hand, a still larger group of birds remain in the south as long as possible, make a late and hurried migration, arrive at the breeding grounds just in time for nest-building and depart for the south as soon as the young are fully grown. One would judge them to consider the land of their winter choice as their home, which they are reluctantly forced to leave by the exigencies of the period of procreation and to which they gladly return. This latter class includes more than half of our migratory birds—the warblers, vireos, thrushes, flycatchers, orioles, tanagers, swallows and such of the sparrows as winter south of the United States. Many an orchard oriole arriving in southern Pennsylvania the first week in May, leaves there by the middle of July, thus spending only two and a half months out of the twelve at the nesting site, while robins can be found in the same locality from March to November, being absent less than a third of the year.

Nothing can be more variable than the distance travelled by birds in their migrations. A few birds, like the grouse, quail, cardinal and Carolina wren are non-migratory. Many a Carolina wren rounds out the full period of its existence without ever going ten miles from the nest where it was hatched. Some other species migrate so short a distance that the movement is scarcely noticeable. Thus meadow-larks are found near New York City even to Patagonia. Among these long distance migrants are some of our commonest birds; the scarlet tanager migrates from Canada to Peru; the bobolinks that nest in New England probably winter in Brazil in company with the purple martins, cliff swallows, barn swallows, nighthawks and some of the thrushes who are their companions both summer and winter. The black-poll warblers that nest in Alaska, winter in northern South America at least 5,000 miles from the summer home. The land-bird with the longest migration route is probably the nighthawk, which occurs north to Yukon and south to Argentina, the two countries being 7,000 miles apart. But even these distances are surpassed by some of the waterbirds and notably by some of the shorebirds which, as a family, have the longest migration routes of all birds. Nineteen species of shore birds breed north of the Arctic Circle, every one of which visits South America in winter and six of which penetrate to Patagonia, a migration route more than 8,000 miles in length. The champion migrant of the world is the Arctic tern; it nests on the most northern shores of the Arctic Ocean as far north as it can find anything stable on which to construct its nest and it winters along the ice pack in the Antarctic as far south as it can find open water and food. The two extremes of its migration route are fully 11,000 miles apart or a 22,000 mile round trip each year.

More wonderful, however, than the total distance the bird migrates in the year, is the enormous distance traveled at a single flight. 

The longest single flight made by any bird is that of the golden plover from Nova Scotia to South America

The nighthawk has the longest migration route of the land birds, traveling each year north to Yukon and south 7,000 miles to Argentina
When birds are migrating over land they fly a short distance—an hour or so at a time—and then stop and rest and feed for a day or several days before they undertake the next stage of their journey. But when they come to a stretch of water, as for instance when birds in fall migration reach the northern coast of the Gulf of Mexico, they make the entire trip across the Gulf from Louisiana to Yucatan at a single flight in a single night between darkness and daylight. Moreover, they do not seem to attempt to shorten the flight as could easily be done by passing to the west through Texas or to the east by way of Florida, but thousands of them cross the Gulf at its widest point. Strangest of all, they do not seem to be exhausted by these long flights, but often fly a hundred miles over the land on the other side before they alight. Indeed, it is certain that their energies are not severely taxed by these flights or they would not undertake them, since, as just remarked, there is no necessity of their making these long flights if they were not preferred. These long flights are made by many of the smaller birds and even by the humming bird, the smallest of all, which spring and fall makes the flight of more than 500 miles between the coast of northwestern Florida and the Mexican coast.

These distances seem great, but they are small compared with the distances flown by some of the water birds to whom a thousand-mile trip is an easy journey. The longest single flight of any bird in the world is made by the golden plover from Nova Scotia directly south across the Atlantic Ocean to the coast of northeastern South America. In fair weather this whole stretch of about 2,500 miles is made without a stop and probably requires nearly if not the whole of twice twenty-four hours for the trip. Here is an aerial machine that is far more economical of fuel than the best aeroplane yet invented. The to and fro motion of the bird's wing would seem to be an uneconomical way of applying power, since all the force required to bring the wing forward for the commencement of the stroke is not only wasted, but is more than wasted, for it largely increases the air friction and retards the speed, while the screw propeller of the aeroplane has no lost motion. Yet less than two ounces of fuel in the shape of body fat suffices to force the bird at a high rate of speed over that 2,500 mile course. A thousand pound aeroplane to be as economical would have to fly 20 miles on the force from a single pint of gasoline.

Some birds migrate by day and others by night. Day migrants include the ducks and geese, the hawks and such birds as the gulls, swallows and nighthawks that are endowed with exceptional aerial powers. The larger part of the small birds migrate at night for the sake of greater safety from the attacks of birds of prey. The night's flight is begun soon after dark and usually lasts only a few hours. Night migrants stop to feed during the day time; ducks and geese seldom fly more than an hour at a time, merely passing from one well known feeding spot to another, while the gulls, swallows and nighthawks catch their food while on the wing during migration.

How do migrating birds find their way? They do not journey haphazard, for the familiar inhabitants of our dooryard martin boxes will return next year to these same boxes, though meanwhile they have visited Brazil. If the entire distance was made over land, it might be supposed that sight and memory were the only factors used in the problem. But for those birds that cross the Gulf of Mexico, and still more so for the golden plover and its Atlantic Ocean crossing brethren, something more than sight is necessary. The best explanation seems to be that birds have a "sense of direction," such as we know ourselves to possess, only in the case of the bird it is vastly more acute than with us. Sometimes, however, the birds are caught by storms of such severity that their sense of direction fails them and then they become the prey of the lighthouses scattered along the coast. Tempest tossed and bewildered, they seem to be fascinated by the lantern rays piercing the darkness and hurl themselves to death against the glass. A red light or one that flashes is avoided, but a steady white light like that of Sombrero Key Light in southern Florida proves irresistible. As long as the light shone in the Statue of Liberty in New York Harbor many hundred birds were killed by it each year. Nor are the lighthouses the only peril to the migrant. Many a flock while crossing the Gulf or the Ocean is overtaken by storms and buffeted until with strength exhausted it sinks into a watery grave. Even the comparatively short trip across the Great Lakes has proved disastrous (Continued on page 331)
The Case for Hot Water Heating

THE REAL FACTS URGED IN FAVOR OF THE HOT WATER SYSTEM—COMPARISON WITH OTHER METHODS ALONG THE LINES OF SERVICE, COST, ECONOMY AND OTHER ADVANTAGES

BY JAMES A. HARDING

Editor's Note.—"What heating system shall I use?" is the constant query of the home-builder. To assist in solving his difficulty, HOUSE & GARDEN has had experts in heating engineering present the advantages of their own favorite types of apparatus. For the first time the whole case of the best heating method will be presented to the public as a jury. This article will be followed by others presenting the characteristics and advantages of steam, hot air, and the indirect system.

Any demonstration of the advantages of hot-water heating necessitates frequent comparisons of the three best known types of heating apparatus, viz.: hot-water, steam and hot-air, and a word as to ventilation seems appropriate, as in the modern scheme of physical life ventilation has become the hand-maiden of heating and is almost as important as the question of heat itself.

Special provision for the ventilation of all the rooms in a dwelling such as has latterly been advocated in connection with hot-air furnace heating is prohibitive in a large majority of houses because of its excessive cost. Such provision is more in the nature of a boosting appliance to insure the successful operation of the hot-air furnace (which mostly fails to deliver heat to unventilated rooms) than it is a necessity or boon to the dwellers in the house.

It is now the almost universal custom of well-informed people to leave one or more windows in their bed chamber open during the night, which excellent practice entirely obviates the need of artificial ventilation through pipes or flues, as regards at least one-half the interior space of the house.

In a house of ten rooms occupied by a family of six adults, for example, with a proper allowance for the incidental leakage or ingress of fresh air, which is considerable in the best built house, not more than five thousand cubic feet of fresh, artificially warmed air per hour need be provided for.

The necessity for burning an excessive amount of coal to warm more fresh air than health and comfort demand, because the supply of heat from a hot-air furnace can be carried to the rooms only by the medium of this excessive air supply, becomes at once the Waterloo of that type of heating apparatus.

The custom of connecting a return air pipe from a large register in the hall to the hot-air furnace, in the interest of economy of fuel, is pernicious from a hygienic standpoint. The health and physical comfort of people in the house during their waking hours depend upon a reasonably constant temperature, imparted to the air by heating (radiating) surfaces at such a low temperature as to act moderately and constantly upon the air in contact with them. The unpleasant and unhealthy odors from minute particles of organic matter, always present in the air indoors, and made apparent by contact with the high temperature hot-air furnace and steam radiator, are thus avoided. A radiator should never be hotter than 170° F., even in zero weather.

The intermittent "going down" of the pressure in a steam heating apparatus, the consequent condensation of steam in the radiator and pipes and filling of these spaces with air, results in a rapid fall of temperature in the rooms. Upon the recurrence of pressure, a discharge into the rooms of a volume of foul, odoriferous air from the air valves takes place, sometimes with an accompaniment of noise, as the steam, water of condensation and air agitate the radiator. To add to these, the rooms are often overheated.

The modern hot-water heating apparatus maintains a steady, noiseless and positive circulation throughout, with moderate temperatures of the radiating surfaces.

In the earlier history of hot-water heating (as far back as 1840) the water was heated under pressure to high temperatures, and that method is followed to some extent at the present time in the interest of reducing the size and first cost of the apparatus; but it has been conclusively proven by physicians and others, that the "open tank" hot-water system chiefly in vogue today, with its lower temperature of radiators, is infinitely superior from the standpoint of health.

The flexibility of a heating apparatus in successfully meeting changes in weather conditions is an important consideration in the interest of comfort.

While steam and hot-water systems are equally possible in the delivery of heat to the points of use, the former requires a certain constant condition of the fire in order to generate steam.
from atmospheric pressure to two pounds gauge pressure.

The temperatures of the radiators in ordinary systems of steam heating will range from 212° to 220°, whereas the atmospheric conditions prevailing out of doors may vary from 50° F. to 10° below zero.

With hot-water heating the temperature of the radiators may be maintained at any degree from say 80° to considerably above 200° if necessary.

Again, after the fire has been banked or otherwise regulated for the night, there is a constant supply of heat from the fire to the radiators, so that in the morning the temperature of the water will be within 10° to 20° or so of that required for maintaining the desired 70° in the house.

In the steam heater after the fire is banked at night, the steam pressure goes down and the house cools off to a low temperature. In reply to them, it is urged that it is possible to get up the temperature quickly with steam heat. While this is true, it is of negative advantage in comparison with the greater one of having a constant temperature which obviates the need of forcing the apparatus, and the consequent waste of fuel which continues while the heater is operated under forced or excessive draft.

In vapor or vacuum systems of heating the variable temperatures of the radiators possible, constitute a valuable claim to superiority in the interest of comfort and economy. If such systems were designed to employ as large radiating surfaces as in modern hot-water heating and not to depend upon steam at high temperatures during excessively cold weather, then such systems would approach the excellence of hot-water heating;—provided, of course, that the vacuum necessary to produce vapor of a wide range of temperatures were not dependent upon the intermittent action of an automatic device, nor the positive action of an expensive mechanical or electrical device.

As to the hot-air furnace system of heating it is urged, and with apparent reason, that the hot-air furnace supplies fresh air to the house through its cold-air box and hot-air pipes, while direct radiator systems of heating do not supply fresh out-door air.

When, as stated above, a limited volume of air only is required for a family of ordinary size in order to maintain a given standard of purity throughout the house, it will be seen that this can be obtained by means of one or two indirect hot-water radiators furnishing fresh out-door air to the halls or principal living rooms of the house, thus providing heat and ventilation at once.

The hot-water radiator obtains its heat from the source of supply, the heater, unhampered by effect of wind; whereas, as is well known, with furnace heating, rooms exposed to pressure of prevailing cold winds do not obtain warm air through the furnace pipes.

Again, with the hot-air furnace the air passes over the iron (usually cast iron) surfaces and takes up in this passage, coal gas and particles of dust, such as moulding sand and accumulated deposits from the street, which impurities more than counterbalance the advantage to be derived from the air, originally fresh then entering the furnace, but which reaches the rooms considerably impaired.

In the matter of leakage of coal gas from the interior of a hot-air furnace into the fresh air passages immediately surrounding it and communicating with the rooms through pipes, the reasons for it are easily comprehended when the physics of furnace construction are understood. A cheaply-constructed furnace is extremely pernicious in its insidious promotion of ill-health and it would seem that if civic authority were as wide awake in the enforcement of ordinances for the exclusion of coal gas from our homes as they are in the matter of sewer gas, then the cheap hot-air furnace would be driven out of existence.

With the hot-air furnace the temperatures of its several parts when in operation will frequently vary through a range from 100° to 200° F. This inherent condition renders it necessary not only to build the furnace in sections, but to assemble its several parts with unscaled elastic joints, so that inequalities of expansion and contraction will not cause a fracture. In the combustion of coal the force of air entering the draught-doors and the expansion of gases in the furnace create an internal pressure with every charge of fuel which will overcome the resistance of the joints in the best made furnace.

It will be of interest to note the reasons why hot-water heating is more economical than the other types, and in considering these reasons it should be borne in mind that comparisons are here made between systems which embody all features necessary to express the highest standard of each type.

It is convenient to base comparisons upon concrete examples, and a country house of ten rooms will afford an average basis of calculation.

A hot-water heating apparatus for such a house should cost approximately $475.

The interest on this amount per year at six per cent. is $28.50. Such an apparatus will require about nine tons of coal for the season which at six dollars per ton makes a total of $54.00 per year for fuel, and a total annual expense of $82.50.

A steam-heating apparatus for the same house will cost about $375, and the interest on this amount will be $22.50. This apparatus will require about twelve tons of coal at a cost of $72.00.

In steam-heating the fluctuations of pressure occasion alternate rapid expansion and contraction of the pipes and other parts at frequent intervals, which promote leaks. Radiator valves should be repacked at least once a year. Automatic air valves are prolific sources of trouble and expense. Damper regulators need repairing and the alternate filling of the system with steam and air promote the rapid oxidation or rusting of the interior of pipes and radiators, and their gradual disintegration.

(Continued on page 335)
Starting with a viewpoint commanding the foothills and Adirondacks beyond, the garden worked itself out as a long central path, flanked by poplar trees, hardy borders and stripes of lawn

A Garden in the Foothills of the Adirondacks

BY MARY LLEWELLYN GIBSON

Photographs by the Author

WHEN I decided to evolve a garden I was so well imbued with William Morris's sense of art from my winter's reading that I selected a field from which the view of the hills, on and on, to the Adirondacks seemed to fulfill what he felt to be a situation for a garden. To him a garden was not a shut-in place but a retreat, from which as one looked abroad the vista gave promises and thoughts suggestive of hope, ever reaching on beyond. That appealed to me, so at this viewpoint I built my seat, a large rustic affair with projecting screens of cedar posts about seven feet high. As a background I transplanted four very large bushes of pink honeysuckle from the woods.

From that my plan grew. I decided to make a straight path down the center a distance of one hundred and eighty feet, with a lawn on either side about ten feet wide and a hedge as an outside line. The hedge question was most puzzling, as in perspective any ordinary hedge plant at such a distance, at least the size I could afford to buy, looked about the size of a geranium. Being an American, of course I had to have an immediate effect, so I decided on trees—Carolina poplars. They grow so rapidly, and then the summer wind when it gently blows their willing leaves has always been to me such a delightful sound. I put them in, the following spring, fifty on a side, about three feet apart.

I knew unusual difficulties confronted me, as this potato patch that I had chosen was composed of clay soil and I could have no water supply. I prepared my borders, which were seventy feet long on each side, by digging down three feet and filling in with compost. As simplicity, I felt, must guide me in all I did, I decided it would be effective to edge the borders with field stones, which I proceeded to collect, selecting the most irregular shapes. They not only made an edging but kept the spring rains from washing away the hill.

I could see as my garden grew that I must break that long plain look to the path. I built three different arches of rustic cedar over the path, and at the end where I put the seat I built a bird table and planted trumpet vine around it. On this I keep a pan of water, which seems to attract the birds particularly well in our country. The beds around the bird table are filled in with clove pinks and white phlox. In spite of the rustic arches the path still lacked something to me. It was too symmetrical for an informal garden—it had no atmosphere. It was not until I saw one day in front of a hardware store, an English crate for dishes, a big affair of slender branches with the bark on, that I saw fences and backgrounds galore. I immediately bargained for that one at fifty

(Continued on page 333)
It is interesting to note the ingenuity with which the architect has kept this comparatively small and high house in good proportion by the deep overhang of the eaves on the gables as well as in front and rear.

THE HOME OF MR. R. S. MACNAMEE, BERWYN, PA.

It is comparatively rare to find such pronounced symmetry in the disposition of the openings in a house of this small size.

By opening up the front end of the hall, the working area of the living-room has been largely increased.

The back stairway, leading directly out of the kitchen, joins the main stairway on an upper landing.
Mr. Bush's home is a modification of the Colonial style with white clapboards and solid green shutters. The evergreens in the window-boxes carry out still further the contrasting effect of green and white.

THE HOME OF
MR. C. H. BUSH,
CRANFORD, N. J.

The large living-room is practically part of the porch when French doors are opened.

The entrance doorway flanked with green lattice is suggestive of old Salem doorways.

The owner's bedroom is unusually large and extends across the whole depth of the house.

The dining-room is made cheery by the sun room, which opens out from one end of it.

The breakfast porch is screened in lattice and will be vine covered, making a delightful room in summer days.
The original of "Graycroft" was an ugly square barn of concrete blocks.

The living-room was made to extend across the whole width of the barn and is lighted by seven windows.

Over the cement blocks wood lath and stucco were applied.

The living-room opens upon a living porch, which is screened in. This was an addition to the original structure.

The house sits up on a hill among the trees, and with its gray stucco walls blends beautifully into the surroundings.

An especially attractive feature of the living-room is the wide fireplace with its inglenook and raised brick hearth.

"Graycroft" is simply another exemplification of the great possibilities of remodeling. Formerly a hideous cement-block barn, it is now a most attractive home, and made so at a cost of but $6,000.

THE HOME OF MR. S. J. LATHROP, WYOMING, N. J. Howell & Thomas, architects.
A Candle Lamp

A NEW candle lamp that seems to have been evolved from a combination of a lantern and the old-fashioned candlestick with a wind shield, is a novelty that is decidedly practical and will no doubt prove useful. The frame is of dull burnished copper with a cylindrical glass shield extending from top to bottom. Perforations in the base and also in the top give free circulation of air, while the candle is so thoroughly protected by the shield, that it burns with a steady flame.

A substantial handle not only adds to the appearance of the lamp, but makes it particularly easy to carry about. It is quite suitable for indoor or outdoor use, and for country houses with neither gas nor electricity it is especially serviceable, as it not only gives a low, steady light for the hall or veranda, but is readily moved about from place to place, and besides seeing that candles are always available it is no trouble to keep in order.

Finishing Floors at Slight Cost.

In country houses when cleaning in the fall, preparatory to comfortable living in the winter, if one would take the trouble to finish the floor for rugs (which can readily be made from the carpets) the appearance of the home would be greatly improved as well as the labor of keeping clean lessened.

First fill the cracks, if large, with pieces of wood, or if they are not wide enough for that, fill with pieces of newspaper torn to bits and mixed with a paste made of flour and water. Then apply a flat, ground, color and when dry, put on a coat of walnut varnish. If there is much walking to be done in certain places, it will pay after letting the varnish dry, to put on a coat of shellac, or elastic finish. This gives a splendid looking floor, one that wears well and costs little. A finish of this kind for two feet and a half around the baseboard of a room works wonders in the cleanliness and appearance. Be sure to let the ground color dry for at least twelve hours before applying the walnut varnish. It then gives the color of a hardwood floor, neither too dark nor too light, and can stand nearly as much wear.

Protection Against Ice in Gutters

SOMETIMES much damage is done by leaks in the roof, when the gutters freeze in winter. I visited a house where such an emergency was provided for by a hot water pipe leading to the gutters. Whenever a sudden freeze followed a day or two of warm weather which melted the snow on the roof, the hot water was turned into the gutters and speedily cleared them of ice. I believe this device was invented by the owner of the house, but it is not patented and anybody is free to adopt it.

Laying Matting

To lay straw matting is a difficult thing to do, as the cheaper grades are likely to get wrinkled and to wear in ridges. When you put the matting down, get it as smooth as possible; then with a pail of hot water, to which a cupful of common salt has been added, mop and wash the matting as if it were dirty. Use the salt water freely, renewing often enough to keep it hot. Wash with the grain of the matting, and leave it quite damp. The salt toughens the straw and prevents it from breaking.

The Desirable Medicine Cabinet

The sanitary value of a metal medicine cabinet is beyond question. No absorbent material comes into contact with spilled medicine—the metal may easily be cleaned with soap and water, and dried immediately. And metal does not swell, warp, shrink, crack nor sag, as wood is apt to do.

These cabinets are most satisfactory when set into a recess in the wall, but may also be attached to the wall-face with screws. In purchasing it is well to procure the model with moveable shelves, to accommodate bottles of different sizes. And the good housekeeper will find that glass shelves are obviously most desirable. The cabinets are all made with bevelled mirror on the door. Some of them have the inside corners rounded, with no place for dirt to accumulate. The cabinet is attached to the recess without injury to marble or tile-work, and without showing the holding screws.

Small Water Pitchers for the Guest Room

LITTLE pitchers which are of use in the guest room come in various pretty designs in pink, green, blue and yellow. I have one for each guest room, pink for the pink room, blue for the blue room, and so on. They stand on a table in the upper hall, and when we retire for the night a large pitcher of ice-water is carried upstairs, each small pitcher filled, and put in its respective room. Each pitcher holds just two glasses of water which, unless one spends a very wakeful night, is quite sufficient for one's needs.

These pitchers are made of a very good quality of china, smooth and thin and for a wonder they can be purchased at the ten-cent store. The shapes are most convenient—the opening is large enough to admit the whole hand in washing, so that
Two Well Planned Rooms

A most alluring color scheme interested me in a New England country house recently. The spacious, low-ceilinged living-room, with a cozy, inglenook at one end, had casement windows and doors opening on two stone porches and a terrace that overlooked the sea. The trim of the room was in white enamel paint, with mahogany doors. The walls were of silvery gray grasscloth, and the rugs were a soft olive green. The furniture was chiefly of silvery gray wicker; stained, not painted, and of very simple design. In addition there was an occasional piece of old mahogany.

But the principal attraction was a wonderful English cretonne of which valanced window-curtains, lamp-shades and several sofa-cushions were made. This cretonne had all the richness of the finest stained glass, and reminded me of La Farge’s famous Peacock Window. It had a gray background over which shaded green peacocks spread their decorative tails, while bunches of deep purple grapes and rose-pink peonies gave the requisite dash of color. The portières, leading into the hall and dining-room, were of Arras cloth in an exquisite shade of purple, and the cushions for the wicker chairs and divans were also of Arras cloth, some in purple and some in green. Fascinating shades for the electric light were made of small pink wall-paper flowers appliqued on a semi-transparent material. The casement doors had curtains of silvery green unfadable gauze—shirred top and bottom.

The dining-room, opening out of the living-room, carried out the same color scheme, only, instead of the grasscloth, the walls were wainscoted in square white panels for about five feet. Above the woodwork was a charming foliage paper, shaded gray poplar trees on a white ground. The same colorful cretonne was used here with green rugs and mahogany furniture.

Hot Water from the Furnace

Furnace water-backs for supplying the hot water necessary for the entire house—bathroom, butler’s pantry, kitchen, laundry, etc.—are now to be had at a very low cost, and are widely coming into use. The vast advantage of installing them in the furnace of the house, and so only having one coal fire both to heat the house and supply hot water, are readily apparent to all careful householders. It should be remembered in this connection that such a water-back will absorb a certain amount of the furnace fire heat. When planning for a new heater, allow two feet more heating surface in its capacity for each gallon of water the kitchen boiler contains; for example for a forty-gallon boiler allow eighty additional feet of heating surface if your furnace is a “direct” steam system, and three feet additional heating surface if the heater is a “direct” hot water system. Also see that a sufficiently large hot-air furnace is installed when this appliance is to be used.

Willow Lamps

A decided novelty in the way of lighting arrangements is the electric light stand in the shape of a lamp made of willow, the standard, shade, and all parts being woven in one piece. The incandescent bulb is screwed to the regulation socket just as in an ordinary lamp made of brass or copper with glass shade, and with the cord and plug the lamp may be attached to any electric light fixture.

It is suitable for both indoor or outdoor use. Corresponding in design as it does with the present style of willow furniture, it makes a most attractive piazza light and is of so little weight that it is easily moved about. For use in a library, hall or den it is equally effective when left the natural color or stained to tone in with the furnishings of the room.

The shades are made in a number of different shapes, some conical, others with perfectly flat tops, and a number have simple designs in openwork effect, either in the sides or serving as a decorative border. For indoor use this is particularly ornamental, as the shade may be lined with silk of a contrasting tone that gives a satisfactory touch of color through the open places. With the exception of the electric light bulbs there is nothing about these lamps that can be broken and, owing to the fact that the shades are practically opaque they are useful as reading lamps, besides being just the thing for rooms or porches where a certain amount of light is desired with no glare from a shade of brilliant colors.

The use of willow is by no means limited to the summer season. It is now woven into very useful lamps for the informal room.
November

WHEN November comes we are thankful indeed to turn to the plants rescued from the garden—or more prudently grown all summer for winter gardening—that make cheery some spot in the living-room.

Without, the sky is dull, the wind chill and cutting: it is the season of sere and yellow leaves and a desolate outdoors. Within, every petal, even every fresh green leaf, for weeks to come, will be treasured, and rightly so, for whatever adds to beauty adds to life.

However, the trouble is not over—in fact, it has just begun—when we get our plants into the house. Only yesterday I called at a house where the mistress exhibited with some pride a fine lace fern (Asparagus plumosus namus) which she had been doctoring up during the summer for a friend. She added sadly, however, that she could not keep it in its present flourishing condition because she has gas illumination in the house. There are many less experienced women who do not realize the baneful effect of even a trace of gas in the air, and who fuss over their plants all winter and watch the leaves and flower buds die as they unfold, without knowing what causes the trouble, and wondering why they do not have better luck with flowers.

How I Save My Geraniums From Year to Year

FOR a number of years I have not been obliged to buy any geraniums for my garden, having saved my stock from year to year. While I succeeded in carrying over the plants, I cannot say that they were particularly good to look at in the early spring, because of their long drawn out scraggy appearance. Judging from what I saw in other gardens, I was content with this condition. A fortunate meeting with a person more skilled in the gardening art than myself quite upset my notions. It was a happy upheaval, however, for I learned much about geraniums, and now instead of plants for which I feel obliged to make apologies, I can show a stock that will compare favorably with that grown for the trade. In the fall I now take out of the garden all the geraniums that I care to carry over through the winter. Some of these I pot and others I pack away in boxes, first cutting them down to mere stumps. Almost 90 per cent. of these small cuttings will grow to be plants. These boxes with the stumps are put in the cellar and just kept alive by an occasional watering during the winter.

I take a number of bowls, or larger receptacles, and fill with enough water to cover the roots of the geranium's stumps. Before this is done, however, I dissolve in the water about five or ten grains of nitrate of soda, according to the relative size of the vessel. The geraniums are then put in the light. In a short time root action begins and the plants make such rapid growth that in a month they can be potted off as stocky plants or even planted outdoors. In administering this treatment, remember to change the water when it gets foul, and also to wash out the roots of the plants, as they are apt to collect a greenish scum.

In potting the geraniums from the water, do it carefully as the roots will be found very tender and rough treatment will do them great harm. I sometimes paddle the loam and pour it in on the roots. This is a good method and results in the minimum injury to the delicate root fibre of plants.

The nitrate solution should just cover the roots of the plant to be forced

After standing in the light awhile the effects soon show in a vigorous and stocky growth

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In connection with my cellar treatment I have a coldframe out of doors, and just as soon in the spring as possible, even before the frost is gone, I put out my plants. On cold nights I cover them with mats. This treatment in the coldframe hardens them and makes them in prime condition for planting.

I wish I could impress on people the fact that there is no mystery or difficulty in keeping plants over during the winter in the cellar and then getting from these same plants in the spring a new stock sufficient to plant under glass many times over. The idea is to keep them quiet in the winter and then force them early in the spring. Cuttings taken from any of them at this time will grow and will, with the aid of a coldframe, make sturdy plants by planting-out time.

Care of Plants in the House

In order to be successful with plants in the house, one must give them the right conditions: a proper environment, proper temperature, proper ventilation and proper degree of moisture.

In regard to the first condition there is not room here to go into much detail. In most dwelling places there may be found one or two sunny windows that may be fitted up with shelves and used for the winter garden. The first shelf, on a level with or a few inches below the window sill, may be made a foot or even two wide and longer than the width of the window, as some plants will thrive without direct sunlight, and may be kept in the partially shaded background. Other shelves, eight to twelve inches wide, may be fitted in above, at sufficient height to allow the plants on lower shelves plenty of room. If a thin strip of wood, say ½ x 3 inches, is nailed along each edge of the shelves, and are covered with an inch or so of small pebbles, the pots will drain better, look neater, and make less muss than if simply set on the flat boards.

There are many instances in which a special place may be easily made for winter plants. Bay windows may frequently be partitioned off from the rest of the room, by glass partitions or even by curtains of closely woven cloth, and the temperature and moisture in the air within the enclosure managed independently of the rest of the room. This is fully as important in keeping the proper degree of moisture in the air as it is in giving an even temperature, for no matter how thoroughly the latter may be regulated, if the air is dry, as it is almost certain to be in any living-room, the plants will suffer. The temperature for most house plants should be kept at from forty-five to fifty-five degrees at night—not under fifty degrees when it can be prevented. The day temperature may run ten to fifteen degrees higher. The temperature should be kept as even as possible, as much harm being done by sudden changes as by too low a temperature. Do not go by guesswork; a good thermometer should be kept near the plants, but shaded from direct sunlight.

Ventilation is as necessary as heat. Plants to be healthy must have fresh air. As a general rule, plants in the house should be given all the fresh air possible while maintaining the required degree of temperature. This does not mean, however, that on a cold windy December day you should open a window near your plants because the thermometer climbed to sixty or sixty-five. To do so would work havoc with your plants. Direct drafts must at all times be avoided when the outside atmosphere is cold. A window in another part of the room, or behind a screen, may be used. Or in very cold weather, it will be better to bring it in in and boxes saturated at all times so thoroughly that the soil is heavy, like mud.

Well drained pots in summer, when water is evaporated very rapidly and when they are making rapid growth, will stand a great deal of watering. But in winter, when for the most part they are undergoing their resting period—usually from October to February, and when the soil will retain moisture for days—no such quantities should be given. The safest rule is to water thoroughly until the soil is wet through (as can be determined by inverting a pot some ten minutes after watering, and knocking out the ball of earth) and then withhold it altogether until the soil itself, by slightly drying out and whitening on the surface, indicates that more

(Continued on page 326)
ASTRIDE A HOBBY

WHEN a man buys an automobile there are few details of its construction, design or working characteristics that he does not investigate in advance. Before he pays real money for a car he knows enough about it—unless he is the one man in a thousand who is willing to buy a "pig in a poke"—to expiate at length upon its advantages in design and the excellence of the materials employed. He knows that only the highest class of drop forgings have been used in the axles; that the best known type of magneto has been put into the car; that there are installed all the little devices that make for comfort and luxurious ease of operation. It is hard to conceive of a man who would buy a car without knowing that he was getting tires of a reputable manufacturer. Yet this same man, who must have the quality of every part in an automobile demonstrated before he buys, will buy a house after the most casual sort of an inspection. He does not know whether the stucco on the outside walls is on a good or a worthless support. He does not know whether this support is fastened directly to the stud frame or whether it has the desirable board sheathing and building paper in between. Whether the flooring consists of a single thickness of cheap North Carolina pine or of dependable Georgia pine on an under-floor, is a question that he does not think it worth while to investigate. Why this unquenchable thirst for information in the case of the automobile and this blind faith in a protecting Providence in the case of the house? The only reason that occurs to us is the tendency on the part of a hobby to induce hard riding. Moral: Get the house hobby.

PRIDE OF CRAFT

IF you will examine in detail a house built a century or more ago, comparing it with a modern house of the same general class, you will notice a difference that corresponds very closely to the difference between a piece of jewelry that is modeled by an enthusiastic hand-craftsman and one that is stamped out by a die in a machine. Here and there in the old house you will find some curiously interesting eccentricity of construction—some ingenious solution of an awkward problem. When a carpenter was fitting the wood trim around a door close to the end of a partition he used his judgment and turned out an attractive if not a perfectly symmetrical doorway. Today the carpenter would change the location of the door rather than risk being unable to follow his rule-of-thumb treatment of the opening. The result is that the great majority of our modern homes look as if they had been stamped out with the same set of dies from some vast house-making machine. It is too bad, for this makes it all the harder for a home to have that air of individuality that we all recognize and promptly covet on sight. Our houses are turned over to us, fresh from the die-stamping machine, and our only hope of attaining individuality in them lies in the furnishings and decorations. But there is a way out of this and it deserves earnest consideration. Before the building is quite finished, go over it and note the details that are not beyond your own ability as a craftsman. There are sure to be some of these, even for the most unskilled. In all probability you are enough of a carpenter to build your latticework for vines, from your own designs; or perhaps you can take the bread out of your mason's mouth by laying your own hearth; homemade hardware can be given an air of distinction very easily, as Mr. Maxfield Parish has so well shown in his own home; built-in shelving and presses for photographs, engravings and such things are not beyond most of us. If we would stamp something of our own personality upon our homes we must make up our minds to the fact that the work of our own hands must find its way into the structure—the more it is in evidence, pro-

vided only that it is well done, the more surely will that particular house be ours unmistakably.

A SUGGESTION FROM THE COUNTY FAIR

T HE county fairs of 1911 are past and the man who failed to attend at least one of them missed a rare treat. There is a good wholesome atmosphere about these fairs that fosters optimism. Each year the prize pumpkin seems a bit larger than ever before, the broad-backed hogs more unwieldy and shorter-legged. On every side there is something to remind you that nature has once more produced a marvelous harvest of grains, fruits and livestock. A day at a big county fair is the surest antidote for pessimism that we know.

It seems a pity that the amateur gardener has not taken his cue from the county fair and shown a greater activity in organizing competitive exhibitions of flowers, fruits and vegetables. While we do have the great benefit and pleasure to be derived from a few of these shows, like the recent Dahlia Show in New York and the annual events of the Massachusetts Horticultural Society, competitive exhibiting among amateur gardeners is not nearly so common as it should be. In England the various local shows of the National Rose Society bring out not only the keenest competition between amateurs and professionals, but a wide dissemination of rose-growing knowledge that has made our English brothers the most skillful rosarians in the world. Our fellow-enthusiasts, the amateur photographers, have no end of competitive exhibitions, tending always to raise the standard of pictorial photography in print or lantern slide to a still higher level. The time has come for some much-needed work in organization of local horticultural societies among amateurs. What can you do toward helping along the good work?

EGG LAYING IN THE CANAL ZONE

A S related in the Canal Record of August 23, 1911, the hospital at Ancon started a poultry farm in January, 1910. They began with 200 Brown Leghorn hens and 15 cocks. Later 100 hens and 10 cocks of the Rhode Island red type were added, and the next winter 230 Plymouth Rocks arrived. This stock was increased this year by 100 Brown Leghorn fowls. The first 18 months saw a total egg production of 53,469 eggs (about 4,455 dozen). Analyzing the part each breed had in this total it was found that the Leghorns laid 29,329 eggs, the Reds, 9,098 and the Plymouth Rocks, 15,042. As to the comparative share each had in this total, the figures showed that the monthly average over a period of eighteen months for each Brown Leghorns was 8.2 eggs; for R. I. Reds, 7.7 eggs, and for Plymouth Rocks, 6.5. A table is also published giving the monthly number of eggs produced and the approximate cost. Although difference of climatic conditions would have to be taken into consideration to apply these figures to conditions here, the comparative laying ability of the different breeds and the cost of running the farm may be used as standard with our results. We reproduce this table entire:

<table>
<thead>
<tr>
<th>Month</th>
<th>Eggs Laid</th>
<th>Cost Per Dozen</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>287</td>
<td>$5.07</td>
</tr>
<tr>
<td>February</td>
<td>243</td>
<td>$5.33</td>
</tr>
<tr>
<td>March</td>
<td>247</td>
<td>$5.81</td>
</tr>
<tr>
<td>April</td>
<td>281</td>
<td>$6.16</td>
</tr>
<tr>
<td>May</td>
<td>299</td>
<td>$9.94</td>
</tr>
<tr>
<td>June</td>
<td>235</td>
<td>$14.15</td>
</tr>
<tr>
<td>July</td>
<td>223</td>
<td>$14.75</td>
</tr>
</tbody>
</table>

The greatest story that these figures tell is the careful method of proceeding in a business-like way in recording the success or failure of a husbandry undertaking. Without such a record the last year's experiences have nothing to teach us for the future. They shed no light on improving our methods or buying new stock.
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Garden Suggestions and Querles
(Continued from page 323)

Garden Suggestions and Querles
(Continued from page 323)
orating on or by all registers, radiators, etc. These may be made decorative as well as useful, by the use of cut flowers, or placing in each an inverted empty pot to support a fern, palm or other plant which will thrive in partial shade. In the second place, shower the plants frequently. This does not mean watering them. Use a rubber sprinkler, or better, a small florist's syringe, and spray the foliage without wetting the soil.

This treatment is useful not only in keeping the atmosphere moist, but it helps keep the foliage clean. The plant's lungs are its leaf pores, and if these get coated over and clogged with dust, it cannot remain so healthy as it otherwise would. The plants should be covered over with a light cloth when the room is being swept, and the leaves wiped off occasionally with a soft cloth. Plants kept in such positions that they cannot be freely sprinkled where they are may be from time to time set in the bath-tub or sink and given a showering there.

A sharp watch must also be kept for insects. The conditions which usually breed them are weak, crowded or dry plants, and lack of thorough ventilation. Cleanliness and fresh air will do much to keep them away. The green plant louse or aphid, mealy-bug, a white cottony looking bug, and the red spider, so minute that he can hardly be seen, are the three most commonly encountered. Methods of fighting them will be explained in a subsequent issue of HOUSE & GARDEN.

IN THE VEGETABLE GARDEN

THE vegetable garden looks pretty forlorn now—that is, if you have not cleaned it up yet. It must look empty at this season of the year, but it should look neat and clean. No old pea bush, bean stalks, asparagus tops, should be left scattered around to harbor insects and delay work next spring. Clean them all up and burn or compost them. Most of the vegetables will have gone to winter quarters before this. Parsnips, salsify, brussels sprouts, celery, are yet out. The former, for use during winter, should be dug out and trenched or stored. Some may be left in the ground where they are, but it will be better to take them up and put them somewhere out of the sun, where they will stay frozen. Celery should be trenched or stored, as already described, for early spring use. Roots and all are stored, and it is not trimmed until wanted for market or table.

Do not forget the compost heap. It is the chance to be storing up plant food for next summer's garden—anything that will rot, as we have frequently said. A little lime, and once in a while a wetting down with water, will help things to rot quickly.

IN THE FLOWER GARDEN AND GROUNDS

OUTSIDE there is not much that requires attention. See that the roses have been properly cut back and mulched,
that the stalks and leaves of hardy perennials are cleaned up and removed, and a mulching of leaves or rough manure given. The objection to leaving the old leaves for a mulch is that disease germs and insects' larvae and eggs are carried over in them, ready on the spot to work injury the next season.

In the trees and shrubs any branches which may have been broken by fall winds should be cut off clean and painted if of any size. Do not leave them to be whipped about and start rot where water can lodge in uneven breaks.

As the snows come, and the last vestiges of summer disappear, keep your eyes open for pleasing effects with buried and colored-barked shrubs in the gardens you visit or pass, and note what could be utilized in the improvement of your own home surroundings.

OTHER SUGGESTIONS FOR HOUSE PLANTS

HOUSE plants of any kind that seem to need more life and energy will thrive by submitting the soil to a course of ammonia water application. Ammonia, when diluted in the proportions that one makes it to wash windows, is a fertilizer. Soapy water is quite as good, and a combination of soapy water and ammonia is still better. Give the poor house plants a drink that is also food to them when you are about to throw into the drain a material that they actually require to keep them at their best.

Another cheap and effective way to keep house plants free from disease is to put a bag of soot in a pail of water, let the contents settle and use a very weak solution for watering plants. Soot is a very valuable fungicide, and when used in this way will keep plants healthy.

During the winter months house plants are frequently attacked by destructive worms. Their presence is indicated by a sudden drooping of foliage and a general decline of vigor. Yet there is no outward sign of the underground siege. A way to exterminate these pests is found by pushing into the earth, near the plant, a number of parlor matches, sulphur end down. The fumes of sulphur destroy the animal life, yet are non-injurious to the vegetable life of the plant. An almost instantaneous relief is effected.

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old English hearth was never complete without its trivet, and if one of New York's dealers in antiques has his way, it may soon become re-established on this side of the Atlantic as one of the most conspicuous of fireplace furnishings. It is a simple little stand with a cast brass flat top, and usually on a three-legged base about a foot high. Its purpose is to stand close up to the fire and hold the tea-kettle or other dish for warming purposes, thus taking the place of the crane. The toast stand belongs to the same family, and is used in the same way, but can only stand on the hearth on its own feet, whereas the trivet has hooks on one side to be hung over the foot rail or fender when desired. Dickens tells us about the trivet, and it has been a leading character in many fascinating fireside stories. In one of its forms it has an ingenious sliding arrangement whereby it can be pushed out over the flame, and in some forms it has extra long legs with room for a plate rack below the top surface.

Another old English idea which never gained much headway in America is the seat fender. This is a simple piece of furniture used as a settle in front of the hearth or to be pushed up against the mantel when there is no fire burning, and still serve the same purpose. It is made in all lengths from 18 inches to 5 feet, and usually has an upholstered top. Its most fitting place would seem to be in large halls, club-rooms, or places of that sort.

It would hardly do to omit the fender or foot rail from the catalogue of the hearth's equipment. We do not use the foot rail as much as our ancestors did. It is, in fact, one of the things whose value we have grown to doubt. It offers no protection against sparks or heat, like the screen, and certainly it does not keep us out of the fire were we determined to walk into it. On the other hand, it would be a most convenient thing to trip over if we were looking for something for that purpose. Then, again, while it may have been ornamental at one time, it is no longer needed as an ornament, and we have grown to prefer the fine brick and tile hearths just as they are. Still, if the fender is wanted, it can be had in any one of many fine patterns in polished brass.

The fireplace hood is a somewhat modern device originally introduced to secure better draft when the chimney is not altogether efficient or large enough for this purpose. More recently the hood has often been extended further up the mantel, and sometimes even to the ceiling, to produce a decorative effect. However, if the chimney is well constructed to permit the fire to draw properly, we can well dispense with the hood, and can rely on the brickwork or tile of the facing for the decorative requirements of the case. The hood is seen at its best in the craftsman style of fireplace, and it affords much opportunity for the worker in brass and bronze to display his skill, but there is something about it that makes us feel that

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New York City

The possibilities for character in brickwork are well evidenced in this window treatment. The possibilities for character in brickwork are well evidenced in this window treatment.
buff color. The deep yellow of the long brick is also relieved by the wide mortar joint which is nearly white.

The window arches are formed in counter sunk areas. The key of each window arch is subordinated by what would appear to be an original idea (if such there is) in the use of bricks. The periphery of this sunken area is made of headers alternating in color, deep yellow and buff. The center of the arch is a highly polished piece of marble of diamond shape. About this and surmounting the lintels are the same face bricks as above described, broken into squares and laid on edge. The cut surfaces of these bricks show quite rough, but not objectionable. Whether original with Mr. Hooper, or not, the design is artistic, attractive and wears well.

The Migrations of the Birds
(Continued from page 313)

and several times after storms, windrows of dead birds have been found at the water's edge.

It is interesting to note the relation between migration and the bird's molting. Most birds care for the young until they are old enough to look out for themselves, then go through the molting period and when the new feathers are fully grown start on their southward journey in their fresh new clothes. But the birds that nest beyond the Arctic Circle have too short a summer to allow of such leisurely movements. They begin their migration as soon as possible after the young are out of the nest and molt en route. Various peculiar changes of plumage are presented by some birds in the different migrations. The bobolink goes south in the fall as an obscurely marked bird of buff and olive; he returns the next spring the well-known black and white denizen of the marshes. The scarlet tanager performs his fall migration in a suit of uniform greenish yellow that is known to only a small part of the persons who welcome him as an old friend when he returns the next spring in his striking black and scarlet.

Among the idiosyncrasies of bird migration may be mentioned the fact that a few birds choose different routes for the spring and fall migration. The Connecticut warbler goes north in the spring up the Mississippi Valley to its breeding grounds in southern Canada and then in the fall journeys at first almost due east to New England and then south along the Atlantic coast to its winter home. The golden plover has the same double route, but on a much larger scale. This bird goes south in the fall by way of Labrador and Nova Scotia and across the Atlantic Ocean to South America and by land to Argentina. Then the next spring the return trip is made by way of northwestern South America, Central America and the Gulf of Mexico to the Mississippi Valley and across central Canada to the nesting

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Cosmos After Frost

LAST fall, quite by accident, I happened upon a pleasing discovery regarding the cosmos plant.

As usual, just as these plants began to flower profusely in my garden, Jack Frost put in an appearance. One afternoon late in September, the thermometer suddenly finished its journey to the north and the mercury dropping steadily until there was no doubt that freezing weather was actually close at hand. So cold grew the air that there seemed not the slightest hope that temporary covering of any kind could save the glory of the cosmos plants and the only course left appeared to be the picking of the blossoms that their beauty might be enjoyed a few more days inside the house. My hands grew numb with the cold as I pulled the blossoms and in the wild hurry to save each flower one strong thin plant, fully four feet high, was unearthed bodily. The soil was so dry that not a particle of it adhered to the roots. Some way, I could not bear to leave the plant in this bare uncovered condition to the ravages of the cold, and although possessing not the slightest hope that the plant in question would live, I hastily filled an old leaky tin pail with earth, planted the cosmos in it, carrying the plant into the house along with the cut flowers.

That night the ground froze solid and the beauty of every growing thing was laid low. Great was my surprise and joy, however, to find that the cosmos plant I had brought into the house apparently was suffering no ill effects from its rude uprooting, the leaves giving no sign of wilting and the flower buds standing as fresh and wiry as when growing out of doors. For a few days the plant was kept in a shady corner of the room and the roots were watered faithfylly, but the plant was moved near a sunny window. Until Christmas time the plant was

grounds on the shores of the Arctic Ocean.

Much has been learned during these later years of the migratory birds, but much remains to be learned. Not a month passes without additional information on some phase of the migration of some species appearing in the ornithological magazines. The migration route and the winter home are known now in more or less detail of every species of United States bird except the chimney swift. Where the millions of this well-known bird pass the winter has not yet been ascertained. Their progress southward in the fall across the United States can be traced and timed until they reach the northern coast of the Gulf of Mexico. Then they start out over its water and become lost to our knowledge. The next spring they return in countless thousands, but where they have spent the five intervening months is thus far an unsolved mystery.

Garo
The Garden That Came
(Continued from page 305)

The hardy white pinks with their spicy breath came in the hands of the toughest boy in the city precinct, who loved my flowers; and the sweet rocket that hurried to complete her masterpiece of white and lavender in a shady corner every spring before the roses begin to exhibit, came in the tiny apron of a fairy girl-child who loved my flowers; and the woodbine on the high fence behind them came from the brookside where the tough boy and the girl-child and I went after mimnaws. The boy is worshiping the fairy now, and here grow the white pinks and the sweet rocket and the woodbine in remembrance.

Of course, such queens of the garden as the six-inch dahlias and hybrid gladiolus, such pictures as the blue larkspur and Madonna lilies and Shasta snowblank do not 'come' except in exchange for very hard cash. Neither do Persian cats and blooded bulldogs. But with the blooming of these modest ones the loves and memories in them bloom anew each summertime, and they are dearer than the florist's dearest rarities. As for rescuing the graceful, grateful lesser ones from the highways and byways and darkest woods, if they will persist in holding up pleading hands and faces that need washing every time I stir abroad, seeking sanctuary with me as does every homeless kitten and tramp dog in the valley—what else is to be done?

The Garden in the Foot Hills of the Adirondacks
(Continued from page 316)

cents and engaged all future crates they might get. So far I have used four and the effect is wonderful. Flowers of every color look well against that twisted bark fence, which I put as a background for the borders.

Looking down my garden the effect is yellow, looking up, pink and white. Below the middle rustic arch are two beds filled with larkspur and iris, and further down I have shrubs on either side. The entrance arch is covered with a Japanese climbing rose, and to emphasize the approach I have planted five small arborvitae on each side. Directly across, join-

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Planning the House and the Garden Together

(Continued from page 300)

Of course in the case of a large country place the problem, because it is more complex, is usually handled less fearlessly by the average owner, because the difficulties are more apparent. At the same time it is well to insist on the fact that the best results are to be obtained by a cheerful co-operation between the owner, the architect and the landscape designer. To obtain this result it is always best to consult with your architect before the selection of the landscape designer in order to insure the selection of men who can work together in harmony.

Experiences with House Plants

A Symposium

(Continued from page 295)

its place in the dining-room and put on its stand, which has on top of it a galvanized iron pan, painted green, sixteen inches in diameter and two inches deep, which serves as a receptacle for the water that drains out after watering. This reserve is held there to be absorbed as needed before the next watering. Each plant is operated on and cared for in just this same way, and by the first week in May they are growing beautifully and ready to be put out on the veranda. From this time until October they are thoroughly watered every twenty-four hours, but never until the sun has entirely gone down, and once a week one tablespoonful of ammonia to the gallon of water is used at watering. The growth is so rapid that soon the newly developed fronds almost entirely cover the pots and touch the floor. By the last of October brought back into winter quarters and given all the air possible until freezing is feared, and even in the cold winter doors are left open sometime each day. No special attention is ever paid to the exact temperature of the room they occupy. We just make an effort to see that they do not have any extreme heat ing the trees, I transplanted some wild barberry.

I rather coax along plants that do not mind a clay soil, of which there are a number, such as hollyhocks, pinks, larkspurs, columbine, and others. In spite of the northern climate, no one, I am sure, after June, can boast of more glory than I. When I realize the hundreds of dollars that are spent on gardens and the feeling so many have of not being able to afford one, and see the delightfully pleasing effect I have produced with so little outlay, I only wish I could help others toward the possession of a little garden, that they may know this source of unending pleasure.

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or extreme cold. While indoors, ferns are injured, I have found, by over-watering. If they are kept as a beautiful decoration all winter, they should not be watered until they have entirely absorbed all water drained through from the last watering into the under-pan, and the soil looks a little dry on top. February is the rest month, and they should not be watered more than once thoroughly in that month.

My ferns are so large, they are never moved during the winter months, only to turn them every two weeks, so that all sides may have the direct rays of light. Care is taken to make as little dust as possible, as the only showers of water they ever get are secured at the time of transplanting and during the summer, when all the plants are lifted off the verandas to enjoy two or three gentle summer showers. In the country they do not have the dust to collect on them as they do in towns and cities.

With healthy plants to begin with, these directions should bring successful results to those who wish to grow the Boston fern.

**Edna Coulter.**

**Homes that Architects Have Built for Themselves**

(Continued from page 303)

Holding clothes, but now promoted to the rôle of a writing-desk: Indian temple hangings, Chinese candlesticks, a Norwegian wooden horse collar acting as a mirror frame, and pipes from all corners of the globe.

The remainder of the house may be considered as stereotyped, unless electric washing and ironing machines in the laundry are deemed unusual.

Such is one architect's home; and, if it is a poor thing, it is at least mine own.

**The Case for Hot Water Heating**

(Continued from page 315)

At least five dollars per year should be allowed on repair account for the items mentioned, making the total yearly expense for steam heating $90.50.

A hot-air heating apparatus for such a house should cost exclusive of any special features in the interest of ventilation not less than $250, the interest on which is $15. For a performance with this type of apparatus that will measure up, even approximately to the results obtainable in hot-water heating, at least fourteen tons of coal will be required, or a yearly expense for fuel of $84. In the matter of repairs not common to hot-water and steam-heating apparatus fire pots and many other parts of a furnace are comparatively short lived. A yearly allowance of five dollars for repairs and five dollars for rapid de-

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MURRAY & LANMAN'S
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"THE UNIVERSAL PERFUME"

Has a distinctive quality, a rich fragrance, which from every other appeals to all and refinement. Its use transforms the daily bath into a delight. It is the best thing for every toilet purpose; an invigorating and permanent distinction to toilet water, and people of taste. In steam heating the water surrounding the fire determines the efficiency of the heater. The material (cast iron) of which steam and hot-water heaters are usually constructed, is the same and therefore does not affect the present calculation.

The rapidity (consequently the quantity) of heat transmission from one medium (fire) to another (water) through an intervening substance (iron) is directly dependent upon the difference in the temperature of the two mediums. In steam heating the water surrounding the fire is never less than 212 degrs. Fahr. In hot water heating the average temperature for the season, of the water returning to the heater will be less than 120 degrs. Fahr., which makes almost 100 degrs. greater difference in transmission activity in favor of hot-water heating.

In the hot-water heating of the house referred to above, to 70 degrs. Fahr. during zero weather, there will be required 108,000 heat units per hour to maintain the 70 degrs. temperature of the rooms, and 6362 heat units per hour for warming the air supplied by the indirect radiators; a total of 114,362 units per hour delivered into the rooms; and this quantity of heat net, is all that it will be necessary to produce from a hot-water heater.
With hot-air furnace heating it is usual in the best practice to limit the velocity of hot air entering the rooms through the registers to about four feet per second. The house in question should have a total free area of registers of about three and one-half square feet. With the above area and velocity the furnace will deliver into the house 50,400 cubic feet of air per hour. This volume of air must be heated from 0 degs. to 70 degs., the temperature of the rooms, and such heating will require 64,120 heat units. In addition there must be supplied 108,000 units to maintain the 70 degs. in the rooms against the usual losses, making a total demand upon the furnace for 172,120 heat units per hour.

Assuming the efficiency of the hot-air furnace in producing heat from coal equal to that of the hot-water heater and that 8,000 heat units per pound of average quality of coal is the amount of heat delivered to the rooms, then we determine that it will require 14.3 lbs. of coal per hour for hot-water heating and 21.5 lbs. of coal per hour for hot-air heating.

It will be well to note that the volume of air required to convey the heat from the furnace to the rooms, as above, will need to be heated to a temperature of 131 degs. Fahr., which is as high a point as consideration of health will permit. A smaller volume of air at a higher temperature would be pernicious.

Another important point of difference between hot-water and hot-air heating is that the air entering the room through the register flows almost directly to the ceiling and has but little effect upon the cooler strata of air near the floor. The hot-water radiator induces a flow of the cool air near the floor toward itself, and heats it, thus contributing to more nearly equal temperatures at the floor and ceiling of the room.

A point of advantage in hot-water over steam is that in the former method moderate temperatures of the water will serve both direct and indirect radiators at the same time, but with steam at 212 degs. and no gauge pressure, the direct radiators may be sufficiently heated, and the steam will have no appreciable effect upon the indirect.

In the relative acceptability of the hot-water, steam and hot-air apparatus in their adaptability to the structural, architectural and decorative features of the house, one is confronted with the problem of providing spaces for registers or radiators as the case may be.

In the matter of locating them so as not to displace the rugs, the radiator being much narrower than the register, its position next the wall seldom interferes, while the floor register does.

The pipes of the hot-water system are readily concealed within the walls without special structural provision or cutting important timbers of the frame, which is nearly always necessary in providing spaces for the large caliber hot-air pipes.

In the earlier piping methods employed,
and with the crude, ugly designs, then common with radiators, much was left to be desired from the esthetic standpoint. Today, however, design and decorative coloring of radiators make them notes in the general harmony of the room.

There is scarcely a space of any shape or dimension in a room (the general arrangement of which has been designed without reference to heating) but can be utilized for the reception of one of the hundred shapes, sizes and designs of the modern radiator.

While the window seat is only one of the means whereby a radiator may be wholly out of sight, a little personal attention on the part of the architect and some exercise of his professional ingenuity will evolve new possibilities.

**The Time to Purchase Palms**

ONE of the best seasons to buy palms for house culture is in the early fall, before cold weather has set in. Then there is less danger from exposure, and the plants have time to become well acclimated before the trying experience of a long winter in a tightly closed house. Oftentimes palms are forced rapidly for winter selling, which means that they are kept in a high temperature. As a result, they suffer when transferred to an ordinary living room.

The palm should not be kept in full sunshine in summer, but will be grateful if allowed to stand out of doors in a gentle rain. Indeed, it is a good plan to give the palm an occasional spraying with tepid water at all seasons.

Palms must be kept out of a draught, and it is well to avoid pots which are unduly large, as all palms do best when there is not a large amount of earth around the roots. It is advisable to loosen up the earth occasionally and to see that the water applied soaks through all parts of the soil. Palms need an abundance of water, but abhor wet feet—water must not be allowed stand in the saucer.

The Making of a Walled Garden

(Continued from page 310)

and leaf mold should be used just as if it were mortar, except that it is advisable to use small stones or pieces of brick to keep the joints wide. When the wall is used for retaining purposes one should endeavor to make it possible for the roots to run through to the earth beyond. In mortar-joined walls interstices may be left to be filled with earth. These should be of sufficient size to support normal growth of the varieties planted.

Planting may be accomplished by means of seed or seedlings. If seeds are chosen, see that they are given a fair start. A good way to do this is to prepare a pill of

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seeds by wrapping them in moist loam and sphagnum moss, and pushing them into crevices. With seedlings, one should allow them to gain a fairly thriving growth of rootlets and carefully hollow out a place for them. Pack the soil tight, as in potting, and leave but little of the plant projecting.

There are numerous plants suitable for wall planting, but a characteristic list of those giving best service is here given.


The Swiss Chalet for America

(Continued from page 292)

terior paneling there is nothing more attractive, all things considered, than redwood and to the interior plans of American chalets, architects have given fancy full play. It is a difficult matter to preserve the artistic simplicity of the Swiss interior and yet to harmonize it with the requirements of modern convenience. Yet this has been done by many builders and has made the American chalet delightful both inside and out.

In our money-governed world one must not forget the matter of expense which enters very largely into the building plans of so many people. Economy was necessary to Swiss people; consequently their architecture was on a style that cost little. And the same is true in America. One can build a Swiss chalet for a third less money than it will cost to erect a house of similar pretension in other styles. Of course one may also put a great deal of money into a chalet, so that it really satisfies all classes; but to such as want an inexpensive home that will be homelike and picturesque and will not look cheap in that worst sense of striving for an elegance one cannot afford, the Swiss chalet is, to my mind, the ideal habit. It is a happy, light-hearted style; it is capable of an infinite variety of treatment without radical departure from its central and fundamental principles of advantage and excellence; it is strong; it costs little and endures. What more can one ask of architecture?

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A Baker's Dozen of Old English Teapots

The old teapots belonging to the Staffordshire class comprise many colors and designs; a study of them will show thirteen varieties of shapes, handles, spouts and knobs. If color photography could have been employed to bring before the reader these rows of antiques, with blues shading from pink to the dark purplish tints of the mulberry; the light blues to the depths of the dark, rich blue of the Washington's tomb pot; the fine red, blue, green and pink floral designs on the back-

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Beginning from left to right in our illustration, on the top shelf of the old cupboard is a teapot in pink and white floral decorations; next comes a pretty shaped low one, with red, green and a bit of yellow in the floral pattern on a white ground; while the third is of the same white background with a floral band of pink, blue

(Continued on page 342)

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(Continued from page 340)

and green running around the center of the pot.

The second shelf starts with the old Washington's Tomb Teapot (Mayer) in dark blue. This design rarely has the mark of Mayer on it, as Wood made the same design with the exception of the flowers, which are different. The figure which is seated is supposed to be that of Lafayette at the tomb of Washington and represents a bewigged man with knee-breeches, carrying a sword. Though the print is usually known as "Lafayette at the tomb of Washington," the face is not that of Lafayette, and when General La
dayet visited Washington's tomb he wore trousers, knee-breeches being out of the fashion. It has been thought that the figure at the tomb was intended for Jefferson. The seated, solitary figure, the temple in the distance with the rays of the setting sun as a background, are the same as in the Wood pieces. In N. Hudson Moore's "Old China Book" the sugar-bowl (Mayer) which matches the teapot tomb piece (Mayer) in this collection is shown among the Staffordshire illustrations.

Next to the teapot piece comes the beautifully shaped black and white one with bunches of grapes, two strawberries and a bird with three ball-like feathers as a top-knot. Following the plan of many potters, this piece, like many others, is marked with an anchor impressed, without color or other markings to identify it (like the anchor with "R. H.", or the three anchors, like the Robert Hancock or Richard Holdship or Chelsea pieces, respectively). The last teapot on the second row is a Burseam piece (Wood) with lanbrequin-like decoration in two shades of royal blue, the cover set well down into the top of the pot. On the third row comes first a mulberry teapot with "Pagoda" and cypress trees; second, a white one with royal blue band about half an inch wide running around the concave-occtagon central part of the teapot, the knob being formed by a flower pod. The marking seems to indicate it as being a Colebrookdale pottery piece. Another of the mulberry family, with willow trees shading the pagoda and a picturesque piece in light blue and white, completes the second shelf.

On the lower row another blue and white begins the line, "Basket of Flowers," being the name stamped on the bottom of the pot. Then comes a large pink one, which gives a fine bit of coloring of a warm tint to the middle of this shelf. The agricultural scene is very interesting, with the farmer sowing the seed in the newly ploughed ground, while the horses, plough and ploughman are distinctly seen in the distance. This teapot is the only one of the Baker's Dozen which boasts feet, which, together with its fine color floral border and ample proportions, make it a beautiful antique. In the collection of do
ded old chin pieces in the Metropolitan

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Third: Many of the shrubs are beautiful all winter and you might just as well be enjoying them during those dreary months. For instance, there is Red Twigged Dogwood, the bark of which is a glowing carmine. Japanese Barberry, with its brilliant red berries which stay on all winter, is unequalled for low mass effects or hedges.

Fourth: Next spring you and everybody else will be too busy. You know how it has been every other year—almost impossible to get what you want done, when you wanted it done. Besides, now, while your needs of the past summer are fresh in your mind, is the best time to order.

Isaac Hicks & Son
Westbury, Long Island

(Continued from page 342)

Museum of Fine Arts, New York City, it was recently a pleasure to see the pink sugar bowl which matches this pink teapot. How fine they would look side-by-side!

Last but not least comes the very fine china teapot in white with gilt spring decoration and charming outlines. A good contrast in its delicateness of tone with its gayer neighbors and a fine finish to the Baker's Dozen. Thirteen cherished possessions! "How did you get so many and such beauties!" is the exclamation of the beholders. Like Topsy, they "grew"; not in a night, for by day three friends have made "red-letter days," each by bringing an offering of a teapot to add to my collection—long enriched by the Washington's Tomb and the pink Agricultural ones (two shrines for a score of years in my china cupboard). Others were bought from the shelves of antiquarians and were carried home by hand, riding in the cars with moments of fearful anxiety. These add beauty and grace to my lovely family of growing teapots. More are on the way and the next family group will contain a score—then twenty-five will be coveted, and who can say how many shall yet be numbered mine!

Josephine Rice Creelman.

Book Reviews
(The Publishers of House and Garden will be glad to furnish any books desired by subscribers on receipt of publisher's prices, ten cents per book.)


The interesting period preceding the actual building of a home is full of an enthusiasm for knowledge. To make some of the mysteries of the architects' profession clear to laymen several books have been published. The above named book contains information making architectural terms, estimating, cost of materials and construction, specifications and kindred subjects intelligible. A considerable portion of the book is devoted to suggestions, pictures and plans of homes, barns and outbuildings which are helpful to the prospective builder.


The best work of American architects to-day is by no means limited to the large public buildings in the big cities, but considerable of it is to be seen in the residences of those who live in the country and the suburbs. Detached Dwellings, Part II, is a book of illustrations that would show the truth of this. It includes several pictures and plans of houses the majority of which equal the homes of England's landed proprietors. In addition to the numerous half-tone reproductions, the
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One is our free catalog; the other is by Professor Massey. It tells how to make and care for hot-beds, what and when to plant. Four cents in stamps will bring Professor Massey's book in addition to the catalog.

Outlines of Practical Sanitation, price $1.25; The Sanitation of a Country House, price $1.00; The Sanitation of Recreation Camps and Parks, price $1.00, by Dr. Harvey B. Bashore, M. D. Illustrated, Cloth, 8vo. New York, John Wiley & Sons.

We are more than likely to dwell upon the sensational side of progress and overlook the homely steps in national advance. As an example of this our interest in sanitation seems to be passive although science has for some time shown us the vital necessity of sanitary methods. Framed to meet this state of ignorance, these three books are full of compact and practical information which is of prime importance to everyone,—not merely the house owner—in that they give a clear and concise idea of what is requisite for normal healthy living and for prevention of disease.

Outlines of Practical Sanitation covers the field in general. It deals with the home and its requirements in plumbing, ventilation and heating, illumination, water supply and the collection and disposal of waste; telling what methods are best and where correction is necessary. The subject of food supply is also dwelt upon as is the cause and prevention of contagious and infectious disease. Besides this a rational view of personal hygiene is considered. The rest of the book has to do with the subject in relation to communities in general, and there is much here that the thoughtful taxpayer should know, to act intelligently.

"To make the country as healthy as the city..." is the aim of The Sanitation of a Country House. This statement has the appearance of a paradox until we begin to understand that while the cities have been spending millions toward improvement, the country has depended upon nature unassisted. The principles expounded in the previously mentioned book are here applied to the country house, from the time the location is selected until it has been in use some time. There are many suggestions that are helpful and best of all are simple.

Sanitation of Recreation Camps and Parks is of similar plan to these two books and applies the principles expounded to the practical building of the successful camp, protecting it from the hostile insects as well as from anything that might cause sickness.

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THOSE APPLES

—Continued

We knew that we had the apples of "Topsham Quality," but we had a qualm or two about our ability to pack them in Western style. Now we wear a perpetual smile, for we know that we can do it. Harvard University educated the foreman of the packing house, and did a good job, too. The New Hampshire College of Agriculture trained our packer of boxed fruit, and I only wish that you could see him at his work. Every apple that gets into the "Fancy" box is inspected three times, which means that every apple comes up to our standard of freedom from blemish and has good color. It is then wrapped and packed. You have seen the Oregon fruit. Ours looks like it, and tastes as only New England fruit can taste. We are so well pleased with it and with the orders that have come in, that we have made two changes. On October 15th, the price was raised and a new grade of boxed fruit introduced.

Our Fancy grade we now sell for $3.00 per box, F. O. B. Boston or South Ryegate.
Our Number One grade, in boxes, will cost you $2.00, F. O. B. We will continue to ship Number Ones in barrels to those who wish them, and will put them on the railroad for $4.50.

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We ask for a check with your order, and feel sure that you will be glad that you didn’t forget to send for a box of our apples.

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The Garden Primer
By GRACE TABOR

This book, as its title indicates, is a hand-book of practical information for the beginner, covering the whole subject from preparing the soil to the gathering of the fruit and flowers. It is set forth, without any confusing technicalities, just the information that will enable the amateur to grasp quickly the essentials of gardening. The author, in preparing this book, has drawn from her long experience, and in writing it assumes that the reader has no knowledge of the subject, in order that it may be of the greatest value to the beginner. While dealing with first principles this volume has an equal interest for the advanced gardener, who will find much of value in the experiences of the author, and in a fresh presentation of a subject which always abounds in new methods and discoveries.

Home Vegetable Gardening
By F. F. ROCKWELL

There are many books that treat of vegetable gardening, fruit growing and flowers, and the like, in an encyclopedic way. They tell what vegetables there are, their characteristics, the kind of soil and the like, all of which are valuable information, and so on, giving far too much information and too technical a form for the man or woman who wants to establish a vegetable garden on the country place or suburban plot for family use. Here is just where "Home Vegetable Gardening" is different from books of this kind. The author, F. F. Rockwell, is a practical gardener himself. He realizes from long experience just what the average layman wants to know in order to raise a successful crop of vegetables and fruits. Accordingly, he has gathered together in this little volume exactly the information that will make it of satisfying value to the amateur. Nothing is omitted to make a book that will answer every question and give a reference of unfailing value. Complete planting tables show at a glance what to plant, how deep, how far apart, the time of maturing, etc. Profusely illustrated.

The Landscape Gardening Book
By GRACE TABOR

There have been many books published within the past few years on the various branches of gardening, but most of these have dealt with the cultural side exclusively. The larger subject, embracing the whole site of the country home, particularly one of moderate size, has apparently been ignored. The author of "The Landscape Gardening Book," a well-known landscape architect, has written the one book that solves the whole problem of making a house out of a house and plot. The book shows just how to plan the home grounds, whether they consist of a suburban plot or a large estate—how to plan the entrance walks and driveways; how to plant trees so that they will give the most value in shade and beauty; how to group and plant shrubbery for a harmonious view as well as a succession of bloom; how to make the grounds attractive in winter—in short, this is the one essential book for the man who would have his home something more than a mere building set on the earth. The illustrations are superb half-tone reproductions of representative gardens and homes.

Distinctive Homes of Moderate Cost
Edited by HENRY H. SAYLOR

This book has been published in response to an ever-increasing demand for a volume of pictures, plans and descriptions of the most charming homes in the country—not the greatest to rent and show places, but the sort of places that most of us can look forward to building, ranging in cost from $1,000 to $5,000.

The illustrations, of which there are more than three hundred, both of the exteriors of houses and their garden settings, and of the principal rooms inside, are all from photographs of houses already built, reproduced in superb half-tone engravings, with line drawings of the floor plans.

The carefully selected contents include country homes, seashore cottages, alluring bungalows, inexpensive remodelled farmhouses, etc. All the desirable architectural styles are represented: Colonial, English Half-timber, Swiss Chalet, etc. Chapters written by authorities cover all sides of the fascinating problem of house-building, interior decoration and furnishing. The relations between the home-builder and his architect, the matter of plans, specifications, contracts, the puzzling problem of extras and how to avoid them—all these subjects are clarified in a most comprehensive and interesting way. Throughout the text are many pages of pictures illustrating constructive, decorative and furnishing details—entrance doorways, bay windows, outside shutters, chimneys, stairways, dormer windows, built-in china-cupboards, consistently furnished interiors, porches—all grouped so that the reader may, at a glance, compare all the best types.

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The prospective builder can find no more adequate or valuable assistance in determining the style, construction and decoration of his home than this book, "Inexpensive Homes of Individuality." It contains plans and photographs of houses, moderate in size and of greatest architectural merit, and is full of just such suggestions as the man about to build will appreciate. It offers an opportunity to study in detail some of the finest homes in the country, of many different styles and varying in cost from $2,000 to $8,000.

Mr. Frank Miles Day, past president of the American Institute of Architects, has written the introduction on the "Choice of a Style for the Country or Suburban Home." Within the sixty-four pages there are over one hundred and twenty-five illustrations and plans made doubly illuminating by information pertinent to cost, location and detail of construction. Printed on coated paper, with an attractive art cover design in two colors.

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Our Education is never complete. The more we travel the broader our education becomes, but many of us cannot travel, time does not allow.

The Real Palestine of To-day, as seen through the eyes of Dr. Leary, is an unfailing source of real education, and absorbing interest. From what land can more of educational value be had, than Palestine, with its present day characteristics, the outgrowth of the successive influence of Persia, Macedonia, and Rome, before the Christian era, and the innumerable latter-day conflicts between Christian and Moslem, the possession of the Holy Sepulchre?

Those who have read Dr. Leary's articles on Palestine need no assurance as to the real gripping interest with which they clothe the people, the customs, and the landmarks of this tiny land that is "Holy" alike to Jew, and Christian and Moslem. His residence for a time in Beirut gave ample opportunity for an unusually thorough study of the people themselves—their mode of life, their customs and prejudices, and this side of the subject is one that must always have the widest educational value. The author's intimate knowledge of the country's legends—those that are well-substantiated and those that are merely amusing—makes the book as entertaining as the best fiction.

The book is of convenient size—5½ by 7½ in. Bound in dark blue linen boards with illustrations, besides maps of the whole country and of important sections of it at larger scale.

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AMERICAN HOMES AND GARDENS

The reader of AMERICAN HOMES AND GARDENS will find many important articles in the next issue of the magazine.

This December number will contain a beautifully illustrated article on one of America's loveliest gardens, a garden which, though planned and planted by one of our foremost landscape architects, is nevertheless full of suggestion and ideas that might be applied to the laying-out and making of even a very small garden by the amateur himself. The article will be accompanied by ground diagrams and gives an indication of what AMERICAN HOMES AND GARDENS will present this coming year for the consideration of its readers. To this number one of the foremost authorities on the subject of textiles will contribute a most entertaining and helpful article on Oriental Rugs. Many persons imagine that genuine oriental rugs must necessarily be beyond their purses, in consequence of which they have passed by the subject. They will, perhaps, surprised to find that rugs of good pattern, texture and durability can be had to fit almost any purse, the prices of the various rugs being given in this article. One of the most attractive houses in the vicinity of Philadelphia will be described by a well-known architectural authority, and fully illustrated with reproductions of both exteriors and interiors. It is a house so skilfully planned that despite its ample proportions it still creates an atmosphere of home-feeling and inspires one with commendation for this sort of domestic architecture, which never can be too generally employed. Edward J. Farrington, the poultry expert and a writer of accepted authority, will contribute an illustrated article on the subject of "Keeping Twenty-five Hens." This and future articles on kindred subjects will assure the standard that has been set by AMERICAN HOMES AND GARDENS for its Poultry Department. The same number will include another article on "Making Hens Lay in Winter," and a helpful Kennel article. If the reader of this present issue has found pleasure in the various photographic reproductions of "friendly dooryards," which the Editor hopes will serve as a little primer for stimulating home-building efforts in such directions, it is to be hoped that he will also find as much of interest in a similar feature that will occupy the middle pages of the magazine for December, a feature especially appropriate to the holiday season, as will be several other articles, including an essay by a New England writer of note on nature subjects. There will be other articles dealing with homes and gardens of distinction and the issue will be fully as interesting as the present one.

"Good Taste in Decoration" will head the department established in the present issue called "Within the House," and the Garden Department will cover a variety of hints and suggestions useful to the home-builder and the garden maker, while some new, original and delicious Christmas dishes will be described in the "Helps to the Housewife" Department. The December number will be richly illustrated throughout.

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Complete coach house, poultry house, sanitary cow barn, hog houses, meat house, servants’ quarters with bath, laundry, milk room, etc. Large farm barns and tenant houses.

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Good Manners in the Dog

In our complex life today, the keeping of a dog is often a matter of considerable sacrifice of time and convenience and often entails some hardships. The difficulty of transporting our pets when we must move, the trouble of cleaning, washing and feeding, the nuisance of hairs on our lounges, window seats and best clothes—these are all little disadvantages of having dogs, but to those of us who love them are not worth consideration when weighed against the great pleasure of a faithful, constant companion.

If we wish to gratify our longing to have our friend, the dog, with us, and thus to develop a side of our nature that ought not be neglected, we should willingly put up with some of the petty annoyances. What is more, a careful training can do away with many of the distasteful elements. A good dog really reflects a good master, for the slipshod man who neglects his pets or the over-indulgent one who spoils them, is a man who would act in a parallel manner with his children. No one should have a dog unless he is ready and anxious to exert his influence, spend his time and lend his careful attention to bringing up his canine companion in the way he should go about it.

With these things granted there are some things to be suggested to make the dog what he should be. First, you must insist on cleanliness and stringently, if necessary. You can form a habit for your dog that will not be broken if established early. A young puppy should not be allowed in the house, except occasionally, and never after he has been sleeping, unless he has been allowed outside for awhile. When he does wrong he should at once be scolded and clearly shown that he has misbehaved. When you scold a dog don’t turn around and pat him and say, “good fellow,” or he will never be obedient. A firm hand is necessary and one that assists in shaping his course of life. The dog should early be taught his province, made to recognize his bed and given to understand that there are certain sections of the house which he must not enter. Regularity of training makes regularity of habits and will make your dog a pleasure to have around, not a nuisance. Those animals that keep up a constant yap-yapping whenever the door bell rings, that climb all over visitors, have their beds on livingroom pillows and enter the dining room, whining during meals, simply cause trouble to their owners because they have not been taught what is right. You don’t need to be cruel but you can be firm and it should be a subject of pride to you to know that your dog is well brought up.

The Prolific Ancona

Sometimes a breed of poultry about which little is known, suddenly springs into wide popularity. This has
be the experience of the Ancona in America. The breed was admitted to the standard in 1895 and a number of fanciers had been showing a few birds for several years before that time, but little was heard about Anconas until recently. Then they began to be talked about, for the fact that breeders all over the country had quietly added a number of Anconas to their flocks with the most satisfactory results. Now the hens of this breed are being heralded as wonderful egg machines, quite equal, if not superior, to the Leghorns. As a result of the fact that they have not been unduly forced or experimented with, they are unusually hardy and vigorous, laying well for two or three years, so that they commend themselves to the amateur who does not like to renew his flock every season.

Anconas belong to the Mediterranean class and possess most of the common characteristics of that class. They lay white eggs of fair size and may be called non-sitters. They differ materially from the Leghorns in one respect—they are not wild, either when on the range or in the yards. 

In color, Anconas are black and white, evenly mottled. Even as small chicks they show these markings and are very pretty in the pens. The male birds seem to run a little darker than the hens, and are very stylish, with fine tail feathers. Anconas breed fairly true to type on the whole, although an occasional bird which is almost wholly black will be seen.

Although comparatively small, these fowls dress well and the meat is rather finer in grain as well as better in flavor than that of the larger breeds. Of course, they are not classed as table poultry, but they may be safely recommended as excellent egg producers and in sections where white eggs are called for, will, undoubtedly, be bred in increasing numbers. Anconas are also very satisfactory for the amateur, anywhere, for they endure confinement well. They are strong flyers, however, and this fact should be kept in mind when constructing the yards.

E. I. F.

The Winter Green Ration

All experienced poultry keepers know that green rations in some form are indispensable when feeding for winter eggs. Probably alfalfa or clover hay is the best green ration. The bureau of animal industry presents the following formula for the preparation of clover hay in order to get the best results: Cut the hay into lengths of one-fourth to one-half inch and place it in a bucket. Pour boiling water over it and allow it to stand two or three hours, or over night. Then drain off the water and mix the hay with a mash of which it may constitute one-half the bulk.

I knew a successful poultryman who placed scalded hay by itself before the birds, who ate it greedily. Alfalfa meal
THE HALL MAMMOTH BROODER

Efficiency of work and economy of operation are the two factors upon which business—money-making—brooding depends. These two factors are most highly attained in The Hall Mammoth Brooders. They achieve their efficiency by following the laws of nature. She gave the chick the cool earth upon which it was brooded. She gave it heat radiated from the body of the old hen to its back. She gave it pure, cool air in which to run, returning to the hen when cold. These same natural conditions are supplied by The Hall Mammoth Brooders. Cool floors develop stout, stocky legs. Hall Mammoth Brooders radiate their heat onto the backs of the chicks.

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is often mixed in a mash—either a dry mash or a wet one. It is highly concentrated and only a little should be used or the hens may reject the mash. Although it is not as good, common hay may also be steamed and fed in the way described.

If rye is planted in the fall, it often will attain a sufficient growth so that the hens can feed on it when the weather is such that they can be allowed their liberty in winter. In the middle states and those farther south, this is an excellent plan, and in the north poultrymen have found it desirable to grow winter rye on which the birds can be turned early in spring. Sometimes it is possible to use the rye as a cover crop in an orchard, so that two purposes, both of them good, are served.

Many amateurs and some professional poultrymen are feeding sprouted oats regularly, and with success. The plan is now well known, although long and profitably boiled as a “secret.” The oats are placed in a box and wet down, being kept dampened until the sprout. The hens are very fond of the sprouts.

Many vegetables may be used, although perhaps not as good as the clover hay or the sprouted oats. Potatoes should not be fed raw, on account of their starchy nature. Cabbages are an old stand-by, but the hens should not be obliged to strain themselves in order to reach them, when the heads are suspended from a string in the old-fashioned way.

E. I. F.

A Baker's Dozen of Old English Teacups

AMONG these thirteen tea cups and saucers are a number of Staffordshire pieces. While the first in line, a gilt-handed white china one, is not in that category, the big blue and white one with no handles, next it, is. Its design of a mother with two offspring at her knees suggests “Cornelia and Her Jewels,” with its Roman statue, arches and columns in the background of white. Cups were made without handles and a number in this collection show that feature of the potters' work, who made tea sets in the last part of the eighteenth and the first part of the nineteenth centuries. This large blue and white creation has a fine border inside the cup of an inch and a half with urns and trees in medallions, with scrolls. Its capacity is large, holding a half pint and probably the tea taster of the Gog and Magog days, had no fault to find with that part of it. The next smaller blue one without a handle also, is a beautiful piece with its bright blue decoration on white, with tiny conventional border at the top outside, and inside, a two-inch one of floral design, and a tiny scene in the bottom of the cup of a castle and palm trees. On the outside also is a fine Saracen rider on a fully-caparisoned steed, with Angora-like mane and tail. The same

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castle and trees appear as in the bottom of the cup, with the addition of a Gothic archway through which the rider has just come. The fourth cup on the top row is a Chelsea one, with purplish-blue flowers in raised work on a white ground, as is the one below it on the second shelf, with the addition of a little trellisery of gold lustre added to the flowers.

Beginning with the second row is a gilt-and-white china cup and saucer with graceful handle and bands of gold with the spring pattern. Then follow the two in blue without handles, the first with smooth rims of cup and saucer, has sixteen radiating sections in the saucer and thirteen in the cup (a baker’s dozen). It bears the impressed mark of Alcock, one of the Staffordshire potters and “Oriental” Stone” and the word, “Seide” in a blue-bordered ellipse. The one next it has “Davenport” impressed with an anchor and the word, “Amoy” in small blue platter-shaped design and the same number of sections as in the Alcock piece. The rims of the Davenport one are slightly scalloped.

Thirteen of the old English tea cups that have the advantage of being attractive and rare, in both pieces. As the Chelsea piece which follows was described below, we go on to the last row, which begins with a lovely pink, green and gold lustre cup and saucer, with pinkish-gold band and mountain scenery, with deer in the foreground on the saucer, and the same general scene with equestriennes and pedestrians in the place of the grazing deer and doe. The cup and saucer following the pink-lustre one is blue and white, of the Staffordshire class, and shows hills and trees in the cup. It has an Oriental picture on it with temples, palms and a loaded camel, with floral design also. The King of Cups is next in line, and while the Colonial tea drinkers acquiesced in the size of the “Cornelia-and-Her-Jewels” one, they would make obeisance to this generous cup of the days of our forefathers, holding as it does more than half a pint. The modest little calico blue and white combination next the last in the collection has a deep border in and outside, with urn and “cattle on a thousand hills” in the bottom of the cup, while the thirteenth is a pink, green, gold and white lustre piece of pink flowers, with narrow gold rim. J. W. C.
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EDITORIAL

The Successful Suburban Place
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Naming the Country House

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"The Orchards," by Edwin L. Lutyens, architect; a modern English example of the purest Northern Tradition, showing the English character in the roof of maximum pitch, the grouped windows and the marked predominance of chimney-stacks.
The Northern Tradition

by ALFRED MORTON GITHENS

Photographs by the author, H. H. S., and others

[The problem of choosing an architectural style for the American country or suburban home is one of the most puzzling that confront the home-builder. In order to bring about a better understanding of the more common types and with the idea of clarifying, as far as possible, this whole matter, we have asked a number of prominent architects to present each the case for one particular style. In previous issues the characteristic features of the Colonial, Dutch Colonial, Half-timber, English Plaster, Chicago School of Architecture and Swiss Chalet type were developed and illustrated at length by prominent architects interested in each of these types. There remain two or three of the more common styles which will be taken up in future issues.—Editor.]

WHEN the editors of House and Garden ask the most fitting style for an American country house—by which presumably they mean the style proper to the major part of the United States, not South America or Southern California, with their different materials and traditions—the self-evident answer seems to be, "That style which is the natural expression of our building materials and constructive problems."

A house, after all, is an enclosure of walls with a roof over it. Now, no matter what the material, walls are vertical always and windows and doors are merely holes in them. But the roofs vary in character with the material used, and seem to give the first broad impression. An Eastern house, and one pictures high parapet walls and hidden behind them a flat, clay roof where the master walks in the cool of the day; a house of the romance countries, Italy, Spain or Southern France, and one sees gently sloping tile roofs and broad eaves; Northern France suggests the excessively steep slate of Normandy farms or the chateaux of the Loire; Germany and Britain, and whatever the so-called "style," the roof-slope is neither steep like the Norman or flat like the Southern, but a half-way pitch, generally ending in gabled walls. A child draws a house on his slate and though one cannot

At Bronxville, New York, by Wm. A. Bates, architect; showing the type-resemblance to the old New York barn above, though it suggests a different wing composition suited to a different setting.
Farmhouse at Cornish, New Hampshire, showing the alteration of an old house without the destruction of its original character of roof lines.

limits indeed—enough, it seems, to form a dominant character.

If this argument is just, then the conclusions must have been reached long ago. They should be found chrystalized as a type in use ever since building with these materials began. Fads and fashions might assert themselves for awhile, but after each there should be a recurrence to the type.

If we follow the history of country houses in a northern country, England for example, as it is best known, we find striking proofs of this surmise. The builder of the Middle Ages knew nothing of distant lands, had nothing to copy, and therefore his houses should obey this natural law as to slope without attempt at concealment, and so they do; so do the later houses without exception down to Elizabeth's time, when certain men masked their roofs with high parapets as at Hatfield or Bramshill; a few years, and under King James the fad is forgotten and the true tradition revives.

tell whether it be "Gothic" or "Colonial," still it never fails to show the roof-slope. Perhaps the roof should be the standard of classification, that just as a fossil-hunter ignores at first all other structure and broadly classifies his skeletons by the tooth formation, so the philosopher-architect should look to his roofs for guidance, the teeth of the house as it were.

Roof-slope seemingly should be determined by the materials used. Tin we have apparently discarded; interlocking tile is so expensive that for the immediate future it will not be common enough to count in the average; so the slope must be determined by slate and shingles. Build the roof flatter than thirty degrees, and rain and snow will drift in; steeper than forty-five degrees or fifty, and space is wasted and money with it; narrow

A house at Mianus, Connecticut; an early example of the forerunner and inspiration of much that is evidenced and delineated in the Woodmere type below.

At Woodmere, Long Island, C. Barton Keen, architect; and "Grayeeyes," at New Rochelle, Wilson Eyre, architect; two totally different American developments of the Northern Tradition, but the photographs show that the houses would not be inharmonious if juxtaposed, and show further the variations of this architectural style.
The high renaissance comes with its artificiality and the type is banished to the simpler houses of the countryside or the colonies. These recognize the classic revival by veneering a pilaster each side the entrance door, by inventing a sort of pediment to put over them, by elaborating the eaves into a cornice and perhaps adopting a more orderly arrangement of windows, but otherwise the type is little altered.

Then why not this for the answer to the question—this nameless basic type which one writer calls the “English Tradition,” though it was the tradition equally of Scotland, of Ireland, of the American colonies and it seems most northern countries? Its characteristics are its roof-pitch, its gables (for gables are simpler than hipped roofs framed to slope back at the ends of the house), the moderate overhang of roof (for broad eaves shut out the sunlight which in the north we need), and the importance given to chimneys. Examples of it are the Tudor country houses, the simpler of the Georgian, the Colonial of the northern states, barring those of them showing the worst artificialities; the Dutch Colonial, with its thrifty gambrel roof, framed to get most with least expense, and purest of all the farmhouses and barns here and in Northern Europe. Just now the type seems undergoing a curious development in England, a complication of many gables, of strange and restless oddities of contorted, half-developed forms, the picturesque run wild. In America, Procrustes-like, we stretch it to fit a repertoire of “styles”—loaded with false half-timber to wear its appearance of some centuries ago; decked with pilasters in the fond hope that it will appear “classic” or what is called “Colonial”; shorn of its gables, with roof depressed and wide eaves, it is “Italian.”

In the Midlands, England. An early type-example of the Northern Tradition in its simplest form, depending for its interest on strong mass and vigorous outline rather than on detail.

Stratford Lodge, near Philadelphia, C. Barton Keen, architect; a type of the true tradition, but showing the possibilities of an adaptation of the Italian pergola-enclosed garden.

"Two Stacks" near Philadelphia, Charles Z. Klauder, architect; Garden and Entrance fronts; the first informal with irregular gables and low eaves, the entrance front with lofty walls, severely symmetrical but not at all monotonous, as life is injected by choosing the stones for their color and texture, which makes unnecessary and superfluous all exterior decoration.
One enters a certain suburb of New York. All the houses are new; no buildings were there a year or two ago; it was a clear field for architects to do what they could, for the promoters were anxious to make it an ideal suburb; yet its general impression is discordant in the extreme. Houses are individually most interesting, far above those of the average town in character, yet it is one of the most unpleasant towns one ever sees. One leaves it with discouragement, with the impression that our country architecture is resulting in a condition worse than the much-despised mid-nineteenth century, when at least there was a certain harmony; that our study, our familiarity with the best work in the world has resulted in nothing; that "the mountain has labored and brought forth a mouse."

One passes "Colonial," "half-timber," "modern English plaster," "thatched shingle roofs," "Italian adaptations"—all seriously studied too, and most of the houses distinctly good according to their several ideals—and the result is wildest discord. Each house strives to assert its independence and drown its fellow. It is as if in an opera Brünhilde and Carmen, Yum-Yum and Aida, Thais and the Runaway Girl were all on the stage together, answering each to each in her own song, some serious, some frivolous, each admirable, and the result diabolical.

An English or a German town never gives this impression. Is it possible that there they have a clearer conception of the basic type? One house may have the orderly arrangement of the Georges and the next a Tudor-arched doorway and mullioned windows, but the difference seems rather interesting. Is it because they are all perfectly natural in their use of materials and roof forms, members of the same family, so to speak, all examples of the same traditional type, nearer, perhaps, than their builders realized or that one can recognize at present on account of his having befogged his wits with much reading of the characteristics of these "styles?"

But this was to be an article upholding a certain "style!"

Until a style is past and done with, it has no name. The medieval architect would have been much surprised to learn that he
The Naturalizing of a City Man

Editor’s Note:—The author of this narrative had refused to write the story of his experiences in going from business life to a farm. His objection was that the published account taken from his closely written diary would contain nothing of the joy and inspiration he felt in getting close to Nature, and would be merely a matter-of-fact list of happenings with their message lost. He finally consented to write it in his own way, allowing memory and imagination to lend color to those days of struggle which are now cherished recollections. He preferred to hide his identity under the disguise of another person, but the essential facts are true and full of practical information. This number deals with the key to his reformation; subsequent installments will show how he succeeded.

MANTELL climbed wearily up the stone steps of his house, and paused disconsolately to note the holly wreath with its satin ribbon behind the rich Cluny curtain. Irresolutionly he fumbled with his bunch of keys, and slowly unlocked the heavy inside door.

His wife stepped anxiously from an adjoining room to meet him.

"You’re late again, Henry," she said, placing a sympathetic hand on his arm. "Are they still fighting? Can’t you call a truce even for the holidays?"

"Hush," he answered, "we'll talk upstairs. The children may be around." He snapped on the light, drew down the shade, and locked the door. Then he stood facing his wife.

"Helen," he said, "you may as well know the worst at the outset. They’ve won. I’m ruined."

There was nothing theatrical about his manner. So low and even was his voice that the woman did not at first realize the importance of his words. Her brain struggled for a moment to reconcile his calmness with the gravity of the subject.

"You’re tired, Chic," she said finally. "You’re blue. I know it’s not so bad as all that. Try to forget it all for a few days, and when you go back things will look better."

They had proceeded to the room above and he drew the heavy curtain across the doorway after them. The woman sank down into the great chair by the center table, and the man went over to the gas log and stood with his hands behind him as one who would warm himself, although the room was at more than summer temperature.

"I wish you were right, dear," he said slowly, "but there’s no use disguising matters. They have bought over Lawson and with him, of course, the new patents. Not content with that, they have brought pressure to bear in another vital matter; my credit is gone! I am helpless, absolutely helpless. They can put me into bankruptcy the minute they say the word—as easily as I could press that button for Annie."

There was a full minute’s silence. Muffled, dulled, far away, the harsh voices of the street leaked in upon them. Then Mr. Mantell laughed bitterly. "My business is the least of my troubles now. I don’t know which way I shall turn when I do think of it again. But day after to-morrow’s Christmas, and the kids—?"

"There," he added, taking from his pocket and tossing over a very slim green roll, "there’s every cent we’ve got."

She came over to where he stood, lost in thought, and placed a white hand on each of the slightly stooped shoulders. "It’s not so bad," she urged, "we were poor before."

"Yes," he answered, "yes, I know. But this is different, quite different. Then we had the future before us, wealth to be won, success to be attained. I worked for it; I earned it; I had achieved a substantial start—and now, poof!—like a child’s bubble, it bursts between my fingers—and through no fault of my own. I do not understand it. I give it up. And yet in a way it’s all clear. I can see just how they’ve done me; how I had to lose. But it doesn’t seem fair somehow. It’s all out of line with what they used to teach us about life."

"Come," said his wife, with assumed sternness, shaking him by the arm. "Come, you can philosophize better after a square meal. It’s spoiling now. Besides, I have a card up my sleeve." (He laughed and pinched her smooth bare forearm.) "You remember Uncle Jay’s mysterious wedding gift—the big gold key and the little black box that was never to be opened until misfortune overtook us? Come on, dear, and after dinner we’ll open it." And she led him from the room.

Some time later they sat alone before the gas log, the mysterious box between them.

"Uncle Jay was something of a miser as well as a little ‘off,’" said Mr. Mantell. "Who knows what tricks he was up to? That key alone, as I remember it, that must be worth a good deal in itself. Let’s see how it has stood the years." His wife tore open a faded envelope and extracted a large key. It glittered warmly in the firelight as she passed it over to him. Its shining was reflected in her eyes.

"By George," said her husband, "I had forgotten how big it was." He inspected the key carefully. "Looks like the real thing, too. It must weigh several ounces. At eighteen dollars an ounce it won’t buy an automobile, but it will tide us over Christmas all right. What do you suppose the miser put in that box; it’s so thin and light? Seems like a fairy story to be opening it after all these years."

As Mr. Mantell passed back the key his wife’s fingers actually trembled a little and it dropped to the hearth. Not a dull, golden sound, nor even a metallic tinkle, but a clear, ringing clink struck their ears.

To the accompaniment of cheery sleigh bells they sped past peaceful homesteads and snow-blanketed white hills contrasted with the dark fir trees.
"Why that—that sounded like iron," exclaimed Mr. Mantell, in a voice that suggested some disappointment. He picked the key up, and applied to it the point of his penknife. "Just the thinnest coating of gold," he asserted. "It’s too bad, dear."

"But the box," insisted Mrs. Mantell, trying bravely to hide her disappointment. "I still have faith in Uncle Jay’s present—even if people didn’t understand his peculiar ways. What do you suppose is in it?"

"Diamonds," said Mr. Mantell, with a smile, "made of the best of glass."

"Henry!" expostulated his wife. "You don’t deserve any Christmas. No fairy would stay in the room with you a minute. It might be—"

"It might be," he concluded for her, and more than half in seriousness, "his savings bank account. Compound interest for seventeen years—that would be quite a nice fairy."

The big key clicked in the big lock on the little box.

"Oh-h," said Mrs. Mantell simply, but with a falling inflection that expressed more than many words. She passed the box to her husband with one hand, and with the other sought for her handkerchief. Mr. Mantell gave one look and then threw back his head and laughed loud and long—laughed as she had not heard him laugh in years.

"Henry! how can you!" she exclaimed, dashing the tears from her shining eyes.

"You’re too cruel for words."

He put one arm around his wife’s shoulders and kissed her. "Never mind, Pet," he said, atoningly. "Look, here’s something on the card."

Together they bent over the photograph of a rambling country house which the box contained, and read, in the jet-black, hair-line chirography of the long deceased Uncle Jay:

"The roof is tight,
The taxes paid.
Come back home,
When the game is played."

"Abominable grammar," said Mr. Mantell—"most abominable. But say, what do you know about that! What good does this do us? I suppose the place was worth about $3,000 then; it must be worth about $300 now."

"You are quite a brute," replied his wife, suddenly all eagerness in voice and manner. "You don’t deserve any Christmas at all. You don’t recognize the gifts of the Magi when they’re showered upon you. You can do what you please, but Robert and Helen and I are going to spend Christmas in the country—the real country—and have the lark of our lives."

"Nonsense, Helen, nonsense," he protested, catching her intention and alarmed at her earnestness. "Why it would be the height of folly. It’s impossible. Think of the—"

"Think—think," she contested, of course warming to her theme under opposition, "we’ve done nothing but think for years. Think and plot and work for a life here, in a brick cage with lace curtains. I won’t think. We’ve got plenty of money for carfaries and that settles it. It will be more fun for Rob and Helen than anything else we could possibly do. Now don’t try to reason with me, because I won’t reason."

Well, it doesn’t take a philosopher to know that when a pretty woman gets a silly idea wedged nicely and firmly into her imaginative head it can be dislodged about as easily as a cap-sized canoe may be paddled up a rapids. Besides, Henry Mantell always secretly admired these infrequent unreasonable or super-reasonable moods in his capable wife. So the natural up-shot of the matter was that a late hour found them sitting before the hearth discussing the exciting details of their strange adventure to winter-bound Arcadia.

For the sake of the artistic touch the dying flames and the sinking embers should close the scene, but the flames only flickered back and forth over the changeless logs, with a slightly gassy smell, for a genuine fireplace and a real fire was a luxury they had desired, but never quite felt they could afford.

II.

The agent at Priestly Junction received somewhat disjointed telegram the next day that requested him to have carriages at the 5:23 train to take four passengers and two trunks to the old Rasmussen place, and have half a cord of cut wood delivered there immediately. Six dollars to defray expenses had been paid at the sending office.

Accordingly when the 5:23 pulled in that night—at 5:50—Mr. Mantell found awaiting him the express agent, telegraph operator, baggage master and ticket agent in the presence of Bill and his co-worker; the chief of police and postmaster in the person of Mr. Hutchins; and Priestly Junction’s leading merchant, citizen and livemary in the rather stout personage of Mr. Logan; who had all been attracted by the somewhat mysterious and very unusual message. There also awaited him several lesser lights, and in addition the truth that he was a millionaire broker escaping for a quiet Christmas in the country with a prominent actress, who would undoubtedly have been recognized if venturing to any more populous center than Priestly Junction. The appearance of Bob and Helen, however, full of energy suppressed by half a day’s ride in a slow train, very shortly dissipated the supposition for one several shades nearer the truth.

The postmaster, with all the dignity at his command, introduced himself and then his companions and after a brief inspection of trunks and bags, Mr. Mantell brought on the first shock by stating that before driving out to the place they wanted to secure a few provisions. Bill and his partner looked at each other with a double grin. The postmaster looked at Mr. Logan, and Priestly Junction’s foremost citizen looked at the station platform.

"Why—er—ye see, this ’ere aint much of a city," explained Mr. Logan. "We don’t keep much of a line outside of gen’l groc’ries—soap, an’ matches, an’ clothes-lines, etc." He paused, for want of wares.

Mr. Mantell looked helplessly at his wife. Perhaps there was an expression of “I told you so” in his eye. At any rate she took matters into her own hands.

"Oh, we didn’t want much," she volunteered. "Just a couple of chickens, and some cranberries, and sweet potatoes, and celery, and nuts, and lettuce, and cream."

Mr. Logan groaned aloud. "Celery—lettuce—cream," he puffed. "Why, Mam, we aint in the city, you must remember.
You're in the country out here, Mam, and what's more it's winter."
"What have you got?" she asked, a little alarmed.
"Why, Water's pink-label soups, an' Make-it-in-a-minute mince-meat, an' Gold Seal guaranteed near-butter, an'—why I'm sure you know why quite a line of such things. The drummer says they are all used quite free in Noo York."

"Where do you get anything fresh?" pleaded the woman.
"Oh, we do most of our buyin' down at Priestly," joined in the postmaster. "Last stop before this place, you came right through it."

"When is the next car back?" asked Bob, whose interest in the discussion of provisions was getting painfully acute.
"9:45—tomorrow morning," said Bill. "Only it don't run tomorrow, bein' Christmas."

"Look-a-here," interrupted Mr. Logan, with an expansive smile that indicated he had been hit by a happy thought, "it's only three miles back, and only one mile further out to the place than it is from here. We'll let the trunks go out direct, and we'll go by way of Priestly. The sleighin's good, an' it won't take much more'n half an hour longer—not includin' th' shoppin', of course," he added, with a timely thought on woman's ways.

Suit-cases and grips were put aboard the sled, and they piled in. Three miles over a smooth road, covered to the tune of cheery sleigh bells and to the time of Lute's long-striding mare "Fly-away," went quickly enough. As they flew past peaceful homesteads and snow-blanketed white hills, with now and then the contrast of groups of dark firs, black as the heart of midnight, the satisfying consciousness came to them that all this fitted in with the spirit of their Christmas lark and that they were leaving the city and its troubles very far behind. The moon hung clear and full in the cloudless sky, and the keen, vitalizing air, rushed into their lungs, so long used to the desiccated atmosphere of city rooms, with almost the effect of an exhilarating cordial.

Mr. Mantell (thought his wife, as she eyed him sideways through her veil), looked ten years younger and twenty years more boyish than he had for a long time. As he glanced up suddenly he saw his wife's face clear cut in the moonlight. Her eyes were shining, her thin, delicately carved nostrils dilated with the sheer joy of life—life at the full tide, insurgent, resistless—and in that moment the blood rushed and swirled about his heart in the ancient, primal way that he had not experienced in years. It was a revelation of many things in a lightning flash; and now he sat wondering about it, wondering what had fallen out of his life, and how it had gone without his missing it, and why.

"Thar she lays," exclaimed Mr. Logan, rounding a sharp curve and flourishing his whip half way around the horizon. At the foot of a long hill, spread out before them like a photographed Christmas tree, sparkled the little city of Priestly.

A few minutes more found them in its shopping center, with a red-cheeked and suspiciously curve-nosed butcher explaining to Mrs. Mantell that his supply of holiday niceties was "direct and fresh from Boston," and the apples—he showed her the mark on the tissue wrapper enveloping each—from Oregon.

Apparently no one in the place, including several farmers from the adjacent countryside, saw anything incongruous in the fact that squash, celery and lettuce were being supplied to them from a distant city, and apples from across a continent. Mr. Mantell, being a stranger, was struck by the fact that it seemed rather funny. Mrs. Mantell was struck by a fact that was not at all funny—the prices of all the nice things she had expected to find so cheap in the country, were in most cases higher than city prices. To keep inside the single green bill with a 5 in the corner, which she had set as the limit, she finally decided upon a pork roast instead of chicken, which really was the part of wisdom, for the pork was extra nice and the chickens were not. That was hardly their fault either, for several long months they had been freezing blue and pucker-skinned in storage awaiting the rush season.

When they finally reached the homestead, the trunks were awaiting them on the veranda, which faced south, and there also was piled half a cord of wood. This offset to some extent the inhospitable looks of closed blinds and boarded up doors; inhospitable, that is, to the extent that this low, rambling roofed, veranda-screened, nestling house could look inhospitable. Its whole appearance and attitude spoke a word of welcome, offered quietness and comfort.

Mrs. Mantell, inwardly somewhat agitated, tried the golden key in the lock of the wide door, entering the house from the veranda, the only one not boarded up. A final misgiving fluttered through her mind as to whether she had not been terribly foolish. Suppose it was wet and leaky? Wouldn't it be impossibly damp and musty? She set her lips firmly, exerted all the strength in her fingers, and the big bolt shot back.

"I christen it 'Pandora Cottage,'" she cried, stepping back, "for whatever comes out. Hope will remain here!" And she threw the big door open.

It was not at all bad; only "kinder like a front parlor after a funeral," as Mr. Logan lugubriously put it. Close, musty, a little dank, of course it was.

Mr. Mantell's camping experience had prompted the taking of a hatchet, and with the capable assistance of Mr. Logan and his man, a fire was soon roaring on the hearth. At first it wanted to swoulder and smoke and blow out into the room. But some dry old shingles, from a pile in the shed, soon had it sizzling burning fragments of them bodily up the cavernous flue, and radiating a generous warmth out into the room.

Apparently everything had been left ready for immediate occupancy. An axe and a rusty saw were at hand in the well filled woodshed. Dishes and cooking utensils occupied their places on shelves and nails in the kitchen.

The kitchen range stored a fire beautifully. Even the pump worked after a few minutes' operation, and though the water seemed all right, Mr. Mantell would not permit its use. So Rob and Helen got some from the well outside. One bucket leaked and the other was mossy, but the water was all right.

The trunks were brought in and began to yield up their useful contents. Supper was soon under way, with the women folks in charge, while Mr. Mantell and Rob explored the house. It had been left partly furnished and evidently with the idea that (Continued on page 396)
The Smokeless Fireplace

AN EXPERIENCE WITH A CHIMNEY THAT WOULD NOT DRAW AND A FLUE THAT WAS TOO SMALL—HOW THE DEFECTS WERE REMEDIED—HINTS ON HOW TO BUILD A FIRE

If there is a moment in the experience of the builder of a home that is fraught with greater tragedy than the moment in which he faces the realization that the fireplace will not draw, I do not know when it is. Many kinds of despair and rage consume him at different times as the different little difficulties which await him are met, but the fireplace that emits only smoke is the crowning calamity. I know, because I have suffered them all—and suffered this, too, at the end.

All of our sentiment about home centered in the fireplace; most people’s does. We had always felt ourselves before it, watching the glowing, crackling logs while we heard the sweep of winds outside and the beating of an icy branch against the pane, and saw through the casement the drifting, scudding snow. The lighting of the first fire on this home altar became an event—a ceremony—and we approached it accordingly. We placed the backlog as it should lie, then the smaller forestick that goes at the front of the andirons; and then we laid the kindling, remembering to start with the two mystical crossed sticks, for their ancient symbolic meaning. The hickory was just right, dry enough to burn and green enough to last, so the torch (really it was a safety match, but we called it a torch) was applied with keen enthusiasm.

Then—my goodness! Did human beings ever before or since succeed in lighting such a smudge, I wonder? Doors and windows had to be thrown wide, and we finally had to carry that wretched fire bodily outdoors, stick by stick, and dump it into the snow.

Then we sneaked upstairs to scrub off the soot, nurse scorched fingers, go to bed to get warm and be alone to curse the mason and the contractor and the architect, not alone of this house but of all houses; individually, collectively and universally!

Of course we went to studying about fireplaces after this, but so far as we were able to find out, there was nothing for ours but to tear the chimney down and build it all over. And as this was very much the same as tearing down the house, owing to the chimney’s location, we did nothing and tried to ignore the fireplace.

Then someone suggested building up a hob at either side and raising the bed of the fireplace by laying one row of brick all over it. This was to make the opening smaller; we had a vague notion that this was what it needed. We went enthusiastically to work, and when we finished the thing looked like the drawing and smoked just as diabolically as ever.

Then we studied the flue. Of course this is what we should have done at the very start, but one is likely to delude himself very often into not doing the right thing first because he hopes something else will answer. Nothing else will answer when it comes to balky fireplaces; there is not a particle of use in trying to botch one up unless the flue is all right, and all efforts in this direction are wasted. If your fireplace smokes, look at the flue first of all.

By E. O. Calvene

Photographs by the author

Never was time and money wasted. If your fireplace smokes, look at the flue area and the fireplace opening area, for purposes of comparison. The area of the former should be from one-tenth to one-twelfth of the area of the latter, according to the very best fireplace experts, never less than one-twelfth. If the flue, for instance, is 8 x 8 inches across, its area is 64 inches.

This will carry a fireplace opening having an area of 768 square inches. Very well. Now, as a pleasing proportion is usually insured by making the opening about two-thirds as high as it is wide, a little figuring will develop for this area, 23 inches for the height with 33 inches for the width, ignoring the fractions. No larger opening should be attempted.

But our fireplace was 26 inches high and 36 inches wide, with an arching top, as the drawing shows. With a flue 8 x 8 inches, this gave us a flue area of about one-fifteenth the fireplace opening! No wonder the smoke could not get up the chimney. And added to this we found that our flue was away over at the side instead of being in the center, that there was no throat whatsoever, and no smoke shelf, consequently no smoke chamber. It was, in short, nothing but a crooked, bent opening, up through to the sky, starting in 8 inches square right at the top of the fireplace. I never would have believed that any mason could or would have done such a thing if it had not (Continued on page 398)
The Making of a Distinctive Home

THE HOUSE AND GARDEN WHICH ITS OWNER PLANNED TO FIT HIS PERSONAL IDEA OF COMFORT AND LUXURY—A SIMPLE AND SINCERE COTTAGE WONDERFULLY ADAPTED TO AN IRREGULAR SITE

by Louise Shrimpton

Photographs by George E. Doust and the author

On a hill-top site overlooking Syracuse, N. Y., William Henry Peters has located the house and garden of his own designing. They are a practical refutation of the theory that the American business man is narrow minded, with no interests other than commercial ones. His cottage is planned with the utmost care as a fitting home for the family that lives in it. Every advantage of siting has been utilized in the placing of living rooms and garden features. A rule of simplicity is everywhere adhered to. In the furniture, designed specially for the places it occupies, the owner has adequately completed his scheme.

The building lot, two hundred and fifty-eight feet wide by three hundred and seventy feet deep, is partly on the crest of the hill, partly on its steep slope. At the foot of the slope is a large pond belonging to a city park. At present the steep hill-side is planted to alfalfa, and is not shown in our garden plan. The width of the lot and its sharp descent at the rear prevent any future interference with the view of the blue hills that stretch far into the distance and skirt half the horizon. In planning the cottage, the site has had due influence, since the principal rooms face the hills at the east, while the kitchen is on the street front. The distribution of ground floor space is also a feature of the plan. In a successful small house plan there must necessarily be sacrifice and selection. To copy the large house or mansion type results in a series of box-like compartments, no one of them large enough for a family assembly room. The living room in this cottage fills a large proportion of ground floor space. The dining room is distinctly small, and the studio is also small, though both rooms have glass doors opening upon the terrace, extending their apparent size. The kitchen is furnished with built-in cupboards that make a butler’s pantry useless.

Each article fits into the general scheme simply but appropriately.
The living-room fireplace, flanked by spacious built-in seats, is constructed of the exterior brick, varying in tone from a bright red to a dark bluish gray, put together with ordinary gray mortar.

Through this deliberate curtailment of other rooms, the living room is spacious, plenty of room for a big table and desk, for a large fireplace with inviting seats built around it and a settle in front, for the foreign books and prints that line the walls. In spite of its size, seventeen by twenty-six feet, it is a homelike place of cottage type, low ceiled and comfortable, the long horizontal lines of casement windows helping this effect, while additional light and air are given by glass doors at either end.

On the second floor the owner's suite consists of a large dressing room and a smaller sleeping room, furnished with windows that make it practically an upper porch. Nursery, guest room, sewing room and bathroom complete the plan, and servants' rooms are finished in attic space.

Sincerity and a feeling for beauty in the choice and use of materials are marked characteristics of the construction. In building chimneys, garden walks and terrace, hard fired brick was used. In the living room fireplace there is no veneer of different material toned to the manufacturer's ideal of lifeless uniformity, but the exterior brick, varying in tone from a bright red to a dark bluish gray, is frankly used with excellent effect, put together with ordinary gray mortar. The roofing slate is unusually varied in color, ranging from pale gray into orange tones, the variation caused by the oxidation of the iron in the composition. Though perfectly durable, this slate lacks monotony and is inexpensive. Chosen partly because of its cost,
The crest of the hill was extended out and upon this a terrace of fired brick, showing a fine color effect, was built.

it proves uncommonly successful from the standpoint of beauty of color.

In both exterior and interior woodwork is the same sincere use of material, selected not because it happens to be popular, but because it is suitable for a cottage; unpretentious, but with marked beauty of grain and texture. Cypress clapboards treated with oil were used for the exterior walls. For interior woodwork hard pine was used throughout, stained a light brown that shows tawny and greenish tones. Paraffin oil is used for cleaning, but this has been the only finish, no shellac or wax having been applied. In design, the woodwork has straight lines, flat surfaces that are easy to dust, and no moldings. No stock windows or doors were used, but all were built after special designs and their proportions and paneling add much to the effect of the interior. In our photograph of the dressing room the doors show the simple lines of the woodwork and its beauty of grain. The staircase has heavy newel posts reaching to the ceiling, suggesting modern English woodwork. The floors throughout the cottage are of comb-grained pine, stained a dark brown and finished with paraffin oil.

The ceilings are of ordinary light construction lathed and plastered. There are no picture rails. The low ceiling walls, seven and a half feet high on the ground floor and seven feet on the second floor, are finished in a flat coat, without the final smooth coat beloved of the plasterer, which often cracks and peels off within a few months' time. No wall paper was used. In the living room and hall, the walls are left in the uncolored gray plaster, the color echoed in the monk's cloth portières and silky window curtains. In the dining room the walls are painted in oil-color in a deep Prussian blue. In one or two other rooms a pale water-color paint much diluted was put upon the walls.

A distinctive feature is the furniture, built-in and movable.
Nearly all the pieces were built by hand after the owner's designs, to occupy a wall or to fill a floor space and, incidentally, to emphasize the quaint and livable quality of the cottage. This method of furnishing, not expensive in the case of built-in pieces such as bookcases or seats that do away with heavy movables, insures a certain harmony between an interior and its fittings, to be gained in no other way. Also pieces can be built to suit and fit their owners, obviating frantic search through shops for an unobtainable ideal.

Among the built-in pieces are the broad settles on each side of the living room fireplace. Their high backs, of broad planks, form a wainscot for the greater part of the room. A built-in desk of very simple make, and simple book shelves, are other living room features. In the nursery and sleeping rooms are broad cushioned window seats with box space beneath. The dining room buffet and serving table are of unique design. The accepted conventions are definitely abandoned, and the buffet instead of being thirty-six inches high, with high back and plate rail, is thirty inches high, with no plate rail or back, a long narrow piece with heavy posts and containing a series of cupboards. On the top is a delightful row of brass and copper utensils collected in Italy. The serving table, not so long as the buffet, is of the same height and contains drawers for table silver as well as linen cupboards. Quartered oak is used in their construction. The round table and leather bottomed chairs are also of oak, stained a slightly darker tone than the wood-work. In the dressing room illustration are shown two chiffoniers designed to fill a wall space. They are of a pattern as simple as possible with no vagaries of line, and tiny brass knobs are their only ornament. An armchair, a desk, dressing table and other chairs in this room are also built specially for their places, as are some of the bedsteads and other furniture in the sleeping rooms.

The cottage is protected from the road by a hedge formed of small trees and shrubs planted in a wide border. There are wild plum trees, their purple colored foliage contrasting with the green around them; Lombardy poplars, sumac, which will be cut out later, as its semi-tropical appearance is not liked, but which gives quick results in the way of shade; syringa and wild currant, and a row of little arbor vitae trees outlining the inner edge of the border. In the three years that cottage and garden have been in existence, the growth of this hedge has made it a thick, high barrier. It has an informal look, and violates none of the prejudices of the passer-by who resents high walls or unbroken hedges. There is no gate, but a narrow brick pathway leads to the sidewalk without.

At one side of the cottage is the rose garden, a formal arrangement of beds, with a sun-dial in the center. Tree roses form a circle around the dial. The grafts are tea-roses on ordinary stock. Climbing roses fill the centers of the beds. The location is a perfect one for a rose garden, the delicate tints of the tea-

(Continued on page 398)
When and How to Do Winter Spraying

THE VARIOUS PESTS WHICH ATTACK TREES AND SHRUBS AND HOW THEY MAY BEST BE REACHED DURING THE WINTER—WHAT PREVENTIVES ARE MOST SUCCESSFULLY USED

BY F. F. ROCKWELL

Time was—according to those wonderful tales which one may always hear where a knot of the oldest inhabitants gathers at the blacksmith shop to watch the repairing of some part of the spraying outfit—when perfect apples loaded down the healthy and un molested trees, and spraying was undreamed of.

That day, if in fact it ever really was, has passed. I believe, however, that authentic history would support the remark of J. H. Hale, the "peach king," made at a meeting of fruit growers. Several had complained at length of the ravages of the San Jose scale; as a veteran grower they looked to him for a few remarks. Jumping to his feet he exclaimed, "Why the scale is the best friend you ever had. It has compelled you to take proper care of your trees, which you never would have done without it!"

Mr. Hale was one of the first to give his trees real care. He not only kept them clean, but through cultivation he gave them moisture and air, and he fed them—he orders their foods, straight chemicals, by the hundreds of tons. In spite of Brown-rot scale, Black-spot, Yellows, and all the other new-fangled insects and diseases, his peach orchards have transformed barren New England hilltops into green acres of productive fruit trees.

It is true that the armies of the minute enemies have invaded fruit growing as well as the other field of agriculture, but in none can they be more thoroughly fought off, or has their history been so carefully studied.

The habits of the several insects attacking fruit trees naturally vary greatly. Some of them may be got at only while they are active, in the summer time, as they spend their winters in quarters inaccessible to the orchardist. Others, on the other hand, are careless enough to leave themselves exposed; and this gives the fruit grower an exceptionally good opportunity to exterminate them, for three plain reasons. First, as the trees are dormant, much stronger remedies may be applied; secondly, as no leaves or fruit are in the way the job can be done more thoroughly; and in the third place, as the enemy is not active, it is easy to get him. Moreover, there is usually more time for the work than is found in the busy summer season, and consequently is not so likely to be skipped. But it must be borne in mind that winter spraying is a supplement to, not a substitute for, summer spraying.

The San Jose scale, illustrated in its active state on this page, is the most serious of the pests we can fight in winter. To the inexperienced, the amount of injury which this small creature can do to a strapping big full grown tree, seems incredible. But one who has witnessed the astonishing improvement, both in quality of fruit and amount of new growth, resulting from a single season's thorough spraying, needs no further proof that they must work serious havoc. The San Jose scale is about the size and shape of a small pin head, with a diminutive "crater" at its center. As every female scale bears several hundred young—there are sometimes four broods during a season—and as they are born living, one may imagine at what rate they increase. However, cold weather kills off all but those at a certain stage of development—black and half-grown—which live through the winter safely. Where they get a chance to multiply unchecked they form plainly discernible colonies or crusts on the branches, and on the fruits conspicuous small red spots.

For San Jose, spray in fall or spring, with any of the winter sprays. In bad cases, at both times.

Oyster Shell Scale. This is sometimes taken for the above, as it colonizes and encrusts small apple twigs, and larger limbs. It is really a bark-louse, the eggs of which are protected during the winter by the old scales, which are something the shape of an oyster shell, but only the fraction of an inch long. Besides winter spraying, they may be reached, just after they hatch, in late May or June, by spraying with 10 per cent. kerosene emulsion or whale-oil soap, 1 pound to 4 gallons. This scale is not nearly so injurious as the San Jose, but undoubtedly retards growth.

Blister Mite. This minute destroyer makes himself known by raising small brownish spots or blisters on the leaves of apple or pear trees. Spray in winter or early spring, with kerosene emulsion diluted five times, or miscible oil.

Leaf-curl of the peach, which causes the leaves to become twisted and distorted in spring and to fall in early summer, may also be controlled by winter spraying. Give one application, before the buds swell, using Bordeaux (5-5-50) or lime sulphur.

Besides directly combating the disease being fought, the winter spraying undoubtedly serves a second purpose in keeping the trees clean of other insects and eggs.

In winter spraying lime-sulphur wash and miscible oils are the two preparations universally used. The lime-sulphur became the more famous, but of late it has, if anything, been losing ground in favor of the oils.
The lime-sulphur wash may be obtained in three ways: (1) home boiling, in which the ingredients, in the proportions of

- Lump lime .......... 4 lbs.
- Flower of sulphur .... 3 lbs.
- Water .............. 5 gals.

are boiled hard for an hour, kept well stirred, in an iron kettle. After boiling add water at the rate of 5 gals., preferably hot, and use if possible before cooling. (2) Self-boiling: While the self-boiled lime-sulphur is very slightly less effective than the fire-boiled, it is so much less trouble to prepare that for use on a small scale, it is preferred. It is prepared so easily that there is no excuse for the owner of a single tree to let it go unprotected. It takes, for a supply for two or three dozen trees,

- Lump lime .......... 8 lbs.
- Flower of sulphur .... 8 lbs.
- Water .............. 50 gals.

Slack the lime in a little warm water; when it is going freely, sift in the sulphur and keep it stirred thoroughly until a thick paste is formed. From the time of putting in the sulphur the mixture self-boils for fifteen minutes, preferably covered. Then cool down with the rest of the 50 gallons of water, and use as soon as possible. A smaller amount may be made, keeping the same proportions. Some advise the addition of a little common soda-lye—such as is sold in grocery stores—to the mixture, say one pound to eight of the lime, adding it after the sulphur is put in.

(3) The “factory-boiled” or commercial brands of lime-sulphur are the easiest to handle and prepare. They are ready for use as soon as diluted with water, warm water being preferable if it may be had.

The miscible oils are the most convenient of all winter sprays to prepare and apply. They are put out under several trade names, and have been proven effective. Dilution with water is the only preparation needed, one gallon of the oil making ten to twelve of spray. They have the advantage over lime-sulphur, for work near buildings that they will not spot painted work, or make the trees conspicuous. They also do not stick-up and corrode the sprayers and nozzles as badly as lime-sulphur.

Oil emulsions may be made at home quite readily. The standard formula is as follows:

- Crude oil or kerosene .... 2 gals.
- Water (soft) ........... 1 gal.
- Soap (preferably fish oil) .... ½ lbs.

Boil the water and add the soap, shavings. Dissolve thoroughly, remove from the fire, and add the oil, and churn rapidly with a pump for five minutes or so, until a milky consistency is obtained, and the oil and water will not separate. For use, dilute with five to seven parts water. Where the strength of an emulsion is expressed by, say a 10 per cent. kerosene emulsion, it means that there would be two gallons of kerosene in ten of the mixture as diluted, ready for applying.

As will be seen from the foregoing, there is quite a choice as to the sprays available. There is, however, no choice in the matter of applying them thoroughly. Only by covering every square inch of bark exposed may efficiency be hoped for. This is where the miscible oils have another advantage over the lime-sulphur wash; they spread more and work into the crevices in the bark.

Before the perfecting of modern spraying apparatus, the thorough and economical application of spray materials was a problem, especially for the man who could not afford extensive apparatus. It is now a simple matter. Modern nozzles give the spray that degree of fineness which is so essential to thorough work. And for use in the home orchard the compressed air sprayer furnishes a steady, conveniently regulated pressure.

For commercial orchards, use is made of a power spraying apparatus, usually driven by gasoline and conveniently arranged lines of spray hose and nozzles, handled by poles, which enable the operators to cover the trees very readily. For the home orchard a barrel-pump like that illustrated below, or one of the several good types of knapsack or air-tank sprayers, like that illustrated on this page, does a world of good with mighty little effort. There is no reason why home grown fruit should not compare very favorably with the best seen in good markets at such pay-envelope wrecking prices.

The little hand sprayers of the syringe type may do for rose bushes and plants; but if you have two or three fruit trees get a good brass air-tank pump. It will be useful for many things beside your winter spraying; not a month in the year but it will pay good dividends. An important feature to watch is to see that the hose is securely fastened to the tank; on most small pumps this is the weakest point. I once got a full charge of kerosene emulsion and Paris green square in my mouth, nose and eyes by having a pump give way at this point, and since then have been rather careful.

The nozzle is another important factor. It should throw a perfectly fine, even spray, should be as nearly as possible “clog” proof, and should be under easy control. One simple kind has the advantage of having a “goose neck,” so that a simple turn of the wrist at the end of the nozzle pole will throw the spray in any direction desired, and thus takes the place of a great deal of inconvenient maneuvering on the part of the operator, in order to cover both sides of limbs, etc. This advantage is still more noticeable on a windy day; with the old type of nozzle throwing the spray straight ahead, it was frequently necessary, in order to do a good job, to go over the tree twice, when the wind happened to be unfavorable. The goose-neck overcomes all this by turning the spray at best point.

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Homes That Architects Have Built for Themselves

THE LONG ISLAND HOME OF MR. THOMAS HASTINGS AT WESTBURY

by Henry H. Saylor

Photographs by Robert W. Tebbs

Here is a fact that seems not to be very widely recognized in connection with building a home. It is that the most successful home as a general rule, is the one built as an expression of one dominating idea. When a man says something in a clear, concise way—making a definite statement regarding one fact—there is no chance of his being misunderstood. It is only when he tries to tell you several things at one time that none of these makes a pronounced impression upon your mind. It is precisely the same in architecture. If a man tries to put together in a harmonious whole a number of schemes that he has observed successfully incorporated in as many houses belonging to other people, the result is sure to be a disappointing hodgepodge. If, on the other hand, he does as Mr. Thomas Hastings did in designing his own home, the chances of success are all in his favor.

The paneled dining-room is at one side of the terrace front, with a porch at its end. On the other side is the living-room symmetrical with it.
Mr. Hastings wanted to live where the center of interest is the thoroughbred horse. Here live many of the friends of Mrs. Hastings and himself—horsemen and horsewomen all, enjoying the broadest sort of country life, in which the saddlehorse plays the leading part. The Westbury colonists do have 30 horse-power mounts too—with the accent always on the horse, for one of the really scarce things in that part of the country is a carriage.

The dominating idea, then, in Mr. Hastings' own home was that he was living in a place where the main interest of everyday life was the horse, and all that has to do with him—following the hounds or riding cross country. To those who know him, the thoroughbred horse is a very lovable animal. Mr. Hastings knew this so well that he wanted to live in the same house with his mounts. A glance at the plan will show how clearly he has expressed this in his design. House and stable are at opposite ends of a moderate-sized court that is enclosed on one of the longer sides by the service wing and a brick wall, on the other side by a pergola. Both buildings are built of the same materials on the outside—a rough-textured brick, which, on the house, is brightened by a restrained use of white marble. The four large box-stalls look out upon the court, whose broad graveled paths are made for the use of the four-footed members of the family as well as for those who come from out the Palladian entrance at the opposite end across the plot of smooth lawn.

The site of the group is one that closely approaches the ideal. Half in and half out of a patch of woods on the slope of a hill, the stable end is given a background of green as a setting for its splendidly simple roof lines, while the outside rooms of the house look out over a terrace down to the pasture for the thoroughbreds in the valley. A really magnificent conception, is it not?—and one that expresses, as clearly as architecture can, the thought—"Love me, love my horse."

When one examines the group more in detail there are several particularly interesting things to notice. One is the fact that Mr. Hastings has built his home as well as it could be built, of enduring materials—the only wood exposed to the weather is that in the window sashes. He has so disposed the openings that there are broad masses of brickwork to support the vines that are already well started. Under the terrace there is a place for wintering the bay trees, aquatics and other potted plants of the kind. A garage is found in a secondary position in the stable group and under it there is a low stable.

It is a pleasure to notice that Mr. Hastings has not followed the beaten path as regards his vegetable garden, relegating it to some out-of-the-way corner as a necessary evil. He has, on the other hand, given it a place bordering the entrance driveway, edging it with lindens which he purposes clip-
ping back. The screen reveals glimpses of the growing vegetables as one drives in, without giving an uninterrupted view over them all the way.

It is particularly interesting, too, to look into the matter of the building’s architectural style. Probably many visitors to the Hastings’ home will be surprised to find so simple a structure sheltering the man who designed such buildings as the New York Public Library and the New Theater. The one thing above all others that Mr. Hastings strove to avoid was an appearance of “too much architecture,” as he phrased it. And in this connection I remember how vigorously the late Mr. John M. Carrère, Mr. Hastings’ partner, spoke of his own difficulties several years ago along this same line. As he put it, his repeated admonition to his draughtsmen working out the details of his Westchester county home was, “cut out the architecture!” Simplicity and restraint in design are the most difficult things to accomplish, just as they are the two most important factors in the successful result, house, if there is any such thing. First,

Mr. Hastings’ house, in architectural style, may be said to be an Italian farmhouse last and all the time, however, it is a Long Island country home for the owner’s family, never forgetting the thoroughbreds. And, above all, it is not a finished product. Mr. Hastings says most truly that when designing a country home he tries to picture what it may be made ten years, or fifty, from its completion. For if it cannot be constantly improved, round-out in detail, made more lovely each year of its life, it is not a good house. Moreover, if within the owner’s lifetime it can be called finished, that man has lost his grip on the most vital thing in country living. In constant improvement, refinement and making more lovely the house and its setting, lies the very essence of joy in the country home.

In this feature I think Mr. Hastings has expounded a truth that should be well to emphasize. The trouble with our American homes is that they show too much evidence of the “home built while you wait” appearance. The house, its ready made garden—bought in its entirety rather than through selection—all must be complete at a certain time. Then the tired owner bids farewell to the tired architect with a short “that’s finished.” Yes, it is finished, perhaps, but there is no room to spread, nothing to grow into, and that feature which we admire so much in English homes is entirely lacking. If we were not so anxious to end our house in a season...
Beautifying the Bathroom

WHILE SANITATION IN THE BATHROOM HAS REACHED GREAT DEVELOPMENT THE DECORATION IS OFTEN NEGLECTED—WALL PAPERS AND RUGS WHICH MAY ADD TO THE BATHROOM'S ATTRACTIVENESS

It seems curious that the smallest room in a house is receiving the most attention. The bathroom is as important as the parlor. It has been the subject of so much careful consideration during the past decade that it now has almost perfect sanitation. Stringent legislation has wrested the subject from individual discretion. Equipments have changed, improved and multiplied.

With all this evolution and revolution the absorbing idea has been sanitation. Everything has been sacrificed for this object. Now that the goal has been won, attention is being turned to decoration. While conforming to every law of health, the place should be made as attractive in its way as any other room in the house. Bathing even indoors in a little room may be more truly refreshing if the surroundings are right. The environment should be psychologically correct. How delightfully this is being accomplished it is pleasant to observe.

For purposes of classification bathrooms may be considered as of two kinds. First the hospital type, a favorite style. And second the familiar home type, idealized. Opinions are divided as to which is the more desirable. The choice of types is a matter of personal preference when building. It frequently happens, however, that one must adapt the sort one finds already installed to the style one prefers. Fortunately there are always latent possibilities. How to make the most of these depends upon the knowledge of working materials and how to use them to obtain best results. For the present article we will confine ourselves to making rooms attractive and leave the matter of novel equipments and luxuries to be considered on a later occasion.

Before going into details of decoration we pause to make one suggestion by way of preface. Keep the bathroom what the name signifies. Let it be a lavatory only. Eliminate the toilette. Put that in a separate room even if it be tiny. This may mean taking space from the bathroom itself, but the convenience of both rooms will be more than doubled.

With this hint as to arrangement we may take up the two styles of rooms as above classified. Regarding the first or "hospital" type, we may say the term is used here in an appreciative and special sense. So immaculate is everything in such a room that one instinctively feels as if everything, floor, walls, ceiling, accessories and even the air, had been sterilized. One is confronted with highly glazed tilings. The whole scheme is as a crystal to a diamond. It has all the clarity and purity—without the glow and color. But it is the option of the housewife to add certain decorative elements.

Suppose, instead of having white tiles only, some tinted ones were introduced in the tiled floor, in the lower third of the wall or in some simple frieze effect. Use this same tone as the keynote for the color scheme of the entire decoration. Choose a washable rug that has this hue dominant. Bring the color into prominence again in the linen. Select towels with borders of the color. Or if white linen only is desired, have monograms and embroideries worked in the right shade. Thus the monotony is relieved by the color introduced.

Where the tiles are unglazed, or walls are painted, stenciling makes an excellent ornamentation. The designs illustrated are unique and especially appropriate. They have the right spirit. Conventionalized fishes, waves and seaweed form the theme for the frieze section, while turtle and trident are strikingly brought into relief in a separate motif. These designs may be used alone or in combination. The turtles and tridents make attractive corner pieces. They may also be introduced occasionally at regular intervals between repeats of the frieze.

Another good use for these stencil designs is to apply them to bathroom rugs. Any suitable material that will wash, preferably white, may form the basis of such rugs. The design may be used as an entire border or to decorate the ends only.

While these stencil rugs are unique and can be made at home, yet the rush of modern life leaves most of us little time, and we avail ourselves of factory products. This season shows some admirable designs. For example, one rug illustrated has for its

Wall papers may be washable and sanitary without the sacrifice of beauty. At the left is the kingfisher design and at the right the sea gulls above the ocean; the central paper combines a conventionalized design with the suggestion of tiling.
border some real or imaginary monsters of the deep which are of genuine decorative value. This rug is of wool, soft and warm to the feet; it is washable and is guaranteed as to color. These woolen rugs, by the way, are a very recent innovation.

In turning from the first type of bathroom to the second or home style, we find it lends itself to more varied treatment. This is largely due to the fact that the walls are papered instead of tiled or painted. The range of bathroom papers is wide. They are

A new wool rug which is washable and somewhat warmer than the old kind comes in various designs

washable and sanitary without any sacrifice of beauty. It is useful to know, however, that one or two coats of varnish make any paper waterproof. The regular bathroom papers are apt to possess the more appropriate designs. Some of the artistic conceptions are nothing short of beautiful.

Take, for example, the kingfisher paper. The background is a realistic lake surface dotted with pond lilies which are reflected upon its waters. Kingfishers are alight on curving stems. Other kingfishers are on the wing, while occasional dragon flies skim the surface. Though the color of this paper is blue, there is the feel of sunshine. Skies are bright and days are pleasant along the shores of this pictured lake. One wants a dip into the water and the tub is inviting.

In contrast to this lake another paper shows the ocean. Little white-caps fleck the waves while sea gulls flit about, their snowy wings reflecting the sunlight. One sees them skim the water, swoop down to catch some unwary fish, or soar far and high. The aesthetic harmony of a bathroom so papered is obvious. However small the room there is a suggestion of immensity.

Even the towels may echo the dominating color note in the decoration

Sanitation does not necessarily preclude decoration. A little color and design might be introduced on these walls, the tiles or in the rugs.

The Greek scroll makes one of the most serviceable patterns for the various styles of cotton bath rugs

Conventionalized fishes, waves and seaweed form the theme for various frieze patterns

Whether the theme be the sea or no, out-of-door papers are the latest vogue. The tide is turning from severity of design as seen in the ordinary tiled effect. The newest papers bring either a smell of the sea or a breath of the garden.

The most decided innovation is the flowered papers. They are some of the surprises Dame Fashion springs on us just as we have fallen into a rut. She refuses to allow us to become conservative. Our ideas may be getting a wrench, but it is toward beauty.

England sends us some of the most fascinating papers for the coming season. One strikes a balance between tiles and flowers and might be termed a transition paper. The background is blocked out in tile effect. At regular intervals there are blossoming plants in decorative flower pots, the handles of which are ornamented with bows of ribbon. It has a quaint, old-world appearance.

There is a chintz paper shown in one of the advance fashions for 1912. The pronounced vogue of English chintz was dwelt on in a former article. Now it is invading even the bathroom. A curious trait of these chintz patterns is the apparent ease with which all sorts of flowers grow from one stem. Whether or no the English florists are experts in the art of grafting, one thing is sure, their designers are.

Other appropriate papers are those depicting Dutch life. There are lads and lassies, windmills, boats, light-houses, ducks, etc. The coloring is chiefly Delft blue.

The final touch of perfection in either of the two types of rooms mentioned is the introduction of growing ferns or other greenery to render the bathroom ideal.
It was the ideal of the chalet dwellers to make the interior trim and furnishings harmonize as nearly as possible with the keynote of the house. The living-room might have been transported from the Tyrol.

How We Furnished the Chalet

by Helen Ray

In a recent number of House & Garden, a writer remarks that the quality of picturesqueness in the Breton farmhouse, or a Swiss chalet, is much a matter of architecture wedded to landscape. All will agree that the harmonious relationship of a building to its site is the first essential of success in the final whole. No less important is the fitness and relation of things within the house.

When the owners of "Felsengarten" (illustrated in the November, 1910, House & Garden) had finished building and the chalet seemed to "ride" very well with its stony hillside furnishing a truly Swiss approach, they found themselves up against it, as the boys say, to make "boughten" furniture cousin with Swiss architecture. The woman in the question brought her woman's wit to the problem, and then called in the carpenter. A bedstead of German solidity and of the uncompromising lines of the Vaterland, was the first evolution of the ingenious carpenter—shall we call him "wood worker," as being a more feeling title? When the bed was made up, with its heavy spread of old blue and white homespun and big Dutch pillows with crochet edged ruffles, it certainly looked the part.

A bureau, warranted to endure for aye, and designed upon the same massive lines, followed. Those who know, had told us that the *sine qua non* in chalet work was massiveness bordering upon clumsiness, so each piece was made rugged and solid. All were built of heavy Oregon pine, stained a warm, walnut brown, not too much rubbed, so that all seemed part and parcel of the woodwork of the rooms. A few odd chairs, a mirror with quaint frame, a candle stand for the side of the bed, were fashioned from odds and ends of the lumber about the place.

The living-room and dining room combined made a fascinating "picture puzzle" in composing its properties. A big library table was built of heavy, two-inch lumber, with sprawling supports, into which the under shelf was let with wooden pegs; an open work clover-leaf was carved out of each end; the same open-work clover-leaf appears elsewhere in other pieces. A small-sized rag rug of dust color, into which were woven little green pine trees, served for a table spread and was well suited to the surroundings.

The look of the shiny upright piano of polished golden oak could not be tolerated for one instant, as being too American-ish altogether for the Swiss interior, and therefore a folding screen was created to conceal it. In the central one of the three panels, a colored oil print of Defriger's "Zither Player" was introduced, the outside panels being of beautifully grained Oregon pine stained a russet brown. Here again
It took considerable ingenuity to make the furniture coincide with the trim. The carpenter sawed out the chairs from Oregon pine; all were stained a rich brown and might easily choose to carve the legs of their tables! When chairs were set about it, it looked altogether very fit. A small side table held a copper percolator, a copper water pot, a brass Brödchen basket, and a German stein for sake of lending atmosphere.

Altogether it makes a retreat of refreshing departure from the stilted and over-adorned or Nouveau Art styles so much exploited.

What satisfied us so completely with our cottage was that we had chosen an appropriate type for the situation and made its interior consistent with its outside appearance. Our rugged site, with its garden of rocks, was certainly suggestive of Alpine scenery, and if the house was to be a chalet its furniture had to chime in. Then, too, we found that after all the pleasure of the furniture building, that it really was intensely practicable and long-lived and decidedly comfortable in use.

It appears the clover-leaf design, and altogether it forms the central feature of the simple apartment.

A few concessions had to be made for the sake of comfort, and so a morris chair was allowed for the head of the family to smoke his nightly pipe of peace in; but the cushions were made of such non-committal russet-brown burlaps that no one would look twice at them. Mother, too, was privileged to have an American rocker, but its quaint fiddle back and cushion of scarlet leather was what caught the eye and no one looked at the rockers.

The extension table in the dining room proved something of a problem to the carpenter, so the factory furniture supply was again levied upon, and a black oak table was chosen with heavy carved or twisted legs—on the score that the Swiss peasants spend long winter evenings carving.
In England a great deal of attention is given to centering the family life about the hearth. This inglenook is almost an additional room.

The raised hearth with flanking seats is characteristic of the inglenook and results in making the fireplace a distinctive feature.

**A PAGE OF INGLENOOKS**

Even very simple fireside seats make an attractive corner by the hearth.

An interesting effect is obtained here in tiling the entire inglenook. The seats and mantel are all one.

The large oak seats are really continuations of the wall paneling.

The heavy beams make the disposition of an inglenook a simple matter. The grotesque figures are an interesting addition.

The English architects seem disposed toward glazed tile fireplaces, which they make in interesting harmony with the woodwork.
The Case for Steam Heating

A CORRECTION OF POPULAR FALLACIES IN REGARD TO THE STEAM SYSTEM—THE MODERN IMPROVEMENTS IN CONSTRUCTION WHICH HAVE RENDERED IT EASY TO REGULATE AND MORE ECONOMICAL

BY A. MASTERSO N PLUMMER

Editor's Note—"What heating system shall I use?" is the constant query of the home-builder. To assist in solving his difficulty, HOUSE & GARDEN has had experts in heating engineering present the advantages of their own favorite types of apparatus. For the first time the whole case of the best heating method will be presented to the public as a jury. The first article was on hot water heating, others will follow presenting the characteristics and advantages of hot air, and the indirect system.

The relative desirability of the three methods of artificially warming the house is not determined by their relative first cost, nor is it wholly dependent upon the matter of expense of maintenance in fuel and repairs and efficiency in securing to all portions of the house that degree of temperature necessary to physical comfort during any and all conditions of weather.

In manufactories where a large number of operatives are employed; also in school rooms, cheap heating was at one time the desideratum, but it has been found, by the introduction of modern apparatus and methods of heating, that absence due to impairment of physical and mental vitality has been very considerably lessened; that in the former case the output has very materially decreased in cost and improved in quality, and in the latter case sluggishness of brain has been superseded by mental activity and greater progress in study. The effect upon the general health chargeable to the method of heating as noted above is hardly less potent in the home, and especially is this true as regards those members of the family who spend the greater part of each twenty-four hours in the house. Anything which contributes to that condition summed up as "a sound mind in a sound body" necessarily contributes to increased efficiency of man, woman and child, and coincidentally cuts down expense in the matter of medical attendance. The system which accomplishes this will be our choice.

Following the subject in all its bearings to a logical conclusion, there seems no escape from proof that "the best is the cheapest."

Confronted and perplexed at the outset by convincing catalog data bearing upon the several methods of heating and types of apparatus, viz.: steam, hot-water and hot-air, the prospective builder of the house is driven to consult his friends who have had experience. The result in such cases can usually be summed up thus. "'Tis with 'their' judgments as 'their' watches; none go just alike, but each believes his own."

Not the specious arguments of the salesman nor the advice of friends, but facts should determine the selection of apparatus, and facts are sometimes hard to come at.

It is now generally comprehended that ventilation is a prime necessity, and that ventilation and heating should be the inseparable achievements of any method or type of apparatus.

To such readers as have never sought to define what the word ventilation really means, it might be sufficient to say that a room in which the percentage of carbonic acid is less than 10 parts in 10,000 parts of air and consequently not to be detected by odor, is sufficiently ventilated, that is, the air is of a sufficient degree of purity to support healthful respiration. This chemical condition of the air, coincident with the most nearly uniform temperature possible of 68° to 70° indoors in our American climate, constitutes perhaps the best definition in a few words of the conditions sought.

Considering the possibilities within the scope of the hot-air furnace, the usual claim that it comprehends, in the method of which it is a part, both ventilation and heating, whereas steam and hot-water heating do not, may be dismissed as a mischievous half truth. Steam and hot-water heating by means of "direct" radiators in the rooms exclusively do not, it is true, provide for ventilation, but a single "indirect" radiator will provide, through its fresh air supply pipe and one or more registers, sufficient renewal of the air indoors to maintain good and sufficient ventilation.

On the other hand the hot-air furnace is dependent for its success upon the heating of a quantity of out-door air far in excess of that required by the exigencies of ventilation and at an expense for fuel which is prohibitory.

The usual failure of the hot-air furnace to deliver heat to exposed rooms during severe windy weather is too generally known to require a demonstration of the reasons here. Its cheapness in first cost is too inconsiderable an advantage to weigh against its large expense of maintenance and failure to give entire satisfaction.

So far as it may constitute a menace to health, not even stoves in the rooms can vie with the average hot-air furnace in the dissemination of dust, ashes and coal gas. In short, this type of heating apparatus may be dismissed at the outset as having no place in the domestic economy of modern life.

Hot-water heating, only until recently, has possessed the inherent
qualities that go to make up the most pleasant, healthful and economical method procurable, but at the present time steam-heating is much superior to hot-water in several particulars, which will be noted.

The "mild, pleasant, summer-like" quality of the heat from hot-water radiators so frequently urged in favor of hot-water heating has led many people to conclude that this desirable condition is due to the water contained in and circulated through the system, whereas these agreeable and healthful conditions are due entirely to the moderate temperatures of the hot-water radiators, which to all intent and purpose might as well be filled with molasses, hot-air, gas or vapor of the same temperature. The only effect upon the air of the room exerted by the hot-water radiator is to warm it gradually and steadily, instead of "violently" as with pressure steam heating. The water in the system contributes no moisture or other element to the air of the room; just temperature.

The chief objection to hot-water heating consists in the impossibility of quickly increasing and reducing the temperature of the house; particularly in the latter case, which occasionally entails the necessity of opening windows to allow the excess heat to escape. Water is capable of holding so much "heat in suspension," that it becomes at once a most intractable medium to control.

For instance, and for the sake of comparison with steam, a hot-water apparatus comprising 600 square feet of heating surface in the radiators would contain altogether about 225 gallons or 1,880 lbs. of water. If this water were let into the system from the street main at 40° and heated to an average of 180° temperature, the whole quantity would contain about 263,200 British Thermal Units: B. T. U. (the unit of measure of heat) representing under average conditions the burning of about 33 lbs. of coal.

A steam-heating apparatus comprising 600 square feet in radiator surface would contain about 30 gallons of water and 25 cubic feet (about 1 lb. avoirdupois) of steam. Under atmospheric pressure (212°) this amount of water and steam would contain 55,380 heat units, representing a consumption of about 7 lbs. of coal.

In the hot-water radiators and pipes alone, there would be contained about 230,000 heat units, costing 29 lbs. of coal. In the steam radiators and pipes there would be about 1,150 heat units costing about 1-6 lbs. of coal. In short, about 180 times as much capital (sinking fund) is invested in the heating medium when water is the medium as when steam is the medium.

Provided there were no sudden changes in our climate, the above facts would signify no advantage in steam-heating, but as it occasionally happens that the outdoor temperature will rise twenty to thirty degrees in two hours, the need of quickly cooling the radiators becomes apparent. With steam-heating this can be done without loss in a few minutes by closing the valves and allowing the steam to condense, but with hot-water heating the large amount of heat in the radiators cannot be gotten rid of without the loss incident to opening the windows and allowing it to escape.

Steam-heating is familiarly under stood to refer to the use of steam delivered into the radiators by pressure at not less than 212° temperature, and this form of steam-heating is not as desirable as hot-water heating except in the one particular noted above.

For the practical purposes of this article, steam may be said to be (as commonly understood) the vapor of boiling water which is at 212° F. in an open vessel at the sea level and at, say 160° F. in an open vessel at the top of Pike’s Peak or any similar altitude where the weight or pressure of the earth’s atmosphere is sufficiently reduced to let the vapor (steam) get away from the water.

To make available the lower temperatures possible with the production of steam is at once to render steam as a heating medium the equal of hot-water in the mild salubrity of the house and economy of fuel, and its superior in flexibility of control.

The one desideratum in the undertaking is a partial vacuum within the heating system, said vacuum corresponding with or the equivalent to a reduction of the atmospheric pressure surrounding us and everything about us. Water will boil and vaporize in a complete, "perfect vacuum" at about 90° F., but a partial vacuum permitting vaporization (the production of steam) at from 150° F. to 180° F. meets all requirements of agreeable and hygienic warming of the house.

Simple devices bearing quite numerous different trade marks, are in practical use at the present time, which make the phenomenon of steam at any temperature from 150° to 212° a simple accomplishment; likewise devices variously called "graduation, modulation," etc. Valves are today in common vogue which permit a mean temperature of the radiator much lower than 150°, so that as wide a range in the temperature of the radiating surface is possible with steam as with water, below the advisable maximum of 180°.

To secure the desirable qualities of hot-water heating as well as to avoid its undesirable features, an apparatus should comprehend the possibility of an almost continuous state of partial vacuum, so that the high temperature of pressure steam in the radiators will seldom occur; and any apparatus which contemplates the necessity of frequent recourse to steam pressure as a means of securing the degree of vacuum necessary to low temperature steam is deficient to the degree of said frequency.

The prospective builder of the house should understand that his interest and comfort as the future dweller therein are not conserved by the fact that "smaller radiators will do the work" than are required for hot-water heating, when the use of these smaller radiators contemplates the use of high temperature steam during cold periods of weather, at which times it is the custom to exclude as much out-door fresh air as possible.

(Continued on page 401.)
The winter is often very severe even on the sparrows and the chickadees, and a little effort can save many to be cheerful companions during the winter and will keep some of the song birds by you throughout the year.

Feeding the Birds in Winter

WHAT MAY BE ACCOMPLISHED IN TAKING CARE OF THE BIRDS THAT STAY DURING THE COLD WEATHER—SUCCESSFUL WAYS OF MAKING FRIENDS AND COMPANIONS OF OUR GARDEN BIRDS

by Hanna Rion

Photographs by Craig S. Thomas, Grace Aspinwall, and others

The winter care of the birds really begins during the summer before. For then it is that we plant great quantities of sunflowers, planting so many we may leave at least half the seed heads untouched for the autumn birds to help themselves to, the remainder being stored away in crates carefully protected from rats for the bird hard times in midwinter.

There is also a large patch of peanuts planted for the chickadees and nut-hatches. The chickadees eventually become so tame they permit us to offer them peanuts in the fingers, perching on the hand when nibbling. The peanuts (crushed) are daily spread on a shelf extending beyond the studio window, in full sight, where we may enjoy the merry feasting of the chickadees and the sly thief-like snatching of the hatches.

During the autumn little bird hotels are erected in sheltered spots, out of cat-reach, in trees near the house for the universally and unjustly despised English sparrows. We take ordinary wooden boxes and by adding partitions form various little apartments, for even sparrows like private rooms and, having once appropriated them, hold and defend their property against all intruders. A little carpentering increases their attraction.

During the snow storms they will patronize the "Catlas-Jar-Inn," and when ice hangs heavy on the boughs overhead they will hie to "The Sign of the Bunford Baking Powder." After five years of intimacy and unprejudiced careful investigation of the English sparrow, I have not found one thing their detractors say to be true. And they do not chase other birds away.

I have attracted all the sparrows I can to my garden and I have more robins, juncos, thrushes, cat-birds, chickadees, nut-hatches, hermit thrushes, Phoebes, orioles and song sparrows than can be found anywhere else within miles of the Wilderness. The sparrows live on terms of greatest amity with all the other birds—their quarrels being confined to their own family.

And as for quarrelsomeness, the nearest approach to actual dueling I've ever witnessed was between two robins. For sheer...
peeved and pecking, none surpass the white-striped headed sparrows of high degree, while even the dear chickadee is remarkably quick of temper and snippish.

The poor English sparrow has been so persecuted and talked about he is very sensitive and especially grateful for kindness, showing actual devotion to a human friend. When I go out under the apple trees and call, "Come on, little children, come on," they flock to me from all directions, fluttering about my head like tame pigeons. The morning after a snow storm I find the embroidery of little feet all over the front porch up to the very door, where I suppose they would knock if they were stronger. There they sit or flutter about the porch bare vines, knowing they can count on us for food supplies during this stormy time.

The sparrows suffer so much during the winter; we always have a few cripples in our flock—poor birds who perhaps perched for the night on a bare bough and woke in the morning to find their feet frozen to the limb.

For two winters we entertained a one-legged junco who, I'm sorry to say, was much persecuted by his kindred, but perhaps it was for some individual unpleasant trait that I didn't know about. He eventually waited until dusk to come alone for his meal under the studio window, stumping about most pitifully, using one wing as a sort of crutch.

The birds learn to look on us as protectors and it is a proud position to fill. I'd even rather be a bird protector than a policeman on Broadway.

When we are awakened, before the workman's whistle, by a hullabaloo at our window, and rush out in nebulous garments just in time to save our sparrow colony from a hawk, it is indeed a proud moment.

During last summer we noticed that the sparrows deserted the drinking bowl for days and kept trying to rauously trying to tell us some scandal about it, but it was only by a chance glance out at dinner one evening that we discovered the trouble. It was a rat who sneaked out to the bowl from the cellar, stealing the bird bread and perhaps pouncing on sparrow orphans and widows.

A small child's rifle aimed nervously and amatureishly fired, only served to wound the rat, and then there was a frolic. All the family rushed at the rat with various nice weapons, such as a chafing-dish, brass poker and Samurai sword, and when the sparrows saw their enemy wounded and our efforts to slaughter him they joined us with all fear departed, diving down between our weapons, getting in the way of blows, pecking the rat's back until somehow, somebody—sparrows or we—killed the enemy. There was a general festival and a grand funeral which all the birds attended.

Of course, taking the responsibility for the birds can be carried too far, if the birds begin to shirk responsibility themselves and expect you to look after the children who desert the nest too soon, the parents demanding, "Where is my wandering boy?" every time you go into the garden, instead of feeding the little bawlers themselves.

Then, too, it's a terrible responsibility to have to assist in the general pandemonium when an entire brood of post wrens fly the coop at once.

There was "Spilly Willy," the post wren, and his little wife, "Tidy." He came to the back porch, then to the front porch, searching and begging for a home, having been unexpectedly accepted by Tidy the day before. We hurried and found a little stunted failure of a gourd that looked about the size of his necessity and broke a fine knife making a round door, and mashed a favorite finger nailing it up to the veranda post. Spilly Willy accepted it in three hours, and he and Tidy nearly killed themselves spilling over with song-joy while trying to fit four-inch twigs of wood crossways in an inch door hole. Then we found another gourd,
a size larger, with a dried crooked stem (which would make a beautiful balcony), and in this one we made two doors, front and back, and nailed that to another post in case Spilly Willy had a cousin or college chum who wanted to go to hurried housekeeping, too. We had scarcely gotten it in place when Tildy—curiosity-beset woman—flitted over to investigate the new house and went in the back door and out of the front door and sat on the balcony and went indoors again and squatted down to try its hatching qualities, and then out she came and called to Spilly Willy (who was still trying, manlike, to do an impossible mathematical problem with twigs) to come over and behold this model abode with all the modern improvements. After much feminine argument Tildy had her way, of course, and Spilly Willy reluctantly gave up the rustic cottage he’d set his heart on and began all over again the task of bringing twigs for the furnishing. I never saw such work as those two accomplished for the next few days—and I never heard such rapturous singing as they kept up perpetually, perfect cataracts of music tumbling from their little throats.

Then the laying started and poor Spilly Willy was completely left out of it—didn’t know what to do with himself, didn’t even have a pipe to smoke—so he just sat on the balcony while Tildy laid the eggs as fast as she could, and sang his very heart out serenading and encouraging her. Spilly Willy no longer had the freedom of the home, as he had when there was house furnishing to do; Tildy treated him as if he were a bull in a china shop and wouldn’t let him do more than peek in at the precious fragile eggs, so Spilly Willy, having no club to go to, formed a habit of going to the first-chosen gourd cottage, sitting contemplatively therein.

Tildy sat and sat and sat and Spilly Willy sang and sang and sang, and brought all the delicacies to be found in the universe to his little wife until at last the first son and heir emerged from his shell.

After little Billee arrived, other little brothers and sisters appeared, until there were in all six hungry, cavernous mouths to feed. Tildy and Spilly Willy nearly worked themselves to feathers and bone providing for that family, until I was afraid the world’s store of grubs and spiders would be exhausted. And Tildy kept reminding him what a blessing it was they moved to the model house, for now she could go in at the back door and feed the children and out of the front, when he arrived at the back door with more food.

Then came a day when Spilly Willy summoned me with piercing shrieks of alarm. I rushed out and sat long before I understood. Tildy, it seemed, had gone off as usual for a spider and, alack and alas, had not returned. There was no use to hunt—I didn’t know where to go—I could only say all the comforting things I could think of and keep a vigil over the little flock while the disconsolate husband sought far and near, coming back every now and again with food which he hastily and silently delivered only to be off again, desperately calling in heart-breaking tones, through the Tildy-less distance.

Toward the end of the third hour, what with his heartache and double duty of feeding the children, Spilly Willy was nigh dead, and I never saw a sadder thing than when he went over to their first little home and crawled inside, his back turned to the world, alone with his memories and his sorrow.

We had both given up hope—I believed a cat had gotten her or she had become entangled in a wire fence—when suddenly a Niagara of song sounded near. Spilly Willy sprang forth from his retreat as one electrified, and gave a cry of joyous relief that gripped my throat. It was Tildy in the flesh, Tildy safe, Tildy back again to her lover and her brood! She gave Spilly Willy one gleeful greeting, and song of

(Continued on page 402)
Mr. Massey's home is a modern adaptation of the Colonial which shows many of its best features. The brickwork is Flemish bond, giving a rich color effect.

Good planning is shown in the kitchen wing and the bedrooms, each with a double exposure.

THE HOME OF
MR. GEORGE W. MASSEY
LAMBERTVILLE, N. J.

C. E. Schermerhorn & Wilson K. Philips,
associate architects

The drawing-room with its large glass chandelier and chaste white wood-work is of approved Colonial design. A little deviation is made in the hearth and fireplace, where a pleasing effect is obtained by the use of delicately colored tile.
From the door a staircase leads up to a broad landing which has almost the value of another room.

The woodwork of the dining-room is of birch and cherry to match the mahogany furniture. The fireplace here is also of hand-made tile.

In the kitchen built-in furniture is a feature. The shelves in the doors give almost double capacity.

Almost all decoration in the bedroom is left to the furnishings, which are family heirlooms of fine old mahogany.

A very attractive feature of the dining-room is a leaded glass window, made of various sorts of white glass with a touch of color in the center. Here also the spirit of Colonial times is evident in the mahogany furniture and the chandelier of modified Colonial lines.
Inexpensive Furnishing

EVERYONE has not an attic of treasures to resort to. City-ites at best, have a storeroom where the kind of treasures one finds in an old country house attic are not to be found. Last summer in our attic I unearthed from behind a pile of old bed springs, mattresses, etc., three small old-fashioned kitchen chairs. They were in pretty bad condition, the splint seats broken, some rungs missing, and the old red paint was very rough.

I took the chairs, washed them carefully, had new rungs supplied where they were missing and then began my work of restoration.

I sandpapered the old paint off, getting down to the smooth boxwood or applewood of which this type of little old-fashioned chair was usually made.

After the wood was perfectly smooth and clean, the dust made by the sandpapering having been washed off, I applied a coat of dull black paint, a second and a third coat following as each application was thoroughly dry.

I then purchased wooden seats, which may be had at any ten cent store, and fitted them to the chairs where the splint seats were too far gone to be substantial. Had the original splint seats been in good condition, I should have left them as they were, or had a maker of rush seats been available. I should have had rush seats put in. Neither being possible, I upholstered the seats, using hair stuffing with a good, stout denim covering. Over that I put “crinkled tapestry” in old blue. I then painted a little design in blue and white Clematis-shaped flowers on the back pieces of the chairs, and they were finished.

A yard and a quarter of any double width tapestry will make covering for four moderate sized chair seats. A twenty-five and a fifteen cent can of paint was enough for the three chairs. One is apt to have some hair, cotton, excelsior or floss in the house and denim for the lining comes at twenty-two cents a yard.

These chairs cost me very little, and they were attractive enough for the living room or bedroom of any not too pretentious home.

By hunting around one can pick up old chairs at a cost of from twenty-five cents to a dollar and a half that can be done over at home into very handsome pieces of furniture, providing each process in the restoration of the whole is carefully done, so that the result will not be amateurish.

I had the opportunity last summer to buy some very pretty chairs for a dollar apiece. They were old-fashioned cane seated chairs which had been newly enameled in white, at a cost the dealer told me of seventy-five cents each, and newly caned at a similar cost; rather a losing proposition for the dealer, but a great bargain for anyone who wanted some very pretty chairs for a white bedroom.

In the same shop were some charming little chairs in very had repair for twenty cents each. The greatest expense in restoring them would have been in having new rush seats put in. Otherwise they were in excellent condition and charming in proportion.

If one has not a large pocketbook, but a realization of what can be done at a moderate cost, providing one has a little ingenuity, a home can be furnished throughout for a very small sum of money. The largest expenditure in such furnishing is of time and labor. However, the pleasure of gathering the odd bits together and the enjoyment in doing the work, to say nothing of the satisfaction one takes in the finished result, more than repays one for any inconveniences in the process of accumulation and restoration.

Decorating Over Wall Paper

THE condition of our living room when we undertook to redecorate was this: A room with north and east exposure with natural oak trim in very good condition, a red brick mantel, the red inlining toward brown and the walls covered with a much-faded dark green crèpe paper.

The ceiling had a six-inch drop and was papered with a plain mat paper in rather dark cream.

My ideal was a rough plaster oil, stained. This was clearly impossible but I finally achieved the same effect in the following manner:

All loose ends of wall paper were pasted carefully to the walls and the whole surface thoroughly sized.

Sizing in drying has a tendency to draw the paper from the wall.

Where this was the case it was again pasted and thumb-tacks used where the paper seemed obstinate.

Over the sizing were applied two coats of ordinary cream paint, the shade of the lightest parts of the trim. Had the paper been a lighter color one coat would have been enough.

When the second coat was thoroughly dry a coat of light wood-stain was applied with a carriage sponge. (Stain such as grainers use for white oak or maple.)

The stain was reduced with turpentine to obtain the proper shade.

Beginning at a corner at the top, the sponge was passed with a circular motion along the moulding to the nearest door or

When painted and upholstered, the old chair looked quite like a well-preserved antique
neighbors for the material for the final pound ball. The weaver volunteered to sell us balls of rags in hit-or-miss colors, but we felt dubious about his source of supply. Since we must have new rags we decided upon that heavy chambray which retails at 6c. per yard. We found that we could get it by the piece at great reduction from the wholesale shops; so we bought one piece of rose, one of blue and one of natural or unbleached color. Then came the problem of reducing them to rags. Surely it was not worth while to cut them into short strips merely to sew them together again! We finally hit upon the expedient of cutting four or five yards from a piece, tearing a strip about 1¼ inches in width down one side, turning the corner by the aid of a little snip of the scissors, and when that side was torn across to within 1¼ inch of the edge, turning the next corner, and so on around to the starting point (still not cutting off the strip) repeating the operation until the entire piece was cut into one rag many yards in length. While one wound this into a ball, another piece was hastily prepared in the same way and its end affixed to the first strip so that within a few hours several pound-balls were piled in our basket. Some old sheets were treated in the same way (old material always cut in strips a trifle wider than the new) and in a fortnight everything was ready to send to the weaver. We insisted upon the "four and four" weaving, a little more expensive but making a much more artistic and durable rug. After the required number of yards had been woven in any one color, the weaver often finished off the warp on the long or short lengths (strips two or three yards long) bordering each end with rows of a contrasting color, and allowing for fringe. When these were ravelled and tied, they made excellent runners for bathroom and halls. Where the color of a rug is given mainly by the warp, it often pays to use the wool warp (adding about two cents a yard to the cost) or else the "oil-boiled" as it holds its cotton warp color long after the ordinary cotton warp has been reduced to nondescript hues. We found that rugs woven in tan and blue warp were serviceable for dining room and sewing room, as the debris is easily gathered up from them. On the porch the rug rugs gave a home-like touch and stood rough treatment from weather and foot tracks. And in the four-poster room the rag carpet gave an old-time atmosphere and ideal setting for grandmother's furniture.

Wicker Trays

TRAYS for all sorts of uses, and small stands and tabourets for the accommodation of smoking sets are made of English wicker and for the time being at least, are used in place of the same articles made of wood.

The wicker is so closely woven and of such substantial quality that to all intents and purposes it is quite as serviceable as wood, to say nothing of being much lighter in weight and the color, a rich shade of brown, is most effective.

All of the trays and stands are supplied with sheets of glass that fit over the tops, and under the glass are colored prints that add considerably to the decorative appearance. Some of these prints show landscape or water scenes, but the majority are sporting subjects, either hunting or coaching scenes, which with their rather vivid colors, seem more in keeping with the brown wicker frames.

The smoking stands and tabourets are of nearly the same design, the principal difference being in the height. The tabourets have an additional lower shelf which makes them rather more serviceable in point of capacity.

Another piece in the English wicker is a folding stand, quite a novelty that adds no little to the appearance and usefulness of the trays for which it is designed. It is much like the regulation butler's stand in size and shape, and has legs of wicker with brass tips. The tray fits snugly over the top of the stand, making a firm, substantial table for the afternoon tea things, the smoking set or the after dinner coffee.

Rag Rugs

THE rug woven from our hand-sewed rags proved so satisfactory that we decided to fit out the bedrooms of our country bungalow with them, matching the warp with the general color scheme of wall paper and draperies. But where were we to get more rags? The last rug had emptied our rag bags, stripped our piece trunks, and even taxed our good window casing, back to the corner and so on down to the baseboard. Each passage along the wall covered about eighteen inches of wall space.

Care was taken to go over the ground just enough to blend the lines but to give a muddy appearance. When this occurred the whole section had to be washed with clear turpentine till all stain was removed and the stain reapplied.

When all the wall had been stained, the corners seemed to have lost their plumb. This was remedied by dipping a small brush in the stain and lightly passing it the whole length of each corner from top to bottom. Without removing the paper the ceiling was given two coats of one of the preparations found on the market similar to kalsomine, matching in shade as nearly as possible the groundwork of the walls.

The finished room was entirely satisfactory and has stood the test of time, for the paint was applied three years ago and the walls show neither fading, rubbing, nor ripping away of the paper.

I did the entire work myself, the cost of materials was less than two dollars and a half.

Other colors may be obtained by using other shades for groundwork with corresponding wood stains for the surface, but I chose the yellows and browns as it brought into harmony my light woodwork, red mantel, and black walnut furniture upholstered in brown leather.

The trays have colored hunting scenes in attractive colors set in beneath the glass to the first strip so that within a few hours several pound-balls were piled in our basket. Some old sheets were treated in the same way (old material always cut in strips a trifle wider than the new) and in a fortnight everything was ready to send to the weaver. We insisted upon the "four and four" weaving, a little more expensive but making a much more artistic and durable rug. After the required number of yards had been woven in any one color, the weaver often finished off the warp on the long or short lengths (strips two or three yards long) bordering each end with rows of a contrasting color, and allowing for fringe. When these were ravelled and tied, they made excellent runners for bathroom and halls. Where the color of a rug is given mainly by the warp, it often pays to use the wool warp (adding about two cents a yard to the cost) or else the "oil-boiled" as it holds its cotton warp color long after the ordinary cotton warp has been reduced to nondescript hues. We found that rugs woven in tan and blue warp were serviceable for dining room and sewing room, as the debris is easily gathered up from them. On the porch the rug rugs gave a home-like touch and stood rough treatment from weather and foot tracks. And in the four-poster room the rag carpet gave an old-time atmosphere and ideal setting for grandmother's furniture.

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December

No season is enjoyed more enthusiastically and more universally than the Christmas season. Through centuries it has remained the holiday of holidays, and the most cynical observer, if he is willing to acknowledge the truth, must admit that the Christmas spirit is a vital, energizing thing.

"Peace on earth: good will toward men." After all, that is a pretty succinct presentation of the idea, even from the individualistic point of view. Only don't be content to try to put on that mood, like a fancy-dress ball costume, once in fifty-two weeks. Get the habit; make it chronic. And the surest way of doing it is to try to beautify and develop some little spot of ground, no matter how small, about your home. In most of us, no matter how thickly plastered on and highly polished the varnish of city living may be, there is beneath the hide a natural hankering to get our hands dirty in the vegetable patch, once in a while, or let loose a few justifiable cuss words when the plane catches and slivers up a nicely smoothed pine board that was just about ready for the cupboard in the dining room.

I hold no brief for squabs, back-yard egg farms, mushrooms or other get-rich-quick-sure-and-easy schemes that can be put into operation in a good sized hatbox, and without experience. In fact, I am not sure that you cannot add slightly more to the bank account by staying in a flat—although in the end it may be transferred to the doctor. But I do know that there are several ways in which, with a very small amount of ground to work with, living expenses may be cut down and enjoyment built up. And if there are children to be considered, the advantages cannot be measured in figures between vertical red lines. In all things the superstructure is limited by the strength of the foundation, and during the tender years of life the foundations are laid. They cannot be too wide, too deep, too strong. And get some dirt with it—a rough, hummocky slice of an erstwhile farm better than a filled in lawn, with a strip of cement path and a maple-sapling. Remember that what you want is the raw material, which you will have the fun of working into shape with your own hands. And that job will be no sinecure. You will probably be long in getting to the end of it. But nothing will yield you greater pleasure, or more enduring profit.

Look before you leap—look carefully and find a good place to hang. But do not be afraid to make the attempt. If you can, just get a good foot room, and hang on the improvements, down to blue hydrangeas in front and a choice collection of dwarf fruits around the garden in back, may gradually be added in the years to come.

There's only one life to invest. So try to get your layout as early as practicable and then develop it so rapidly and thoroughly as circumstances will allow. Remember always that the real return on effort is not an accumulation of bank deposits, but what you are getting out of life as you go along.

Outdoors

If your garden work has not all been attended to, remember that strawberries and the small fruits—raspberries, etc.—will need their mulch early this month.

The rose bed and any tender spots in the hardy border, should also be attended to. Leaves, held in place by small boughs, make a good mulch. If the rose bushes have thrown up long shoots late in the fall, that seem top-heavy and likely to whip about in the wind, cut them back about a third.

This is also a good time to get a lot of work in the orchard cleaned up. Be sure that you are keeping your trees pruned out to the open head shape. Cut out branches that cross or rub together. Look into the subject of winter spraying. An article on another page of this issue gives particulars about what to spray for, formulas, when and how to apply, etc. In these days one cannot have good fruit without spraying.

Fruit and Vegetables in Storage

It will pay handsomely, if you can get the time to go over your pears, apples, etc., and select some of the best and firmest and pack them away carefully in cracker boxes to keep for especially late use. You will probably find many that have small soft or bad spots which are all right to use now, but which, if left undisturbed, would not only soon spoil themselves but spread trouble through the lot. If you are keeping any onions by the freezing method, be sure that they are put where they will stay frozen. Look over your squashes and put the firm ones where they cannot get even severely chilled. See to it that the celery is dry and kept cold. The storage cellar has been spoken of before. It is not too late to provide a cool, dry place for your winter fruits.
Plants in the House

During the dull, dark days of mid-winter, special care must be taken with the house plants. Do not over water. During this season most plants are resting and need just enough water to keep the pots from drying out. Plants in full bloom require a little more, and may in many cases be given extra food, in the form of liquid manure or fertilizer, to advantage.

Keep them clean. In cold weather, when windows must be kept tightly closed most of the time, and the air inside gets very dry, conditions will be favorable for the appearance of insect enemies—aphis, the small green plant lice, mealy-bug, the cottony, fuzzy looking stickers, red spider, size of a pin point and making the leaves turn yellow and drop; these and others must be guarded against. Don't let them get a start! Formulas and other methods of fighting will be given in detail in next month's department.

Give all the air you can. Nothing is more important to healthy plant growth than fresh air. They should have all it is possible to give without letting the temperature get too low—60-70 in the daytime is right for most house plants. Never, however, let cold air blow directly onto the plants. Ventilate through a hall, an adjoining room, or window on the opposite side of the room, with a screen in front of it. Once in a while, on a bright day, give the plants a good syringing and let them dry off in the sunlight.

Study your plants: find out their individual needs. Get all the information you can about them.

A Use for Dust

Dry dust is a valuable absorbent. Gather it off the surface of the road or walks after a long dry spell and store it in boxes for future use. It is good in the hen house if spread over parts of the henry or barn daily. Wherever there are foul gases and a disinfectant is needed this dry dust is useful. Mixed with ground tobacco stems and leaves and dry manure it makes an excellent fertilizer and is worth a good deal in developing plants in a hurry.

J. J. O'C.

Mulching Ivy

The success of gardening depends entirely upon preparatory measures. Along this line first of all comes mulching—the most important of all the garden work. Try it and see how true this is.

A slip of ivy taken from the walls of Kenilworth Castle and brought to this country just hugged the ground year after year, never attempting to climb until a mulch of fine stable-manure was applied to it, in the fall of the year. When attention was called to it, the answer would be, “Kenilworth ivy is of very slow growth.”

After the mulch was applied, covering it pretty well, it began putting up its tendrils all along the wall. Its new growth, a light willow-green, looking so thrifty and beautiful.

Peas, beans, potatoes, beets, carrots, and corn require from one-fifth to one-fourth of the weight of the entire mixture of fertilizer to be some form of potash. Fruits and berries require about one-third.

Spreading the garden with compost increases the efficiency of the prepared fertilizers.

The mixing of fertilizers may be done some weeks previous to planting time if the mixtures are stored in a dry place. Be sure to label each mixture.

For a garden plot of one-quarter of an acre set with small fruits, this mixture is very helpful: Thirty pounds of ground bone, forty-five pounds of muriate of potash, fifty-five pounds of acid phosphate.

For the same area planted with garden vegetables, twenty-five pounds each of ni-

The attractive garden is not the product of a single spring planting, but depends just as much on careful winter planning and arranging to produce results such as these.

The successful gardener is the man who has his garden in mind all the year. In the spring, its preparation and planting; in summer and autumn, cultivation and harvest and the preservation of its products, and in the winter, reflection upon causes and results, and careful planning.

To leave the choice of seeds, fertilizers, tools, etc., until the first warm days of
The Situation—Outdoors and In

WHAT is all this talk about situation in house building and the fitting of house to land and room to house? It is merely the old law of harmony made applicable to the home not merely to develop it as a work of art but because when planned most consistently its economy of comfort is greatest. The days of a roof and four walls are past, because history and civilization have advanced our tastes and increased our desires. The cave man might have found little to bother him in a stone bed; the present-day citizen can be irritated by an ugly color scheme. It is not elegance that is demanded but relation of parts. In several instances described in this magazine house builders have sought and obtained this ideal. The section upon which they chose to build appealed to the architect’s constructive imagination and he designed a type suitable to the situation. That is the hope of architects. They accepted his ideas and carried them out still further by seeking to have everything inside the completed dwelling add to the unity of the whole. But how often is the good beginning spoiled by a poor completion of the work. The style of exterior design is forgotten in interior decoration, and the furnishing is undertaken as chance dictates. It is not a matter of greater expense to complete a scheme. In these several instances it was a saving. But the greatest gain is in the living. As we are influenced by our environment we will find our days run much pleasanter in a home where there is no constant fight between the house and the things in it. The old song can then be changed to this rendering: Behold how good it is to dwell in a house where there is unity.

The Grip of Winter

IT is only within very recent years that Winter has begun to be appreciated. Even so keen a nature lover as Thoreau, writing fifty years ago of his sojourn at Walden Pond, dwells but lightly on winter. He tells of the animals and their winter habits, of fishing through the ice, of the ice harvest, but of the beauty of nature in her winter dress he says very little. Perhaps he was too close to nature to appreciate her Winter, the need of replenishing his fire and chopping through a foot of ice for his morning’s water, too grim realities for even his appreciative moods. We have the advantage of him in this. It is a far more comfortable and enjoyable experience to pay a short visit to the Winter woods from our comfortably heated homes of today. There is less chance for the real zest of it to be numbed by the reality. And he who has once tramped, preferably on snowshoes, over the blanket-like drifts of the Northern woods needs no suggestion that he repeat the experience. He would as soon miss the thrill of a hunt through the woods for the May wildflowers.

For the man who really knows the beauties of the four seasons—knows them by intimate association with their moods, a choice between them is difficult. And yet it does seem to us that Summer is the least inspiring of the cycle, that the sweeter melancholy days of Autumn, with a tang of burning brush in the air, are more satisfying than the impatient, hot-headed Spring and that the vast silence of nature’s Winter sleep in the woods, when the snow lies deep and unbelievably spotless, is, after all, the year’s most glorious season.

Around the Chip-Block

THERE is a very humble institution that is in danger of extinction in modern life, and that is the wood pile. Perhaps you are one of those erring ones who would with perfect equanimity see it relegated to an honorable past, provided only that there is a goodly supply of coal or gas or steam in sight. It is fortunate then that there is yet time in which to convince you of your error. A great limb of one of the lawn maples has lain on the lawn out there for a month or more. To the uninitiated it has a potential value for fuel, but that is all. If, however, you will take an axe and investigate the matter you will find that it has a potential value that is far greater. Mark the log off into lengths of a convenient size for your fireplace and swing away at it with your axe. With the flying of the thick chips from beside its keen edge there will come an appreciation of several things. There will come back to you a sub-conscious knowledge of hewing wood that comes from your pioneer ancestors. There will come also a keen relish for accomplishment that is not dulled by aching muscles and a tired back. There will come an appetite for food that may cost far more to satisfy than the value of the hewn timber, but no matter, you will have gained in health and in the knowledge that the wood pile is one of man’s most cherished possessions.

The Woman’s Opportunity

YOU surely don’t intend to stay out there all winter!” This was in reply to Mrs. Field’s statement that her home in the country would be ready for occupation late in the fall. Her affirmation brought a flood of criticism that ended up with the remark that such a course would be suicidal. Her visitor claimed she would die of ennui, would become cramped of vision and narrowed in mind away from the city’s culture and opportunity for intercourse. Those whose life fortunately is spent in the open can afford to smile with the wider knowledge that refutes such ignorance. But there is something in the question which demands our attention.

Out of the tourney of suffrage arguments, among broken weapons of discussion, we find the claim that the mother woman is the domestic drudge under present conditions; that she must of necessity be so for she has no incentive or opportunity to be otherwise. Let us leave the question to the combatants; we have rashly approached too near. It gives us a thought for the country woman, however, and an answer to Mrs. Field’s uncomprehending friend.

The matter is summed up so well in Prof. L. H. Bailey’s book, “The Country Life Movement,” that we give it direct: “It is as necessary to the woman as to the man that her mind be open to the facts, phenomena and objects that are everywhere about her, as the winds and weather, the plants and the birds, the fields and streams and woods. It is one of the best resources in life to be able to distinguish the songs and voices of the common fields, and it should be part of the education of every person, and particularly every country person, to have this respite. The making of a garden is much more than the growing of radishes, strawberies and petunias. It is the experiences in the out-of-doors, the contact with realities, the personal joy of seeing things germinate and grow and reproduce their kind.”

We personally feel that the woman, much more than the man, is appreciative of this and that perhaps the first sentence should be ‘It is as necessary for the man as for the woman.’ But at any rate it is so, and the country woman has the God-given opportunity. The change of seasons, the wonderful alchemy of Nature which, when we throw back that of her bounty which we have used and destroyed, turns it to use again to give sustenance to a new crop—all this is far from narrowing; is big in importance for us. The greater chance to enjoy it is the woman’s, and most of all, of course, the country woman’s. Wouldn’t it be well to cultivate this attitude to strike a companionship with birds and beasts and plants? The country would then have a sweeter song and brighter message. This is not a poet’s dream; it is truth.
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The Naturalization of a City Man

(Continued from page 367)

it might be put into immediate use. In fact there were signs of recent occupation of the woodhouse bunk.

Lute Logan and his man had not been gone many minutes when a solid tread resounded on the veranda, and a hearty knock rattled the door. Hale, hearty, red-cheeked, a little puffy after his walk, a towering framed visitor introduced himself.

“My name—is Hunderson—live—up the road—next house,” he informed them, banging a two-gallon jug he had carried down on the floor, and depositing his walking stick with a thwack on the table. “Logan—told me—you’d just come out— from the city; and I thought—maybe a little good cider would go nicely over the holidays. So I took the liberty of dropping in—we don’t stand on ceremony out here much you know—and getting acquainted. I’m your nearest neighbor, and have sort of looked out for this place for a good many years.”

“Squire” Hunderson—to whom the old title stuck even into a new generation—was a gentleman of the old school. Before taking his leave, some fifteen minutes later, he had won the hearts of the whole family. He also left them the information that the treasurer of the Priestly Bank, an old friend of Uncle Jay Rasmussen, had kept the place in order and repair since the latter’s death.

Supper was soon ready to serve and was not kept waiting. Of course the best things were being saved for the morrow, but genuine hunger is a better appetizer than any sauce, and there was little left over for the dish-washers to remove.

The combined effect of a drive in the exhilarating cold and the full meal was not long in making itself apparent. Heads began bobbing as they all sat before the cheery open fireplace and sleeping quarters were quickly assigned. The old house was warming up quite nicely and drew forth complimentary remarks for the fireplace, until the discovery was made that the sky had clouded over a south wind was blowing up, which had changed the temperature several degrees.

Mr. Mantell, as well as the rest, fell into a sound sleep almost immediately, lulled by the sound, which he had not heard in many years, of rain beating upon a shingled roof. With it, there came to him a strange sense of security, of comfort, of protection and peace, that he had not experienced for a long time.

The morning was as warm as early spring; the snow had largely disappeared, and the brown steaming hillsides looked like March rather than December. Rob, who had brought his skates, was disappointed until the fact that all the ice had been covered with snow was called to his attention. It wasn’t a bit like the traditional Christmas day, but they enjoyed it immensely, just the same; particularly Mrs. Mantell, to whom the memories of
many spring openings on those same hillsides were recalled vividly. She roamed through the brush and weed-littered hardy garden, with an undefined but ever-growing desire springing in her thoughts. The square on the slope south of the house and east of the orchard, where the vegetable garden had been, was still definable. Her thoughts turned back to many long ago Aprils—and then to the one ahead. The vague awakening within her mind began to take more definite shapes.

Mr. Mantell came suddenly upon her sitting on the stone wall under the bare and brushy lilac hedge. He experienced again the feeling of the night before, and it made him almost bashful. He did not even sit down by her.

"Helen," he said, "What do you suppose I've done?"
She had no idea.

"I've hired a man. For once I thought I'd do something on impulse, since you're always advocating it." He waited for her disapproval. "You saw that fellow I was talking with out at the barn. It seems the treasurer of the bank has been letting him stay here in return for looking after the place. He's out of a job and wants to work in return for the place to sleep and eat while we're here. Besides I may send you and the kids up here for a few weeks next summer."

"Oh-oh," she said simply. He could not understand the note of disappointment in her voice.

Late that night they sat alone before the open fire—a real fire in a real fireplace. And their happiness was real. Suddenly she got up, came over and sat down in his lap, and put her arms about his neck.

"Did your new man tell you," began Mrs. Mantel cautiously, for she had been interviewing the new incumbent, "that he had worked for two years on a big seed farm?"

"I believe he said something about it," replied her husband, wondering; "what of it? You can't believe these fellows anyway."

"But you do believe him; I know you do," his wife persisted. "Do you know, I've been thinking today a lot; thinking awfully hard."

"Well?"

"I've been thinking that a certain man I know and have a good deal of confidence in, is going to leave the city and make a living out here in—"

"Impossible, my dear; I'm—"

"No, it is not. You've struck a lucky combination of circumstances. Just think—"

"I have thought. I wouldn't like anything better, but I don't dare take—"

But what's the use of arguing with a woman?—especially when for every reason you want to agree with her. Mr. Mantell's resistance burned out with the fire.

"Well, I'll think it over," he gave in at last. "Maybe—we might try it."

And in the flickering shadowed gloom he drew her close to him, and a very deep, very perfect happiness unfolded them.
MOTT'S PLUMBING

The modern built-in bath gives more floor space—utilizes an otherwise useless recess or corner—eliminates the hard-to-keep-clean places under and back of the fixture—removes brass work from within the room. It is built right into the wall tiling and floor, becoming a part of the room itself.

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The Making of a Distinctive House

(Continued from page 372)

roses seen against the background of marvelous blues or misty greys of the distant hills.

At the rear of the cottage, which is really the garden front, is a broad terrace, used as an outdoor living room, and furnished with garden chairs. Beyond are flower beds and a garden pool. The crest of the hill is built out fifteen feet to extend this part of the garden. The brick terrace and broad walk with pergola at the end are planned to give a vista of sunlit and shadowed spaces. Brick steps lead down several feet from the pergola to a lawn and tennis court sunken several feet below. On the other side of the garden, near enough to the cottage to insure protection from wandering boys, is the orchard, further shielded by the hedge of shrubs and trees. The fruit trees, small as yet, included varieties of peaches, apples and pears. Below the orchard is a sunken plot of grass bordered with small fruits. Since the street front has an aspect of no particular interest, hot-beds, cold-frames and vegetable garden are given this location and at the front, near the kitchen entrance, is the kitchen court and drying ground.

It is unusual for the home builder to design unaided a complete house and garden scheme. Clear cut ideals and the ability to insist upon their fulfillment are often lacking. But problems of house construction and garden planning, as discussed in modern magazines and books, are of increasing interest to house owners. This cottage, expressing its owner's personality, and carrying out in every detail cherished ideas and principles, is by no means an unknown variety of the American home.

The Smokeless Fireplace and How We Achieved It

(Continued from page 368)

actually happened in my own house!

Three days' work fixed the chimney when we found out, after many months, what to do. All the brick that had been built in for hobs and the raised bed of the fireplace was first chipped out with a cold chisel and mallet. Then the entire front of the chimney the full width of the opening and almost up to the mantel, was cut away, little by little, in the same way. The mantel was a reinforced slab of concrete and the bricks were all laid in cement mortar that was as hard as stone, so we knew the chimney could stand the strain perfectly well. Cutting away the front exposed the tile flue of course, and this was cut off to make room for the throat, and the smoke chamber above.

A groove was cut in the brick 23 inches from the floor on the inside of the jambs and across the back, to receive the project-
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Here's a photograph (straight from the wood) of a piece of Cypress Siding taken from St. Charles College, La., duly attested in writing by the president, Father Maring. Built 1839—Torn down 1919. NOT A TRACE OF KOT. Note that the lower exposed edge, originally thicker, has become the thinner by the simple erosion of nearly a century of rains.

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When and How to Do Winter Spraying
(Continued from page 374)

Winter spraying is done usually in November, or in February or March. A bright fairly warm day, with little or no wind, is not only the most comfortable, but things will go better and results be more satisfactory.

Although this article deals with winter spraying, a word on winter pruning may not be amiss, as the trees should be put into the best of shape before spraying. If you will only take the pains, in winter, to do just the best you can by your trees, you can begin right now to set your mouth for some surprisingly fine fruit.

Pears and plums require practically no pruning; just enough to keep them in even form, and the instant removal of black-knot if any should appear. Peaches will have to be cut out a little to keep them open, and headed low—in the commercial orchards they like to have the lower branches low enough to droop right down onto the ground, when in fruit and thus relieve the trees of their excessive burdens. The apple requires more attention. Young

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trees should be cut out to the open-head shape, formed by pruning above an outside eye whenever the branches are cut back. In older trees, all suckers must be kept off, and cross, tangled and rubbing limbs removed; if over an inch in diameter, use a clean-cutting saw and paint over the stumps. March is a good time to do this work, as all winter-damaged limbs may be removed, but November or December will answer as well.

In the small home orchard—and every house with a garden ought to have its few fruit trees—two or three afternoons' pleasant work will serve to put things into first-class shape. The pruning is a matter of a few hours only. An efficient spraying outfit may be had for a few dollars—$4 to $10—and for other purposes all the year round. A standard prepared spraying wash or oil is ready for use by simply adding cold water; and from five to thirty minutes, according to its size, will spray a tree effectively. What excuse is there, then, for backward trees and poor quality fruit. You may as well have the extra fancy sort.

The Case for Steam Heating

(Continued from page 384)

The size of the radiator for service in any room is dependent upon its temperature, consequently the larger it is, the lower its temperature may be in rendering the service required of it, and the lower its temperature, the nearer it approaches perfection in the dissemination of artificial warmth in the house.

In the modern systems of heating by low temperature steam (vapor) some of the objectionable mechanical features of the more familiar steam-heating systems are eliminated. Air valves are dispensed with, packless valves are employed and noiseless circulation at all times is assured. The fire in the heater will contribute heat to the rooms continuously as with hot water and much of the waste in fuel incident to the pressure method of steam-heating is avoided. This method of steam-heating will cost less in fuel consumption than hot-water heating and a system expressing the best practice in the present state of the art will cost about the same to install as a first-class hot-water heating apparatus.

This article being in the nature of a comparison of different systems of heating and not a technical exposition of the methods of arriving at the proper size of the heater, radiator, pipes, etc., it presupposes that a general statement of the importance of moderate temperatures of the radiators, endorsed by medical and other scientific authority, will sufficiently indicate to the house builder that a clause limiting the temperature of the radiators may be inserted in the contract for the heating apparatus.

Heating apparatus in the house makes...
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you have a rug of wonderful texture, the soft, high, resilient pile sinking luxuriously under the foot. In design we offer you close imitations of beautiful old Oriental masterpieces worked out in their rich, mellow colorings. The length of pile and the use of splendid material insures you great resistance to wear, while our dyes are subjected to rigid tests in our laboratory before use.

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WORCESTER, MASS
ESTABLISHED 1880

Feeding the Birds in Winter

(Continued from page 387)

its appeal to us (or does not) in very cold weather through a sixth sense of its friendly warmth. Of course nothing in the way of artificial warming approaches the open wood fire in its appeal to that sense. This luxury in our climate contributes its warmth by about 90 per cent., of radiant heat. The radiator produces a genial 45 per cent. of radiant heat and the register gives no radiant heat at all but just hot air.

The radiator is a useful friend in taking up and warming the cold currents of air in the bay windows, under the stair wells and near the outer doors.

"A radiator seems to me

The kindest reptile that can be.

Its cobra coils of golden art

Entwine the cockles of my heart."

For I do not blame poor Eve at all;

For it was very cold—that Fall;

Of course, she took the serpent's hiss

For Steam heat's everlasting bliss."

—Southern Architect and Building News.

In writing to advertisers please mention HOUSE AND GARDEN.
Locking the Windows

The necessity of going about the house at night to see if the windows are safely locked, can easily be obviated by the use of the clever arrangement of the lock and lower sash-lift at the bottom of the lower sash. This consists of a metal finger-hook for raising the sash. There is, however, a drop hook as well. A separate plate, with a hole large enough to accommodate the drop hook, screws into the window-sill. The sash-lift and the hook-locking device work from a center pivot, and the act of closing the window forces the edge of the drop hook over the edge of the lock-plate on the sill, thus clamping the window on the "hook and eye" basis.

Where the bedroom windows are on the ground floor or other exposed place, the "ventilating lock" is a very desirable addition to one's comfort. This is a metal device applied to the side of the window, allowing the upper sash to be dropped a required distance, when the night-lock is applied. Bolts are also made for the purpose, and it is merely a question of personal preference as to which is the most desirable; the ventilating lock, however, being more practical as it is self-applying.

Economy in Gardening

So far from expecting to make any profit from their gardens, many would probably be satisfied if they could make them self-supporting. We are all agreed that the pleasure afforded by a well-kept garden is worth a good deal of trouble and expense; indeed, it can be looked upon as a necessary expenditure, inasmuch as it is an indispensable factor in maintaining the value of an estate, but it is very certain that the study of the accounts of a number of important gardens would reveal the fact that good and bad management result in a very considerable difference both in outlay and returns.

Economy in gardening is largely a matter of making the best of the site. Is it not really better to make the most of natural advantages than to pit one's ingenuity and purse against nature? Yet there are people who must cultivate roses where all the soil for them has to be brought a great distance, and others who must needs make a lake on an unsuitable site, or whose taste is all for plants which require constant replacement. Fortunately, in glasshouse gardening it is quite easy to economize. Thus the maintenance of a stove or forcing houses cannot be termed a necessary expense, and the conventional summer bedding out is an item which might certainly in some instances be advantageously improved away. Where room is available a saving could be accomplished by doing more home propagation. Professional gardeners say there are not many employers who have not got economy very much in mind. The pity of it is that

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California Notes

On February sixth I found the purple-crimson tips of our very earliest Clematis, the "Scarlet Trumpet," C. Sanguinea or C. Coccinea Sanguinea, just peeping out of the ground. The old vine dies back to the ground each year, but the young shoots grow rapidly, and before they have attained a height of three feet the buds appear at the leaf axes, and while the vine climbs steadily away the buds grow brighter and more showy.

The flower comes out flat like other Clematis, but retains the flagon shape of the bud, only opening at the tip, absolutely unlike any other Clematis I have seen, dainty, fairy, attractive bits of scarlet coral, standing up stiff on woody stems and holding much of honey in their depths. The humming-birds visit them the first thing every morning and many times throughout the day, making the delicate drapery of vine over my bedroom window a constant delight.

The vine never grows heavy or thick, being a delicate ornament rather than a shade. The seed clusters are as ornamental as the flowers, of soft, pale green, and most curiously twisted and curled. It grows readily from seed, but the seedlings are slow of growth, when two years old only attaining a growth of about twelve inches.

The mountain clematis, C. Montana, is the second one to bloom here. While I find it, and the later and more showy ones, very attractive, still nothing is more charming than the Sanguinea, blooming as it does from earliest springtime until fall, all summer long withstanding the hottest sunshine, still growing and blooming and displaying their efforts are often misdirected, for he who knows little of gardening is unlikely to be able to economize with good effect. The usual mistake is to seek to effect a considerable saving in the cost of labor. But by doing this the garden is sure to get out of hand, and above all things it is fatal to try to save by employing cheap incompetent men.

W. R. G.

The Sprouting Stage

I have found the sprouting stage of my plantings accompanied with the greatest dangers to the little seedlings. Last year, in order to have them more fully under my care, I planted corn and lima beans in small boxes of damp sand; when they had come up and seemed sufficiently hardy I put them out in the ground and discovered that such fostering seemed to make them immune from the rot and other enemies that blast the life of so many baby plants in the raw chill of early spring.

A. W. D.
Keeping Cut Flowers Fresh

All decay is caused from some sort of bacteria, and by using antisepic preparations and cleanliness we can delay the process. In the case of cut flowers we find that they will keep fresh longer if gathered at night and the next morning have the stem washed in warm water and a quarter of an inch cut off with a sharp knife. They may then be put in a vase of water and be taken out and washed and trimmed again every morning for several days before they show signs of decay or wilting. If it is desired to send flowers to a distance they may be gathered at night and treated in this way the next morning, then wrapped each stem in cotton and oil paper. A small potato stuck on each stem will furnish sufficient moisture to keep a flower fresh for several days while in transit.

How to Make Your Suburban Home a Success

The man of moderate means as well as the man with millions has a desire for the scenic beauty of the country, which finds expression in homes ranging all the way from a lot with a few flowers to the country estate. Each in its way serves to gratify this desire. By successful administration let us mean that the lawns are well kept, the walks and drives are in order, the shrubs and flower beds and the garden are free from weeds. First of all, have your residence and outbuildings properly located. There is nothing that adds so much beauty and at the same time cuts down the expense of a place like an economic arrangement. Many a man has become disgusted with his place because it never seemed to be in order. You have seen many places where the whole arrangement reminded you of a horticultural junk shop without shape or system. Vegetables and flowers growing together, the lawns cut up with figure shaped flower beds as crosses, stars, etc. Perhaps you will find board boxes or wooden edges to the beds. All these things tend to lessen the character of the place. This patchwork method is always the most expensive and totally lacking in taste or art. Flower beds edged with field stone are in bad taste and never in keeping with any design of a bed. By far the best way to make a flower bed is to cut out the shape and size out of a well-kept sod, letting the dirt come almost flush with the top of the sod. Good taste demands no greater demarcation of the bed and lawn than this. It is much the simpler way and there is nothing about it to become dilapidated.

Perhaps the most important of all is the lawn. We all enjoy a wide stretch of green. Make your lawns seem as large as possible. Do not cut them up with beds of flowering annuals, they have no place on a lawn, where nearly everything like

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The drive, which is both walk and drive, enters from one side and the out-buildings are reached without cutting across the main lawn. In going to or leaving your garage (G) you pass your residence without going some roundabout way. Your residence is so located that you have the best possible view of your lawns from your front porch (F. P.) and your living room (L. R.), while at the same time your outbuildings are so close that you experience no inconvenience. The residence must, to a very large degree, be considered as being diagrammatic, for in this matter individual taste plays so important a part, that at best suggestions are only safeguards. There are some features of a suburban home that make it enjoyable. By means of our sketch let us study some of these features. The summer porch (S. P.) is fitted up with removable screens and used for a summer dining room. This porch is close to the pantry (P). Through the kitchen hall (H.) you have easy access to the drying yard (D. Y.) and the vegetable garden (V. G.). The front entrance is by way of the front porch, or you may use the carriage entrance (E.) at your discretion. The living room is a good size and through a bay overlooks a wide stretch of lawn. These details are important and must be worked out carefully, for they have much to do with the success of your home. The residence and home grounds are correlated and must be worked out together. (C. L.) and (T. I.) are croquet and tennis lawns.

The garage (G.) and hen house (H. H.) are so located that the yards (Y.) are together with only a fence between them, but connected with a wide gate so the two yards can be thrown into one if you have no occasion to use them separately, thus giving you a larger hen park. The out buildings are located closely to the garden, so that all manure and compost can easily be drawn out on the garden at the proper time, and which aids very materially in making your garden a success.

The garden contains thirteen fruit trees, 1, 2, 3, 4 are Early Richmond, Black Tartar, Elkhorn and May Duke cherry trees. 5 and 6 are summer apples, Red Astrachan and Yellow Transparent. 7 and 8 are autumn apples, Fameuse (Snow apple) and Duchess of Oldenburg. 9 and 10 are winter apples, Baldwin and Jonathan. 11 is Hyslop's crab apple. 12 and 13 are Kieffer and Seckel pears. Small fruits, such as black and red raspberries, gooseberries and currants, are planted in variety on the outside of the garden walls. The grape arbor that covers the center garden walk (G. A.) is covered with Concord, Delaware and

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Niagara grapes. A nice strawberry bed could be planted in the southwest corner of the garden. This scheme gives you quite a variety of fruit and a quantity that will supply a large family table throughout the entire year. The walks are three feet wide and constructed of coal cinders laid to a depth of three inches. On either side the walks are bordered with a strip of sod a foot wide, which serves to keep your walks well lined up. Here you may grow all manner of vegetables to suit your taste. Do not, however, grow the same vegetables on the same plot for more than two successive years, change them about. A good deal of green stuff from the garden can be thrown into the hen park for the hens, for this will help them to stand confinement much better. It is never practical to let your hens run at large, for they will destroy your garden and pester your neighbors.

Flowers can best be handled in gardens by themselves. The flower garden (F. G.) is composed of three beds. The center bed is eight feet by fifteen feet, the two end beds are eight feet by ten feet. The row of cherry trees and a privet hedge forms a background and separates the flower garden from the vegetable garden. A perennial border between the flower beds and the hedge runs the entire length of the hedge and ends in a bank of high growing perennials at the north end of the flower garden, which serves also to screen the vegetable garden from the flower garden. These beds can be filled with bulbs in the fall to give you your first spring bloom. Subsequently, when the bulbs are done blooming the bulbs should be removed and the beds filled with bedding plants that will bloom all summer. The perennial border is composed of the hardiest perennials, of which we might name, Golden Glow, Japan and German Iris, Achillea in variety, Columbine, Perennial Asters, Campanula or Bellflower, Lily of the Valley, Hardy Phlox and there are hundreds of other good varieties to select from.

The drive can be made very cheaply and lasting by excavating to a depth of nine inches and filling in with six inches of coarse coal cinders for the first layer and a three inch layer of good gravel for the top coat. It is quite essential that you give the drive a good crown, as it serves for both walk and drive, and it is important that the surface water runs off quickly, so that the drive will always be dry and hard.

The lawn plantations will vary, as will all other plantations, with the locality. In general we may say that all shrubs planted close to the residence should be of a low growing character so as not to obstruct any view from the house. Among these can be mentioned Dwarf Barbree, Indian Currant, Snowberry, Spiraeas, etc. Shrubs in the background of the border plantations should be high growing shrubs, so they shall serve to screen out any objectionable features that may be beyond
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The Investigations of the Agricultural Department

As scientific farming advances we find further assistance from the Agricultural Department. The experimentation carried on in investigating the spread of contagious diseases affecting farm stock is of the greatest value at a time when the subject is not completely understood. For instance, a recent farmer's bulletin (473) contains an important and most comprehensive statement of facts on bovine tuberculosis. The bulletin deals with the history, nature, symptoms of the disease; how it spreads, how a herd is infected, the tuberculin test, and its prevention and suppression.

"Tuberculosis" the bulletin states, "is a widespread disease affecting animals and also man. Human beings and cattle are its chief victims, but there is no kind of animal that will not take it. Hogs and chickens are quite often affected; horses, sheep, and goats being affected but seldom, however.

The disease is contagious. It spreads from cow to cow in a herd until most of them are affected. It is slow in developing and may not become noticeable for months or even years. The tuberculin test, which cannot do harm to the healthy cow, reveals the germ in a few hours, and always proves successful when in the hands of an experienced veterinarian."

"The disease is common among hogs," the bulletin goes on. The public at large report that thousands of hogs inspected is found to be tuberculosis. The losses among cattle and hogs are enormous, amounting to millions of dollars annually."

Turning to the infection of human beings with the tuberculosis germ through cattle, the bulletin says: "Milk is the staple food of infants and young children and is usually taken in the raw state. If this milk is taken from a tuberculous cow it
may contain millions of living tubercle germs. Young children fed on such milk often contract the disease, and it is a frequent cause of death among them.

"Meat from tuberculous cattle is not so likely to convey the infection, for several reasons. It does not so frequently contain the germs; cooking destroys those that may be present, and, lastly, meat is not consumed by very young children."

As to the spread of the disease, the bulletin says: "Sooner or later the tuberculous cow begins to give off the germs of the disease. The germs escape by the mouth and nose, by the employee, in the air, and discharges from the genital organs. When the germs are being given off in any of these ways, the disease is known as open tuberculosis."

The bulletin concludes with: "Dark, dirty, crowded stables are unfavorable to tuberculosis. Under these conditions the disease spreads rapidly and is only kept out with difficulty.

"Clean, airy, well-lighted stables, on the other hand, are unfavorable to the development of the disease. If brought into such a stable it does not spread so rapidly and is not so difficult to get rid of as in the first case."

"A well-built, sanitary stable need not be made of expensive material or of elaborate design, but should have plenty of light, air, and drainage.

"Light is very important. Direct sunlight is a great destroyer of germ life. Tubercle bacilli find it exposed to sunlight. It is a disinfectant, always ready to work without cost."

Naming the Country Home

THE return to nature has been the social phenomenon of the last decade. Our grandparents—or our grandparents, rather—herded in great hotels, at Long Branch or Saratoga; our fathers "took trips" to Florida, or the Pacific Coast; but we, of this generation, are not content merely to visit the country, we want to own a bit of it. We covet a place where we may build a bungalow, or moor a houseboat, or, at least, pitch a tent; a place that we may call our own, and this very calling necessitates a name. So, when once the spot is selected and the tabernacle rests, the question is "What shall we name the summer home?"

Simple as the question sounds, it is, by no means, easy to answer. There are it, true hundreds of names to select from, but to find the one, attractive, euphonious, unhackneyed and, above all, suitable, is becoming more and more difficult.

In Adam’s day, that interesting document that Mr. Mark Twain has saved to us from oblivion—Adam tells how Eve went about naming all the creatures in the garden from their "looks." She called the dodo, a "dodo" because it looked like a dodo. This intuitive method is really the one that should be applied in naming greens, 6 to 40 feet high. Don’t put it off till spring, for the chances are the spring rush will make you put it off till fall—and then put off till spring and so on. Get it done, and have us do it for you. Send for our catalog—Winter Evergreen Moving—if you can’t come and talk it over with us at our Westbury nursery. We are only 40 minutes’ train ride from New York, or it’s a beautiful motor ride, and we are right on the Jericho Turnpike.

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Do it with our special tree moving apparatus and the assistance of your team, or one we will hire from a local man.

Don’t think because your walks are frozen hard that the ground under the trees is. We work all winter among the trees in our nursery, and what we can do there we can do for you—and do it economically.

Of course, if you prefer to have us send your trees from our nursery first, sturdy root-annel trees—we will gladly do that. But in either case, now is the time to plant big evergreens, 6 to 40 feet high. Don’t put it off till spring, for the chances are the spring rush will make you put it off till fall—and then put off till spring and so on. Get it done, and have us do it for you. Send for our catalog—Winter Evergreen Moving—if you can’t come and talk it over with us at our Westbury nursery. We are only 40 minutes’ train ride from New York, or it’s a beautiful motor ride, and we are right on the Jericho Turnpike.

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First, study its location. If set on a hill, "Hill Top," "Hill Side," "Hill Slope," "Hill Crest," "Watch Hill," "Beacon Hill," are a few of the possible combinations. If one does not care for the word "hill," one of the many synonyms may be substituted, as "Rise," "slope," "peak," "summit," "brae," "barrow," if sandy, "dune," and, if high and rocky, the old English "tor."

Possibly the cottage is near a stream or waterfall. Then "brook," "beck," "burn," "cascade," "falls," "springs," are a few of the words that may enter into the name. If in an open field, "meadow," "mead," "heath," "terrace," "valley," and "fen," if in the wood, "glen," "forest," "wood," "grove," and "thicket."

These words may be prefixed to "cottage," "cote," "place," "lodge," "house," "cabin," "hall," "court," "camp"—whatever name may fit the particular form of domicile; or to one of the many liked English endings; "croft," "wold," "crest," "more," "mere," "wood," "chester," or "stead." Again, these English endings may be suffixed to names of trees, flowers or birds, making another long list. Any tree will form the basis of an attractive name, only be sure that it is the characteristic tree of the place. "Pine," "fir," "cedar," "cherry," "locust," "chestnut," "elm," "maple," "oak," "briar," and "woodbine" are a very few. The list is only limited by the number of species. "Briar Cliff," "Cherry Hedge," "Willowhurst," "Cobble Dell," "Woodbine Cottage," "Elmstead," "White Birches," "Laurel Hill," "Oak Bluff," are examples of such names.

"But," some one objects, "these names are not what the house looks like; they are all names of its surroundings. What are some of the names that come directly from the house itself?"

It may be named from its material: "Cobbles," "Boulders," "Shingle," "Logs," or, like Mr. John Burroughs' cottage, "Slabsides." It may be named from some architectural feature: "Gambrels," "Dormers," "Gables," "Colonia," "Ridgepole," "Hearthstone," "Oriels," or "Timbers," or, it may combine the color with some other characteristic, as, for example: "Red Top," "Gray Stone," the "White House," "Red Cote," or like Mr. Cleveland's Nut-tucket home, "Gray Cables."

As the summer home is, especially, a place of rest and contemplation it is fitting, if desired, to let the view or exposure decide the name. "Sea View," "Hill View," "Near View," "Fair View," "Bonnie View," "Vista," "Belle Vue," "Out-

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Look,” “Overlook,” “Lookout,” and “Sunnside,” “Shadyside,” “Morningside,” “Brightside,” “Daybreak,” “Sunburst,” are all significant.

A play on the owner’s name sometimes gives a pleasing touch of individuality. Mr. Vanderbilt’s “Biltmore,” Mr. Howard’s “Howardon,” the “Sherwood Forest” of the E. E. Sherwood family and Mr. Hazard’s amusing “Hap-Hazard” are good examples of this class of names. The very cleverest one, however, is the name of a cottage owned by Mr. Maurice Sheppard, “Shieling,” the Hebrides’ word for Shepherd’s Hut.

This use of Sheiling is suggestive, too, of another class of words—those from other languages that have appropriate meanings. Nothing could be better than the Japanese “Nikko”—sunshine—for the popular Japanese cottage; the German “Herzheim”—heart home—just fits the Dutch architecture; while no name could be prettier or more suitable for a lodge in our American forests than some of the musical words of our native Indians. “Mohogian,” “Minnehaha” (Laughing Water), “The Long House,” “Antlers,” “Arrow Head,” “Horicon,” “Uncos,” “Manitou,” are a few of these names. The lover of Cooper will easily add to the list.

From Cooper the search leads to other books and authors, for there is real joy in linking the place of rest and leisure with one’s favorite poem or romance. Of course the mistress of “Boffin’s Bower” will have a set of Dickens on her shelves, as the owner of “Kenilworth,” “Melrose,” or “Woodstock” will bring her Scott with her. It was the boy of the family who named the summering place on one of the Thousand Islands, “Treasure Island,” and the grandfather who christened another one “Ellerslie,” from his own boyhood favorite, “The Scottish Chiefs.” “Windermere,” “Atlantic,” “Aurora,” “Westward Ho,” “Rip Van Winkle”—what a suggestion of blissful sleep—“Rosemary,” “Brook Farm,” “Avelon,” “Appledore,” “Valkyrie” and Madame Modjeska’s “Arden” are all of this class.

Sometimes, however, the summer home is such a deep delight, such a realization of long cherished hopes and plans, that the owner feels that nothing short of the expression of his satisfaction in the accomplishment will serve for a name. This is naming the summer home for what it looks like subjectively. A few such names are, “Rest-well,” “Eureka,” “Eden Bay,” “Paradise Point,” “Joy Land,” “Liberty Camp,” “Peace Haven,” “Hope Cottage,” “Heart’s Desire.” One couple called the new cottage in which they spent their honeymoon “Hearts Content.” They have spent their summers there ever since for thirty years, and it has always been “Heart’s Content” to them and their children.

Perhaps this list would not be complete without a mention of a class of names that may be called facetious. When witty and apt, these names are often amusing, but,

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like nicknames, should fit like a glove and even then they are only suitable to the rough camp, not to the substantial permanent home. Many of them, too, like "Kill Kare," "Uneeda Rest," "Hate-to-Quit-It," "Restawhile," "Dew Drop In," "Take-It-Easy," have become so common as not to have even novelty to recommend them. If one cannot coin his own he would better take some straightforward simple name that will endear itself with use.

Another word of caution may not be amiss. While it may not be absolutely necessary to have the name of the summer home fit the locality, at least it should not be a misfit. "Crestdale," for example, is a contradiction of terms. One may have intended for years to name her summer home "Anchorage," but it certainly does not fit a mountain bungalow any more than "Wigwam" does the seaside cottage. Then, simple straightforward names are usually preferable to romantic, highly poetic ones, there is the other extreme, "Secluded Quiet" and "Good Rest," for example, are only one degree removed from "Comfortable Mat-rasses" and "No-Flies-Not-Mosquitoes." In short, one needs a sense of humor, even in naming a country home.

As there are a few happy mortals who can wear ready-made clothes and have them look as if made to order, so doubtless there are summer houses that can be fitted perfectly by ready made names, and, for such, the following list is appended:


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(Continued from page 364)
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(Continued from page 414)

it make whether windows are in groups with mullions between or each a single rectangle fitted with small, square panes, or the doors round-arched with fan-lights or depressed-pointed with clustered moldings?

They are of a type with gables and sloping roofs, the whole house under a single roof or with a long main ridge with intersecting gables disposed either formally or informally as the site, the plan, or the owner's whim suggests. In each the gentle lines of silhouette seem to fit our irregular treatment of a countryside where, for instance, the long tranquil lines of the Italian villas might seem unrelated. They must have a proper setting of formal terrace and garden to be in their full majesty; but our northern type is democratic and seems born of the soil. It suits hillside or meadow, formal gardens or no gardens at all with equal naturalness, a sine qua non of a successful American type, for while one man likes formality, another does not; where one man desires a garden with straight paths and arbors, another would sow in grass with clumps of trees, and so it goes.

"Northern Tradition" as a title is misleading in one respect. Its defense has not been attempted because it is traditional; that were an emotional reason, as, alas! most architectural arguments seem to be—merely, built on a morass of sentiment, will o' the wisp which lead to self destruction. But the argument is that the house should take its form from the materials employed and the constructive problem to be solved, all in the easiest and most natural way, the old, old argument of Ruskin, the "Chere-ches le Vérté" of the Paris school, by which they mean that the most direct solution of the constructive problem should determine the form of the result. Now, since the problem has been substantially the same in Northern Europe since the Middle Ages, we should test our solution by comparison with the persisting basic type there; that as it seems, our solution agrees with this, we may feel sure we have argued logically, that our type is the same as this, and that by so building we are merely continuing the "Northern Tradition."

Some of my predecessors have argued that historic association should govern style; others that any beautiful quality should be adopted. Both true, but is it not true that we should take only what we can properly assimilate; that all else, be it beautiful beyond words, we may admire but must pass by, to work out our own solution with the natural use of our own materials?

Look at *House and Garden’s* symbol in the circle, each side the magazine title on the front page; what “style” is that house? Dear knows; but it does not matter. Unconsciously the magazine has adopted in its simplest form the Northern Tradition, and what is unconscious is natural, and what is natural is best.

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The Annual Building Number of House & Garden

A MAN wrote in to us the other day and asked whether we couldn't possibly postpone for six months the appearance of our next Building Number. For nearly three years he had been practically ready to start work on a new home. Each January he had found so many new ideas in the Building Number that he revised all his plans. If we could only hold back this coming January's issue until he could get a spade into the ground before the spring, his troubles would be over, he hoped; otherwise he feared he would rent a house and revise plans all his life.

We were extremely sorry not to be able to oblige him, but for the sake of the thousands who can make up their minds more quickly and who also will build next spring, perhaps, we cannot longer hold back the deluge of information, suggestions, clever ideas that other builders have evolved, plans, cost data, and pictures that tell a thousand and one stories. We had an idea that last year's Building Number was a good one—a man happened to write us that he had started his new home soon after receiving it, and that for every knotty problem he met that Building Number pointed out a solution. However, here's a better one this year. It covers its subject like a blanket—not a wet one, and if you fail to find it crammed full and running over with brand-new ideas that you can snatch out to adapt to your own problems, why—we'll throw up our hands.

Which would you rather do—build a new house that expresses your own tastes and ideas of arrangement throughout—spic and span in its modern materials, or take one of the homes our ancestors built a hundred years ago and remodel it to suit your present-day needs as far as possible? That question is the subject of a debate in the January Building Number, and the pleadings for both sides have their war paint on.

Do you know that if you change your mind and decide to build that house of yours with stucco outside instead of clapboards or shingles it will cost you about ten percent more? There's a lot more of such information in an article on Comparative Costs of Building Materials.

Then there are articles—with pictures that fairly make your mouth water—on lighting fixtures, hardware, rough or smooth plaster walls, casement windows, how to keep a cellar from getting wet or how to make it dry if it has that bad habit. There is another article on that vital question of choosing an architectural style, one on tiling for use and decoration, one showing some valuable short-cuts in achieving paneled effects. Professor Ogden of Cornell clears up, once for all, the sewage disposal problem. A young woman tells how she and her husband bought a piece of land and lived on it in a tent during the summer, working out the fascinating problems of locating and planting for the permanent home right on the spot. The controversy over the choice of a heating system is continued, and grows hotter each month. Another installment of "The Naturalization of a City Man" follows, in which the narrative "gets down to brass tacks" and gives you a whole lot of incidental information.

But here, we can't tell you about everything in the whole number—some of the many good things will remain prize packages, in the original wrappers, which may be opened on December 23rd.

By the way, last year's Building Number was out of print soon after publication. We're printing a big pile of the 1912 one; but if your subscription expires with December, or you are planning to buy it on the news-stands, you'd better fill out the coupon on the next page right now and make sure you will not miss it.

In writing to advertisers please mention HOUSE AND GARDEN.
TRYING to tell you what HOUSE AND GARDEN is going to be during the coming twelve months is a good deal like setting a turkey dinner, with all the fixin's, before a famished street urchin—there's so much of it, that he hardly knows where to start in.

In a single issue of HOUSE AND GARDEN there are, on an average, fifteen major articles or pictorial features, and probably twice as many more minor ones in the departments and in the back of the magazine. If we were merely to enumerate the year's articles, in small type, there wouldn't be any space left on this page to tell you how good they are.

Then, too, there are some that are better than others—the real giants of the Contents Page. Take, for instance, the subject of building really good houses at low cost. That has, to judge from titles alone, been one of the most fully discussed subjects in many of the magazines of a certain class. Yet the subject matter under those alluring titles has, to say the least, left much to be desired. We think we have the real thing, however, for an architect has spent several years on this problem of building houses of brick and stucco for three thousand dollars. The houses are not mansions, to be sure, and they are necessarily—and happily—free from useless ornamentation, but they are mighty interesting examples of planning to save square inches and of a straightforward use of honest materials, outside and in. This particular architect has realized the fact that designing houses of such low cost does not pay the architect, but he has stopped to conquer one of the really great problems of modern building.

Do you know that the ant is such a true lover of country life that he keeps a cow? Do you know how the spider measures the angles across which he spins his web? Do you know all that you would like to know regarding the community life among bees? These are but a few of the subjects that will be presented in a remarkable series of articles on the broader side of that life that HOUSE AND GARDEN seeks to foster—the marvelous manifestations of nature.

If you have read "The Naturalization of a City Man" in this number you have started one of the most interesting serials that we have ever had in the magazine. It is an account of how a man went back to the land—his problems and how they were solved, not always at the first trial. It is just the sort of a narrative that will serve to guide any man who is thinking of breaking away from the city in an attempt to make the land support him and his family.

There are a number of gardening articles scheduled for early issues by Mr. F. F. Rockwell. Mr. Rockwell is a man who makes his living from the land, so that his description of the short-cuts and methods by which he makes the soil give the greatest return for his labor have a weight that the great majority of gardening writers, working only with the pen, can never have. The gardening side of HOUSE AND GARDEN will tend somewhat more towards the personal experience type of article rather than that of mere dogmatic instruction. The latter has its place—a place that cannot be taken by anything else, but we shall try always to show by picture and text just what has been accomplished by amateur gardeners. Their problems are your problems, and what they have solved you can solve and find a great joy in the doing.

The series describing Houses That Architects Have Built for Themselves continues through the coming months. You can always recognize an architect's own home. When he may carry out all of the ideas that seem too radical for his clients the result is sure to be interesting, and it is sometimes startling. Undoubtedly this collection of homes has more claim to real distinction than any like number the country over. They will win you over to the reasonableness of certain unconventional ways of building.

We are beginning to appreciate more fully the possibilities that lie in remodeling old farmhouses for modern life. Our photographers have been scouring Connecticut, New Jersey and Long Island particularly, and have reaped a great harvest of pictures that show some astounding transformations. One of our staff has just finished remodeling for his own use a house dating from 1802, in which he has met and solved more problems than he could begin to tell about in several complete issues of the magazine. There are some particularly valuable suggestions in his experience for those who have the desire to go and do likewise, and he was forehanded enough to secure a complete set of "before" pictures.

After the Annual Building Number, described more in detail on the opposite page, it is but a short jump to the April Gardening Guide—a vast fund of information and new ideas with the finest pictures that our photographers can gather all over the country; in June comes the Summer Home Number; October brings the Fall Planting and Furnishing Number, showing how to gain a year in the making of your garden as well as the season's advance in interior decoration and furnishing—four great special issues that are absolutely indispensable.

It has been possible here to give but the most hasty glance over the magazine for 1912. The details of the notable articles that are to come must be reserved for further announcements. It remains but for you to ask yourself whether you can possibly afford to miss the inspiration and constant help that HOUSE AND GARDEN will carry to its readers through the coming year. If you have not already done so, take this opportunity to renew your subscription, to make sure that you do not miss a single one of the monthly treats in store for you. Use the coupon below and provide right now for the twelve visits of a magazine that is a guide and an inspiration to all those who would have their homes and their outdoor surroundings notable in their beauty, comfort and good taste.

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