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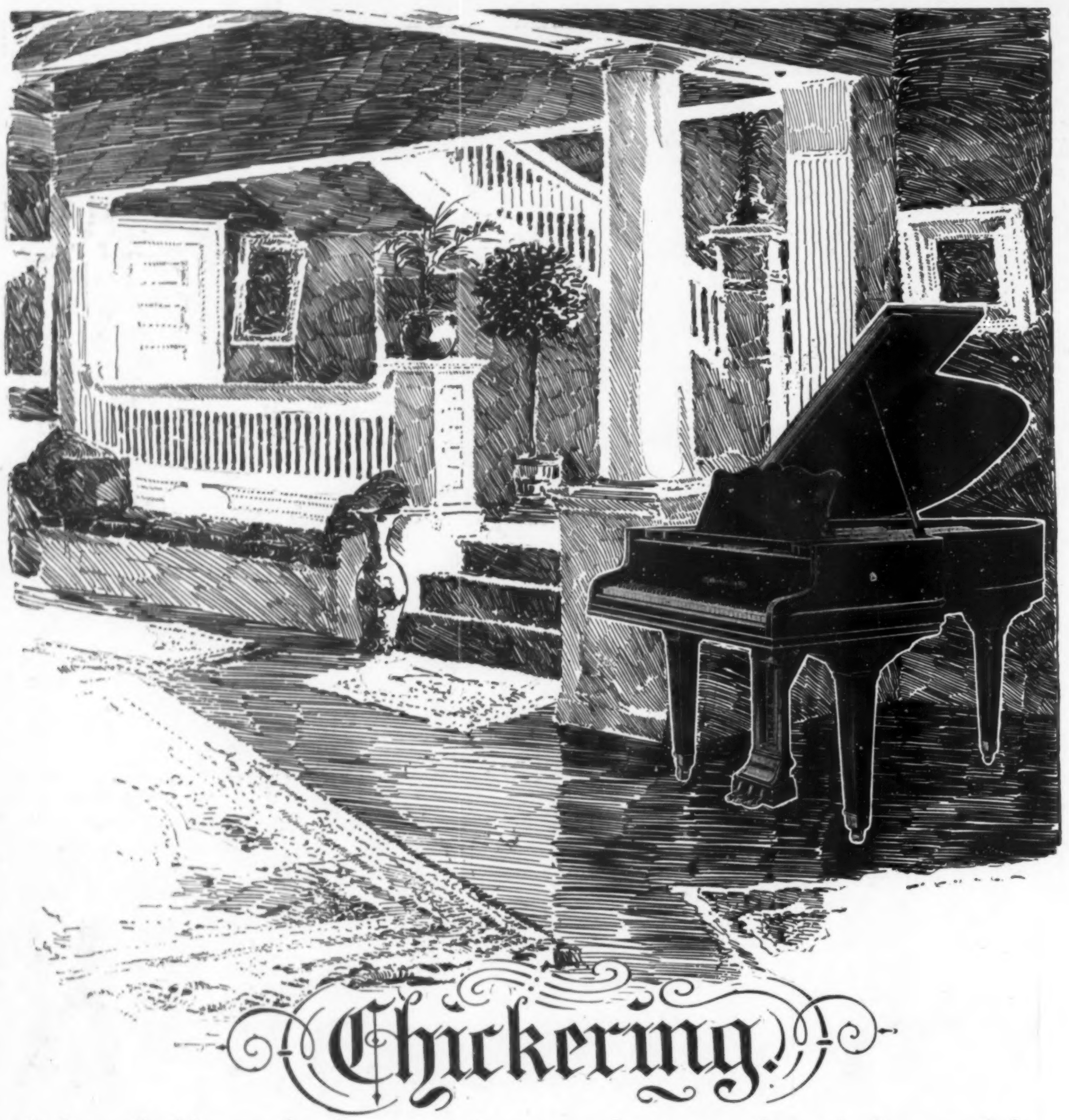

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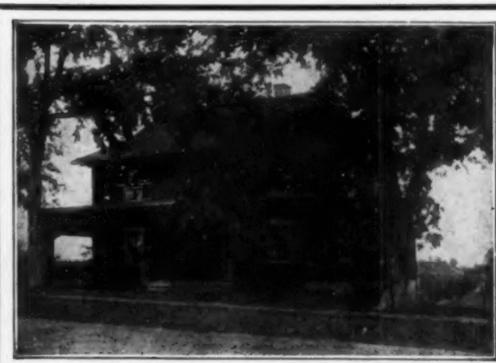

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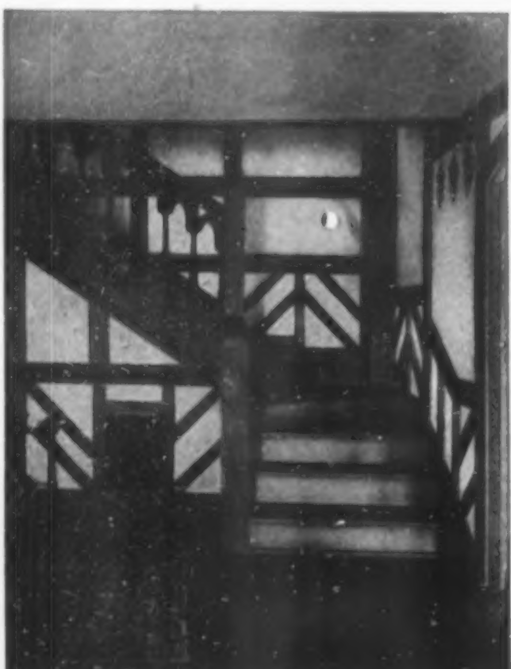

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FROM THE PUBLISHER'S DESK

PUBLISHING a magazine is surely one of the most interesting things in the world. It is never a grind, never mere drudgery, never monotonous. There is something new, instructive interesting about it every minute—the routine that mars most of this life's activities is buried deep under the footprints of the steady, forward march along the road, in publishing. The tasks that each day brings are new, varied, engrossing. The way leads along the road, not merely up and down the furrows.

HERE is the November issue—another day's march along the way. There are some entertaining, instructive, helpful things in its pages—but you will find them, and we must be on. The next day's march calls us, the Christmas HOUSE AND GARDEN is in the making. It will carry forth something of the real Christmas spirit. That day is essentially a festival of the home. HOUSE AND GARDEN, a magazine of the home, should and will interpret it. The December issue will picture and tell of Christmas decorations—how to gather from the woods greens to bring the holiday cheer; of house plants that will keep the Christmas spirit alive long after the yule log has smouldered away; the best gifts in useful, tasteful, expressive things; gardens grown for winter effects—but here is a partial list of the contents:

Christmas Gifts for the Home Maker—clocks, lamps, ornaments, brass ware, pottery, glass, and a whole lot of other things that, as gifts, will be remembered long after Christmas Day is past.

Rugs You Can Buy for $50 and Less—a helpful, interesting article for the home builder and the seeker after distinctive Christmas gifts.

House Plants—an article that will help you to have growing things indoors through the winter months with a minimum of trouble and the maximum of satisfaction.

Christmas Greens—what to get, where to find them, and the way they may be most effectively used.

Planting the Garden for Winter—a way around the loss of this important part of the home during the cold season.

Why You Should Choose the Colonial Style of Architecture—its story, its details, its meaning, its charm, as set forth by an enthusiastic advocate.

Old Mirrors—their interest and value from the collector's standpoint, their value in furnishing.

Formal or Informal Gardens?—the third article in Miss Tabor's series on landscape gardening as applied to the home of moderate proportions.

All the Fir Trees—another introduction into the fascinating characteristics of our tree neighbors, along the lines of the one describing the maples in this issue.

Japanese Stencils—a marvelously ingenious class of instruments that broadens the field of this form of home decoration.

Practical Talks With Home Builders—the second of Mr. Trowbridge's papers, this one dealing with the selection of a site.

Hawthorne Lodge, Fox Point, Wisconsin—a beautiful and splendidly designed home of moderate size.

The Available Wall Coverings—a round-up of them all, with suggestions as to their proper use, their effects, and their comparative costs.

Then there will be several pages of pictures showing some important features of home architecture, the usual departments of Inside the House and Garden Suggestions and Queries, and another instalment of helpful information regarding The Beginner's Garden.

DO you not see the real Christmas spirit in that list? Not the conventional touch of holly borders and Santa Claus pictures, but the vital, practical side of it all—the means by which your own Christmas Day and that of your friends may be made a better and happier one.

HERE are just a few of the kind words that have come in the mail during the past week or so. They and their like make us feel that we are at least on the right track with the magazine.

"I have noticed the last—I believe two—issues of your magazine, and must congratulate you not only on its appearance, but, what is more important, its interesting and instructive contents."

"I am in receipt of the September and October numbers of HOUSE AND GARDEN, and delighted with it! The matter is more fitted for the average purse than formerly—when it was simply an ornament for the living-room center table."

"Enclosed find check to cover subscription. I find your October number one of the best magazines I have read in months."

"I must congratulate you on the last issue. It certainly is a work of art and thoroughly good. May it go on and prosper."

"While I have never seen a copy of the magazine which I did not thoroughly enjoy, yet the current number seems to me a very decided improvement on its predecessors."

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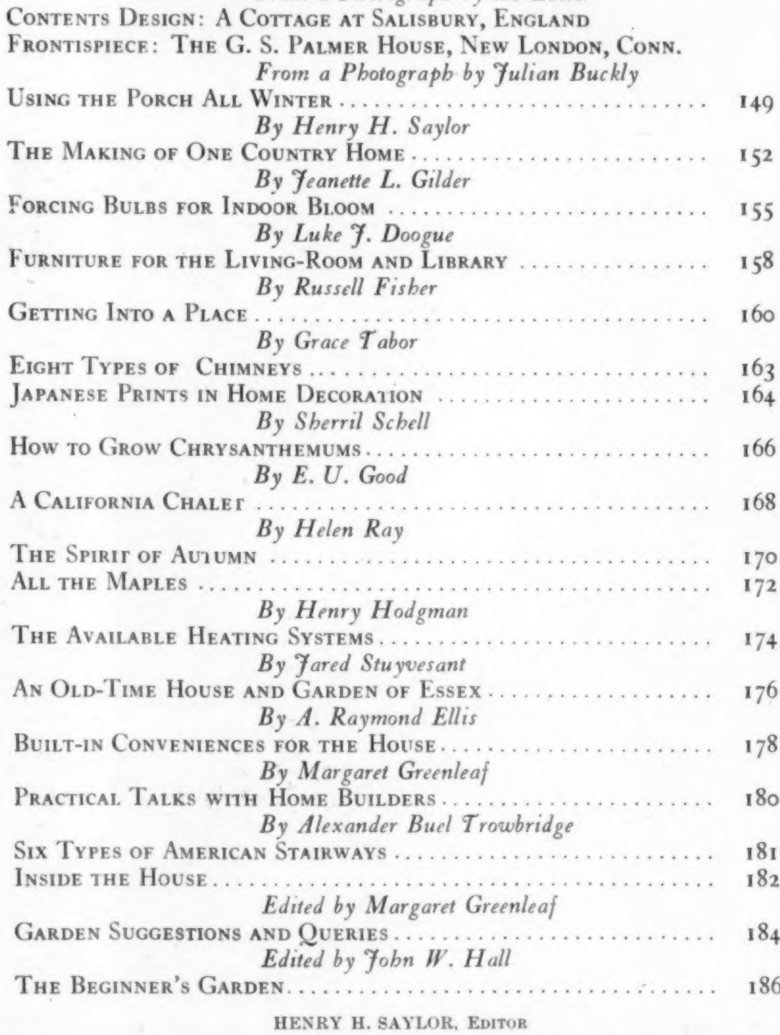

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THE GLASS-ENCLOSED PORCH FORMING AN END WING ON THE HOME OF MR. GEORGE S. PALMER, NEW LONDON, CONN.

The porch openings all have glazed doors opening out upon the lawn, and the light in the sun room may be controlled by means of the Venetian blinds which fold up into pockets at the top of each opening. The house was designed by Mr. Charles A. Platt, architect

House & Garden

VOLUME XVI — November, 1909 — NUMBER 5

Enclose your porch with glazed sash, furnish it informally and make use of this important part of your house during the winter months

Using the Porch all Winter

A SUGGESTION FOR MAKING USE OF THE MOST ENJOYABLE FEATURE OF THE HOUSE EVERY MONTH IN THE YEAR INSTEAD OF ONLY IN THE SUMMER

BY HENRY H. SAYLOR

Photographs by J. T. Beals and M. H. Northend

IT is a very strange thing, when you come to think of it, that we Americans have, in the main, been perfectly satisfied to give up the use of our porches for the greater part of every year. In no other country in the world has the porch been accepted as such an indispensable part of home life as in the United States. We spend upon it the greater part of our waking hours from June through September—not to mention the increasingly great use we make of the porch in our sleeping hours as well. And yet, when the cooler days and chilly evenings of October come around we give it up with scarcely a murmur, and take refuge in the darker, less cheerful and less healthful portions of our homes on the other side of the front door. One would think that our Yankee ingenuity would long ago have devised some means of getting around our climate in this regard, and yet the instances where this has actually been done are so few as to be actually noteworthy.

And the strangest part of it all is that the solution of the problem is so very easy. In the mosquito-infested parts of the country it has long since become the customary thing to do to enclose the whole porch, or a portion of it, with screens to keep out the insects, yet the enclosing of the same space with glazed sash in winter to keep out the cold—or, to be more accurate, to keep in the warmth—is remarkably uncommon.

I suppose that a study of a number of typical house plans would disclose the fact that from one-fifth to one-quarter of the area occupied by the first floor of a house is occupied by porch space. Leaving out of consideration the upper stories, for the reason that they are used primarily and almost exclusively as sleeping quarters, this brings the realization that we are actually losing the use of about eight per cent of our house during the hours when we are up and about. An eight per cent loss on any other kind of investment would surely not have gone unchallenged this long. Why it is almost, if not quite, as bad and without reason as that very amusing custom of our not far distant ancestors, when they kept closed and musty and dismal the largest and best located room of the house—the front parlor, excepting upon the

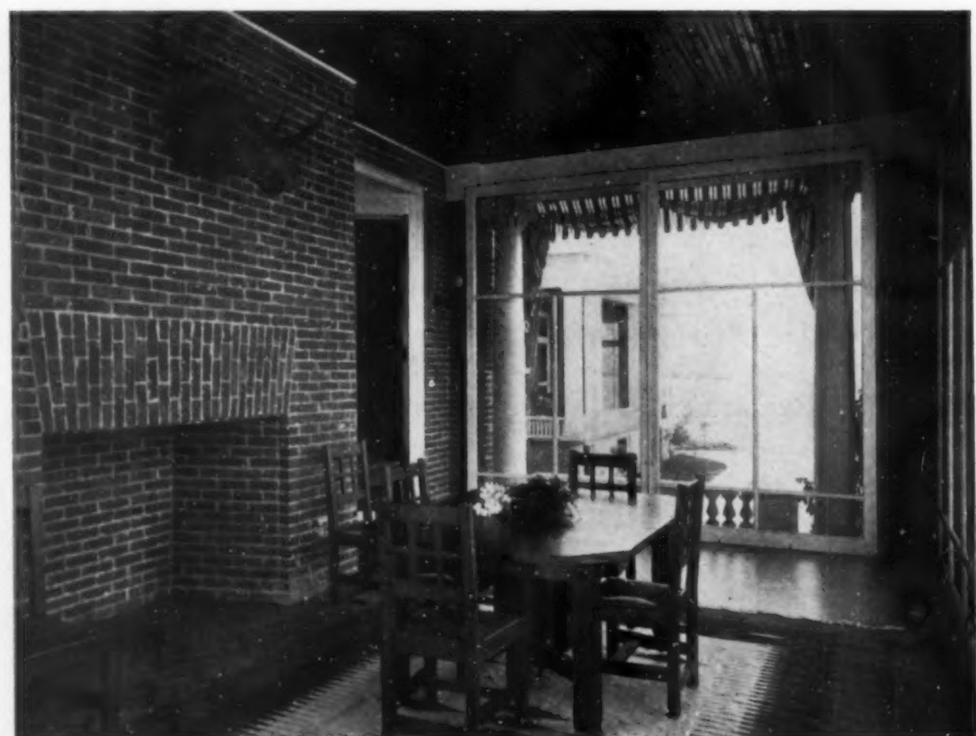
Where the porch has an open balustrade or railing it may either be sheathed with tongue-and-groove boards on the inside, with a sash above the hand-rail, or else the sash may extend from floor to ceiling inside the railing

occasions of weddings and funerals. Probably our own children will smile indulgently while enjoying the comforts of their sun-lit outdoor living-rooms and say to themselves, "And this is the part of the house that our fathers were content to have put out of commission for eight months of the twelve!"

Of course, some porches can be much more easily enclosed with glazed sash than others. If your porch has square posts supporting the roof, rather than round columns, and if the "balustrade" is not a balustrade but a solid parapet of shingles or plaster, the fitting of the sash will be the easiest thing in the world; all that is needed is a strip of ½ x 2 inch wood, white pine preferably, along the top of the parapet ledge, across the lower side of the soffit or top of the opening, and on the sides of the uprights, against which the sash will be snugly fastened. In one or two of the openings it will be well to have a pair of sash, fitted to open like casements, or to slide one behind the other, for there will be many times throughout the winter when the porch will be the more comfortable and enjoyable for being open to the outside air. Have at least several single panes arranged to slide open for the sake of ventilation.

Where there is an open balustrade, and round columns for the uprights, the problem is not so simple, but it may be solved no less completely, and you will then have an additional area of glass, which means more sunlight. In this form of construction the most satisfactory way to enclose the porch is to put the strips or "stops" on the floor, along the porch ceiling, and up along the wall of the house proper, setting the longer sash up against these inside the line of balustrade and columns. At the corners the sash may lap, one over the end of the other, with another upright strip to make tight the inside corner. The sash, in either case, should be held in place by screws or, better still, by brass turn-buttons, so as to leave no disfiguring marks on the permanent woodwork during the summer when the sash are taken down and stored. It is, of course, an easy matter to have the fittings arranged so that insect screens may take the place of the sash when warm weather comes. The screens are usually built up of thinner wood, but the turn-buttons may be made to engage in the same slots by the simple expedient of mounting them on strips that will make up the greater thickness of the frames.

The enclosing of the porch area, however, is not all that has to be done to make the place an outdoor sun room that will be comfortable enough to ensure constant occupancy throughout the cold weather. The bare, uninviting enclosure alone would be little reward for the work of fitting it up with sash, and we would perhaps conclude that the aforesaid eight per cent loss was irretrievable after all. In the first place, it is well to make some provision for keeping the floor from being constantly cold and barn-like. A tight sheathing of tar paper



If there is a chimney on the porch side of the house it is not a difficult matter to put in an outside fireplace. Here the dining-porch is enclosed with glass for use as a winter breakfast room

nailed to the under side of the porch floor joists will give an air space beneath the floor proper that will do much towards accomplishing the desired result. Weather-stripping on the outside edges of the sash will prove to be another factor in the comfort of the enclosure.

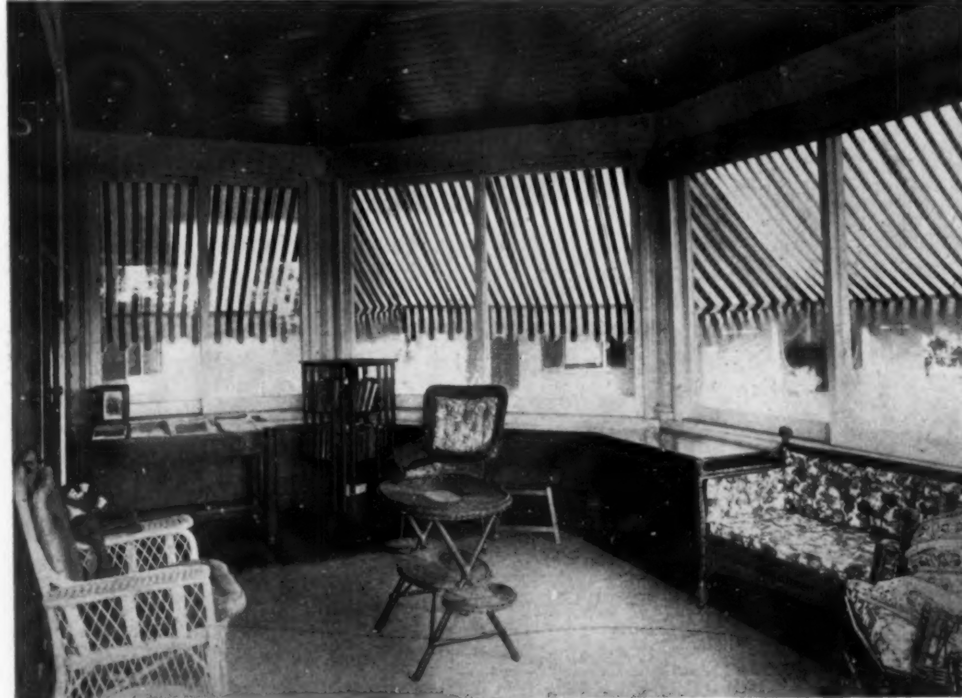
The door in the glass partition will almost never need to be as wide as the opening left at the head of the porch steps. Make it about three feet wide and place it in the center of the opening, flanking it on either side with narrower glazed sash. To gain the requisite rigidity, both at the hinge and latch side of the door, it will be well to introduce a couple of 2 x 2 inch uprights against the outside of the partition at these points. And if any of the spaces between the permanent uprights is greater than six feet or so, it would be well to divide the space with several sash instead of using only one, putting the same size uprights—2 x 2 inches—against the outside of the dividing lines.

Where a solid parapet and square piers support the porch roof it is the easiest thing in the world to fill the openings with glazed sash so that one-quarter of your floor space is not put out of commission for eight months of the year

Small panes are better than large ones in a partition of this kind for two reasons: one is that the breakage that is almost certain to occur when the sash are being taken down or put in place will be less expensive, and the other is that small panes, because of the additional amount of woodwork in the frames, give a more substantial and pleasing effect from both inside and outside of the enclosed room.

Perhaps the most important factor in securing for the sun room the inviting and hospitable quality that will ensure its constant use and enjoyment is the furnishing. Consider the porch as enclosed a *room*, and treat it accordingly. Its open, semi-outdoor character will demand a certain informality in floor covering and furniture, and surely a number of potted plants.

For the floor a domestic rug of coarse but substantial weave would do nicely, or one of the type that is woven from grass would be eminently serviceable—Orientals are never out of place, but the tracking in of dust and snow upon the enclosed porch floor is not conducive to their usual long life.



Wicker furniture seems to belong naturally to the enclosed porch. It is well, however, to have it stained a dark color in order to prevent its making the sun room look cold

Wicker furniture always looks well on the porch, whether the latter be open or enclosed. If it is stained a dark green, so much the better, for the natural color of the wicker or white paint will look too cold. Sturdy oak furniture, of the craftsman or so-called "Mission" type, is also well suited to a room of this kind. Whatever you do select, do not make the sun room a repository for all the cast-off furniture that has been banished from various other rooms inside the house—that is perhaps the very surest way to make the place a disappointment from the start.

Have in it a table, by all means—there are few things that will make a room more inviting and livable than a fairly large table in the middle, bearing a few good books, a stock of the current magazines, and a large bowl of cut flowers. It has a peculiar form of magnetism that makes one want to turn aside from his way, throw himself down in the big easy chair by the table's side and luxuriate. And, by the way, do not omit the big

easy chair; the table alone or the chair alone will not suffice; you must provide the combination.

Then you will want plenty of chairs, a settle or two, with cushions that one does not have to handle tenderly, and plenty of growing things. With the whole outdoors in its winter sleep, the presence of some real, live green will be appreciated as at no other time. Have some ferns, on the window ledge and in hanging baskets; some primroses and begonias in brass bowls or pottery, and some narcissus bulbs forced into winter bloom in a bowl of pebbles and water.

But this is not all. If the sun room is to be of use at all times throughout the cold months there will have to be some provision for heating it. That sounds difficult, on the face of it, but in reality it is not such a hard thing to accomplish after all. If you have hot water or steam heat, it will be a matter of no great moment to have a couple of new radiators connected up to stand along the inside wall. Few hot water or steam boilers are utilized to the limit of their capacity in the amount of radiation installed. Even with hot air as the system in use, the difficulty is not hard to overcome; for the duct may be led from the furnace through the cellar wall and up through a register in the porch floor, provided the distance is not over twenty feet; if greater, a hot water coil may be put in the furnace and the porch heated by a radiator.

If you are fortunate enough to have a chimney on the porch side of the house, you are to be envied, for a new fireplace can be built on its outside face and the heating problem solved at once in the most satisfactory way of all.

Would you like to know how much it would cost to enclose your own porch and save that eight per cent loss year after year? You can readily figure it out for yourself. The under sheathing for the floor may be set down at one cent a square foot, including the labor. The sash, all glazed, weather-stripped and framed in place might cost about forty-five cents a square foot. A radiator of average size, and fitting up, would perhaps bring up the amount by $40 or $60. Making a connection with a hot air furnace with duct and register would cost, say, $25. And if the chimney is at hand a new fireplace could be built on and ventilated through an existing flue for about $50. So there you are. Add it all up, allow for rugs and furniture and see how long it would take that eight per cent loss on the cost of your house to balance the account, not forgetting to put on that side of the ledger the cash value of the enjoyment you and your family and your friends are going to have in the enclosed porch or sun room.

The Making of One Country Home

THE ACQUISITION, RECONSTRUCTION AND OCCUPATION OF AN OLD FARMHOUSE AT REDDING RIDGE, CONNECTICUT—WHAT REMODELING WAS NECESSARY AND WHAT IT ALL COST

BY JEANNETTE L. GILDER

Photographs by author and F. P. Sherman

MANY years ago, in the turbulent sixties, I lived as a small child in the hamlet of Redding Centre among the hills of Connecticut. My family had moved to that place from a village near New York and it was my first introduction to the delights of real country life. About two miles from Redding Centre was Redding Ridge, a hamlet of much the same size but a little higher up in the hills.

When we children went out for a good walk our objective point was more than likely to be Redding Ridge, and this for various reasons: one, that at a certain large and hospitable farmhouse we were sure of getting generous slices of cake and all the milk that we wanted to drink. The daughter of the house was a great horsewoman. She rode and drove the horses that she had herself broken to harness. What she did not know about live stock and farming generally was not worth knowing. Naturally she was a great attraction to us youngsters who regarded her as a veritable Di Vernon.

For only one short year did we live at Redding Centre, then we folded out tents, like the Arabs, and silently, and I may add, tearfully, moved away.

One day about five years ago, and forty since the Redding days, a letter bearing the post-mark Redding Ridge was handed me with my office mail. Although I had not seen the handwriting since I was a young girl I recognized the characteristic chirography of the Di Vernon of the Ridge. The letter contained an invitation for me to make her a week-end visit. I answered by return post that I would come as sure as there was a train to take me, and I went.

The next day my friend drove me over the old scenes and to her surprise, and to my own as well, I recognized all the old places and noticed every detail of change. The changes were not many— a "lean-to" added, a barn moved back,—small thin s but I noticed them all and my love of this country returned tenfold. I must have a place up there among the hills. I had been looking for years for a little summer retiring place, a place where there were no mosquitoes and no malaria and on the main line of a railroad, for I dislike tiresome changes once I am started on my journey. Although on the main line, Redding Ridge is seven miles, five by courtesy, from the railway station at Bethel, but that to me was one of its attractions. I inquired about property and was shown farms that could then have been bought for a song, but they were not what I wanted. I wanted something on the Ridge road not too far from my friend's farm, for I should depend upon her for "butter and eggs and a pound of cheese." I did not want much land for I did not want responsibilities. Something inexpensive where I could be care-free, where I might loaf and invite my soul. I found just the place but I could not have it. It was not more than a pistol-shot down the road from my friend's farm, a quaint old house in good repair, with four fireplaces and with about two acres of land surrounding it. The outlying land belonged to my friend, so I would be well protected. But alas! the old lady who lived there had no notion of selling, and she was wise. She allowed me to go over the house, a most tantalizing performance, for the place was exactly what I wanted. She was old and ill and that was her home; she had lived there

"Overwoods" from the north. This is the least attractive view of the house, but it shows the two wings added—the kitchen with the salamandery over, and the maid's room built on later. To the left up the road is the general store

for many years and she wanted to die there. There was no use in coaxing so I let the matter drop; my spirits dropped also.

This was in the early spring. In May my niece and I were going abroad for the summer. A few days before the day of sailing I received a letter from my friend on the Ridge saying that the old lady, who owned the house that I coveted, had decided to sell—with certain conditions, namely—If I would pay the mortgage, $500, and give her $100 for herself and—here was the hard one—let her live there till she died, the house was mine. I must decide at once or she would probably make the same offer to some one else. I sent a cheque for $600 by return post, and the end of the week saw me well on my way across the ocean.

In August, while we were at Dieppe, a letter reached us saying that the old lady was dead. She had died happy. The mortgage was paid and she told my friend, whom she made the custodian of her funds, that she envied neither Vanderbilt nor Astor, for had she not a hundred dollars of her own, to buy anything that she wanted!

That fall, on our return, we went up to Redding Ridge to consult with a builder as to needed alterations. We found the local builder to be a man of ideas and not so busy then as he is to-day. I drew him a rough plan of what I wanted, which lay principally in the direction of tearing down, so far as the interior was concerned. There were two front doors, one with a big wrought iron latch leading directly into the room that the old lady used as sitting-room and kitchen. The other opened into a tiny little hallway with a narrow winding stair, so narrow and so winding that neither a sizable piece of furniture, a trunk, nor a stout person could ascend its almost perpendicular incline. I have a very dear friend whom I was anxious to have visit me and I felt sure that she could never make any headway up those stairs, so I built wider and easier ones at the back. The first thing that she did on visiting me was to mount that narrow flight and regard me reproachfully from its giddy height.

The best rooms on the ground floor faced east, south and west. The front one had a large fireplace with a big field stone for a

One end of the sitting-room showing the old nreplace and the oven doors. The tall clock stands by the foot of the new staircase

The south end. This is the best view of the house and its surroundings, for it shows the big pine tree and the winding road leading to the Ridge

hearth, and a crane with an iron tea-kettle swinging across its generous width All of the rooms were small so I had the partitions chopped down and made three into one. This gave me a main room fourteen by twenty-four with an L thirteen by fifteen. There was another fireplace in the L and opposite this I put my stairs, low risers and broad treads, that you would as readily run up and down as to walk on a level. Our sitting-room now has six windows, three doors and two fireplaces. So it does not want for ventilation.

Across the front of the house runs a narrow veranda, but as we do not care to sit facing the road we never use it. At the back of the house there is a drop in the land of fifteen feet and there is where I built the veranda upon which we live and move and have our being. It is a two-story affair and the second story we use for sleeping.

The dining-room, which had been used for a bedroom, was of fairly good size for a small family and only needed painting and papering. Then I added a butler's pantry and a kitchen, with a room over. This room over I intended for a servant's room, but it was so hot that only a salamander could have occupied it. So I built a wing beyond the kitchen, to which I added all the modern conveniences. There is no cooler or pleasanter room in the house.

The second story was cut up into small rooms, as was the first, and there was no way of getting at one without going through the other. I chopped out a dark and mouse-haunted closet, tore down a partition or two, and made a convenient hallway, so that now each room is "self-contained," as they say in England. I added a bathroom and put running water in the guest room. Then there was the attic! That I did not tackle the first year, but later added a room with a double dormer window looking out over the sunset hills and the woods below, and I do not hesitate to say, once you get there, for view and airiness it beats any room in the house. Considering that our highest ceilings are only six feet seven inches, it is remarkable that we are as cool as we are within doors. One thing, we have plenty of windows and lots of breeze, almost too much at times, for I have found it impossible to keep awnings on the upstairs veranda.

When I bought this place it had a picturesque old well with pole and sweep, the old oaken bucket and all. Every one said that it was the finest well in the neighborhood and that when all the other wells ran dry it was as wet as ever. That was a splendid record and I congratulated myself. After I put in a bath and running water generally, I withdrew the congratulation. We used at the least six hundred gallons a day and at the end of the first—it may have been the second—month of our occupancy the well was as dry as Death Valley. "Give the water a chance to run in," our neighbors advised. So we hauled water in barrels from a near-by artesian well and gave ours the chance. A few gallons may have trickled in, but no more. A neighboring farmer had a big pond fed by springs on a hilltop about twelve hundred feet up from our place. I besought him to let me dig it out, fence it in from the cattle and smaller intruders, build a proper reservoir and pipe it into my house. "Wait till next year," he said, "and we'll talk it over." I could not postpone my bath that long, so I took council of local talent and the result was that I widened and deepened the old well with excellent results. The old well was two and a half feet in diameter and twenty feet deep. The new well is ten feet in diameter in the clear and thirty-five feet deep. Sometimes it has nineteen feet of water in it and again, in times of drought, not more than four, but it has never run dry and I do not think that it will. It cost me four hundred dollars, but if it had been an artesian it might have cost four thousand. At first we used a double-action hand pump, but no one liked the job of pumping,though it did not take more than an hour a day. Now I have installed a hot-air engine that I bought second-hand.

Now let us see what our country place has cost:—To the first price of $600 add $2500 and you will about get it to date. That is a little over $3000 and the work of improving is going merrily on. We could sell for double that price any moment, but "not for gold or precious stones would I leave my mountain (hill)

(*Continued on page* vii)

A view from the lower corner of the lot, some fifty feet below the house The upper veranda is used as an outdoor sleeping-room

Forcing Bulbs for Indoor Bloom

PRACTICAL INSTRUCTIONS FOR SECURING A SUCCESSION OF BLOOM INDOORS THROUGHOUT THE LONG WINTER MONTHS—WHAT BULBS ARE MOST EASILY FORCED AND HOW

BY LUKE J. DOOGUE

Photographs by Nathan R. Graves

EVERY one should make an attempt to pot some flowering bulbs in the fall so as to have a few flowers in the house at a time when they are very expensive in the stores. In the spring a few flowers are worth more than at any time in the year. There is absolutely nothing difficult about the work and even a very small child can grow bulb stuff with but little instruction. The range of varieties is very great and 'most every taste can be satisfied.

The point to pin fast in the mind, before starting in to grow bulbs, is that you must get good stock to start with. This is essential to success. Don't quibble over a few cents in buying your bulbs, for you make nothing by it. If you want bulbs go to your seedsman and tell him what you want and then leave it to him to select the quality for you. The price in the fall may seem high to you, but at flowering time in the spring you will wonder how he could sell the bulbs at so low a price. Don't be allured by offers of bulbs at a ridiculously low price. Common sense ought to tell one that if the regular seed houses are asking much higher than the comparatively unknown advertiser, there must be something wrong somewhere. Have you ever bought hyacinths for one cent apiece? That's what some offer them for in the fall. And tulips for four cents a dozen? Don't get caught by this threadbare game. If you are willing to get good stuff let's go on and say a few things about handling it, for the road will be smooth; you cannot fail.

To get your plants flowering on time you can figure it in most cases by computing from the time you pot them, through the period of rest, about eight to ten weeks, and then it depends on just the conditions of heat they are put under before they come into flower in the house. There is no hard-and-fast rule, all depending on your method and time of handling.

Let us take the hyacinths first. You can grow them in boxes, glasses, pans or pots. They will do well under any of these conditions. Start them as soon as possible after this issue appears. The large Dutch hyacinths are the most showy and the first-size bulbs throw wonderfully large flowers.

Just try a pan of tulips with a few bulbs of lily-of-the-valley scattered between them

The keynote to success in growing hyacinths is the formation of the roots. Roots take time to form and during the period of formation there must be no top growth; that is, the leaves must not be started. To effect the result the bulbs must be kept in a dark, cool place, either in the ground, buried, or in a cellar where it is cool or in a cold frame; in fact, any place where there will be neither light nor heat to induce top growth. If you should pot your bulbs and put them in the light the result would be all leaves and no flowers. Store your hyacinths from eight to ten weeks before bringing to the light. Don't try to hurry the process, for you cannot do it safely.

Potted hyacinths should have a pot large enough for them. A five-inch or a five-and-one-half-inch pot, according to the size of bulb, is about the proper size. Don't get the pot too small. For pans use a twelve to fourteen-inch pan. This makes a show worth looking at. If so desired, hyacinths grown separately may be transferred from the pots into the glasses mentioned above. Many do this but it requires care not to damage the roots. Using white glasses, one can see the wonderful root system of the bulb. Use a sandy soil for potting. Put some drainage in the bottom of the pot, or pan, then a little charcoal, and on this the loam. After the weeks of preparation take them all out, or lengthen the period of bloom by taking them from storage at different times.

The Roman hyacinths are suitable for cut flowers and force very easily. They are among the earliest flowering bulbs. For cutting, it is best to grow them in boxes.

You can grow tulips for cutting purposes or for house decoration. For the former purpo e use boxes, for the latter, pans. An ordinary wooden box about five inches deep will do nicely. Bore holes in the bottom, put in drainage and fill almost to the top with loam. Put your bulbs in close together, give them a little water and store in a cool place. This is the most practical way to get flowers for cutting. Dig a hole in the ground and bury the bulbs, keeping them so covered that the frost will not get at them. Put litter and leaves over the top. This top will

not freeze so hard that you cannot get through it when you want to get the boxes out. A great quantity of bloom can be had in this way with little trouble and room. Ask your dealer for early forcing tulips for this purpose. Don't make the mistake of trying to force old tulips. You may have an occasional success but it is not to be recommended. Put your old tulips out of doors in the border and you will get more satisfactory results. Pans of separate colors are always the best; mixed tulips out of doors will pass muster but they do not seem at home in pans. Get your tulips going before November first if possible and figure on giving them ten weeks in the ground before bringing to light. You can keep them back a long while under cover and thus keep up the show of bloom in the house for weeks. Bulbs brought into the house should not be put into too hot a room. This treatment just drags them into flower and makes a poorer plant and flower than if brought along in a cool place.

Nothing is handsomer than a well grown pan of lilies-of-the-valley. Pot them an inch apart in a large pan and put them away in storage for a couple of months. Under this treatment they form sightly leaves but if forced under heat they simply send up the flower and pale unsightly leaves. A combination of tulips and lilies-of-the-valley in the same pan is one well worth trying.

A collection of different sorts of narcissi will help balance the show, and as they are cheap, and very easy to raise, they commend themselves. The single sorts in glorious shades of yellow —Emperor, Golden Spur, Horsfieldi, can be grown in pans or in boxes with about the same treatment as was suggested for tulips. These singles are wonderfully beautiful and the price is moderate, the bulbs costing about two and one-half cents each by the hundred. The double sorts, of which Von Sion is the best, should be grown too. In choosing these, get double-nosed bulbs, as each will send up at least two flowers, and I have seen these bulbs each send up as many as five. They cost a little more but are worth more than the extra price. Just try the ordinary kinds and the double-nosed kind and see for yourself. For cutting, grow them in boxes with same treatment as suggested for tulips. Start them in October if possible. To get some flowers before the hyacinths and tulips use some of the following.

Paper White narcissus and Chinese lilies are quickly flowered. They can be grown in pots, pans or in water. For cutting, grow them in a box. This box idea is the best way where flowers are wanted with small available space. The bulbs do very well under the conditions and the Paper Whites particularly. By successive plantings of the bulbs a display can be kept up for many weeks. The Paper White Grandiflora is the best one to use. It throws up spikes with as many as twenty flowers and the character of the flower is a great improvement over the commoner variety. The Chinese lilies are not to be compared with the Paper Whites, as a trial of the latter will convince anyone. Treat these like tulips, etc., with the exception of the storage; they need but little time in the dark.

You can grow freesia without giving it a preliminary start in the cellar. Just pot it in a pan and start it in growing. Put about ten in an eight-inch pan and hang it up in the sun. There are yellow and pure white flowers, both of which have a delicate fragrance. If started early this will give you flowers by Christmas. Oxalis is another attractive house plant for the window. Pot them in a pan and hang in the window. Even if it had no flowers the foliage would commend it as an attraction, but the flowers of different shades and size make it doubly desirable. Bowiea and Buttercup are the best; one with large cloverlike foliage and large dark red blossoms, and the other with smaller foliage and yellow flowers. Both of these are to be recommended. The bulbs can be used for successive seasons. When flowering they need considerable water. There are other varieties but these two are the best for the house.

The crocuses are ordinarily considered out of place anywhere but on the lawn, but in pans they certainly are attractive for house use. In pans put them down about an inch and store them away for a couple of months. This storing applies to the majority

The result of forcing three good bulbs of Poet's Narcissus

The crocus seems pre-eminently an out-door bulb, but if you will try named varieties for forcing you will be surprised at the excellent results

Paper White Narcissus is one of the best bulbs for forcing and it flowers quickly. The bulbs may be grown in pots, pans or in water

Ixias may be had in separate colors or in mixtures. Put them in shallow pans and store away for root growth

Golden Spur Narcissus is one of the best for forcing —it is a glorious shade of yellow

You can grow freesia by merely potting it and starting it into growth without the preliminary time for root growth

of bulbous stuff and should be rigidly observed. Use the named varieties for this work and you will have much better results. They can be grown in shallow saucers under moss, or in other small vessels. They are effective, however, in numbers, so that the pans are preferable. Start them in October if possible.

Ixia is a plant too little used. They can be had in separate colors or in mixtures showing a wide range of brilliancy. Put them up in shallow pans and store. They are worth the trouble, for their scarlet is a much needed color among flowering plants in the spring.

Calla lilies are well adapted for the house and under most conditions they will flower for a long period. The beauty of these things is that once you get a stock of them you can increase them very readily, for they divide without any trouble. There are numerous kinds of Callas (*Richardia*): the Pink or Rose Calla; the Spotted Calla; the Black-throated Calla, whose straw-colored, widely flaring flowers have an ample black-purple spot at the base within; the Golden Calla; and the common Calla (*R. Africana*), which is also called Lily-of-the Nile. The common white Calla will flower easily. It should be dried off and rested during the summer. If this is done you will have no trouble with it. The rest must be enforced, however, for Callas will grow all the year round, increasing in size and number when planted out. The largest blooms usually come from summer-grown plants. They are taken up in the autumn, given good loam and plenty of space in which to spread their roots, with a liberal allowance of liquid fertilizer when well established. They thrive best under good light and in a temperature which does not fall below fifty-five degrees.

Hyacinths can be grown in boxes, glasses or pots. Start at once and get first-size bulbs

The Black Calla or Solomon's Lily (*Arum Dracunculus, Palæstinum* or *sanctum*) grows something like the common white Calla, but it has a flower that is dark purple and about ten inches long. The spadix is very black and quite long. Plant the tubers sufficiently deep, so that roots may form from near the top. Give them rich soil and water freely when growing or in bloom.

Sauromatum guttatum is a freaky looking thing that is worth trying, not because of its great beauty but because of its way of growth. Just put the bulb on the shelf, without water or loam, and it will send out its leaves as readily as though potted. The spotted stalk gives it an odd appearance. You can almost see it grow.

With what has been mentioned above, a very good display of flowers can be had in the house. And if this is supplemented by a choice of plants taken up from the garden before the frost, the windows can be kept bright from early fall till the spring planting time.

This is the essential factor of success in forcing most bulbs—let the roots grow before the top growth starts

Furniture for the Living-room and Library

THE AVAILABLE STYLES, HOW THEY SHOULD BE USED, WHAT THE PIECES COST —A FEW GENERAL PRINCIPLES THAT SERVE TO MAKE THESE ROOMS INVITING

BY RUSSELL FISHER

WHAT an important factor furniture is in our home life, and not only as regards mere surface matters—the joy to the eye that comes from beautiful lines and harmonious colors, or the dissatisfaction arising from the sight of crude and unsuitable examples. That is but one side of the matter; the other and deeper effect is much more subtle. Have you ever visited the home of a friend and *felt* in his living-room a sort of soothing peace that was of such a subconscious nature that it never occurred to you to formulate it or investigate the reason therefor? That feeling was in all probability aroused by your friend's thoroughly harmonious furnishings—not only the furniture, of course, but the entire scheme, the coverings of wall and floor, the hangings, the pictures and their frames, the ornaments (or the lack of these), and the color scheme of the ensemble. I sincerely hope that you have had this pleasurable experience, but surely you have had its opposite—the mental jarring produced by an assemblage of reprehensible design, unsuitable combinations and garish colors. Unfortunately the latter condition of things is too common to have escaped the attention even of the least observant.

Now a great many people have the idea that the only satisfactory method of furnishing a room—so far as the furniture is concerned, at least, is by holding steadfastly to one of the so-called Period Styles, letting no incongruous note find its way into the room. It sounds reasonable enough, to be sure, but practically it doesn't work out just that way. There is a good deal more to furnishing a room—and particularly a living-room—than can be squeezed into a formula. The room that has in it nothing but Louis XVI furniture may look well in a building devoted to the interests of some historical society, but it will in all likelihood not make a living-room in your home that will attract you into it and make you want to sit down and be comfortable.

You can buy a secretary built of mahogany along the lines of the old work for $115

A year or two ago I had the privilege of seeing the living-room in the home of the late Grover Cleveland at Princeton. There was nothing that remotely suggested Period furnishing about it. In it were great easy chairs, upholstered in unobstrusive tones, chairs of mahogany of several periods, chairs of wicker, an old English chest—I cannot give you an inventory of the entire contents, but in some mysterious way its elements from different lands and various periods dwelt together in perfect harmony and seemed to lend, each in its own degree, a portion of the quiet, restful distinction that made the room seem like a true haven of rest.

The part played by the furniture itself in a successful living-room or library is, of course, one of the most important elements that go to make up the whole. It is a surprising thing to find how great an improvement has taken place during the last few years in the furniture that is being made by American manufacturers. Three or four years ago it was a difficult thing to find in the stores enough furniture of good design and careful workmanship to furnish the whole house. One could pick up a stray piece or even a set at times, but there was no consistent note of merit running through all the various kinds. The situation is very different to-day. It is possible to find in the stock of the better manufacturers furniture that instantly impresses one with its grace of design, its soft, beautiful finish and its honest craftsmanship. The day of the flimsily glued furniture has gone by, at least so far as the better known manufacturers are concerned. No doubt the recent developed popularity of antiques has been largely responsible for this improvement. In fact, a visit to the

Sturdy oak furniture that is a development of the so-called Mission type makes an attractive style for the living-room

principal manufacturers in New York shows that the majority, perhaps, of the modern work is patterned after old pieces of historic note or of established excellence of design. The "Colonial" is chiefly in evidence—reproductions or adaptations of the rather heavily built furniture that was used by our grandfathers, although, of course, older periods known by the name of Sheraton, Chippendale and Adam are well represented in the modern reproductions.

Here is convincing evidence why the living-room furniture does not have to be all of the same period, style or material in order to achieve harmony

Still another tendency in the available furniture is not so pronounced but nevertheless surely there. It is the recognition of the suitability of old English furniture, particularly for the dining-room, but to some extent for the library as well. In these reproductions are included representations from the Elizabethan, Jacobean and the William and Mary periods, stamped with the mark of a rugged honesty of purpose and executed always in dark oak.

There is also still another tendency in the available furniture for library or living-room. That is the modern English which has been associated with various names, including those of Morris and Voysey. In this general type the woodwork of the room itself and the furniture are alike in material and finish. The furniture is usually associated with plain paneled woodwork, bearing little or no carved detail but depending for its effectiveness on the beauty in the grain of the wood and in the finish given it which serves to accent and display rather than to gloss over the beauty of the grain, and retaining the wood's natural color.

This two-door bookcase of mahogany would make an attractive addition to the library. The price is $70

There is apparently no lessening in the appreciation accorded another type of furniture which is distinctly American—that known as the craftsman type. It is not unlike the modern English work excepting in an entire freedom from the faintest suggestion of Art Nouveau motives. There is a substantial and serviceable note in this typical American furniture of oak that improves upon acquaintance—a quality that unfortunately is not to be found in many of the novelties annually thrust into the furniture world. This furniture, like its English contemporary, depends for much of its value upon the finish that serves to bring out the beauties of the grain.

Here is an odd type of low secretary in beautifully selected mahogany veneer for $61

It is impossible, of course, to formulate all the elements that go to make up a successfully furnished living-room or library. There are, however, one or two suggestions that may help. In the first place, do not be afraid to use furniture of different kinds in either of these rooms, and particularly in the living-room, where furniture of a single kind often serves to dispel rather than to create the desired atmosphere of hospitality and attractiveness. It is usually an advantage to use several of the old-fashioned, heavily upholstered easy chairs that belong to no particular period, provided only that their covering is made harmonious with the other furniture and with the wall and floor coverings and the hangings. Chairs of wicker usually help in creating that informal atmosphere that makes a living-room attractive rather than stiff and repellent. See that these have cushions of the same upholstering material or of a material that harmonizes with the rest of the room. One word of warning: do not use mahogany with a pronounced color scheme of reds. That particular color will serve most effectively to kill all the beauty in the mahogany By all means have a center table in the living-room, around which is gathered an easy chair or two as an invitation to pause and rest or read some of the current magazine literature or books. Nothing else will do so much for the room.

One of the modern tendencies is a growing popularity of the English oak furniture

Getting Into a Place

THE MATTER OF WALKS, ENTRANCES, DRIVEWAYS — WHY WE WANT TO CUT ACROSS THE LAWN—PRACTICAL SUGGESTIONS FOR THE TYPICAL SUBURBAN PLOT

BY GRACE TABOR

Photographs by Thomas W. Sears, landscape architect, and by Nathan R. Graves

[This is the second of a series of articles by Miss Tabor on the great subject of landscape gardening as applied to the American home of moderate size. The preceding article, in the October issue, was upon "Utilizing Natural Features in Garden Making."]

IT is the fashion of some landscape architects to consider all roads or walks as simply necessary evils, to be slid over and made as inconspicuous as possible—and then forgotten; but this seems to me a rather extreme view to take of a thing so essential as our exits and our entrances, and one that is apt to lead to over-elaborate efforts at concealment of them. This in turn leads to freakish results — or is likely to.

Entrances we must have, therefore let us be frank with them and spare no pains to have them beautiful, for the entrance gives to the whole place its characteristic first impression. But let us find out very carefully, at the outset, what constitutes a beautiful entrance. Important as they are, it behooves us to do this with due regard for their importance.

The beauty in a gateway itself—the actual entrance—is secured, I should say, first of all by suitability; the fascinating arched cottage-garden gate, overrun with rambler and honeysuckle, is nothing but an absurdity if widened to cover the span between big posts defining a ten-foot driveway, appropriate to a five-hundred-foot front—and similarly, huge wrought iron gates swung from massive pillars between which sweeps a majestic drive, admitting one to the dooryard of a house whose keynote is modest simplicity, is a blunder almost as pathetic as it is ludicrous. Make your entrance suitable both in style and scale—that is, in proportionate size.

Make the size and style of your entrance gateway to conform with the house and garden—that is, keep it in scale

And then, make it reasonably direct—as direct as the line that a tired, or lazy man, coming into the house or driving to the stable, would naturally follow.

No rule can be formulated for laying out a walk or drive; generalities for certain circumstances may be developed, but no certainties for general application reward even the most earnest study—excepting this that is suggested in the last paragraph. I am perfectly sure that no one can go wrong in placing a gateway or mapping a walk or drive who understands this one truth and acts upon it intelligently.

So let us take a glance into the realm of psychology for a minute—after premising that of course the location of the house and any other buildings, being governed by the formation of the land and other local conditions, has been decided upon before the question of entrances comes up at all. It should be; the very choicest site which the land affords should be selected, regardless of how the drive or walk is to reach it, or where the gate is to be. There is never any kind of path anywhere in the world that doesn't lead to something that was there before it.

Given, then, a house situated where you want it on the land, fronting in whichever direction is to the greatest advantage according to the arrangement of its rooms, with its doors and windows placed where they are under the twin considerations of convenience and beauty, the locating of the gateway and the mapping of walks and drives become a problem of psychology pure and simple, restricted only within the purely local lines.

Lives there a man who doesn't want to cut across the lawn, even though it saves him less than half a dozen steps? The impulse is almost always there, though of course he does not allow himself to follow it; yet why should it be there? Why this irresistible desire to go some other way than along the walk laid out? Is it just human nature?

Undoubtedly it is—just that; and that, again, is psychology. So here we are. The highest degree of success attainable in

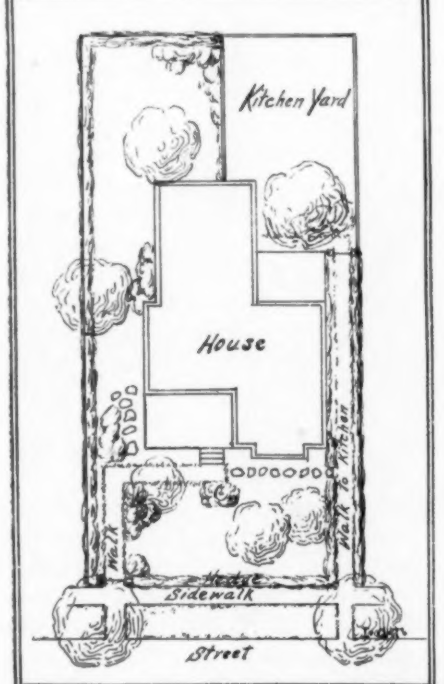
mapping a walk, I therefore contend, is in humoring this whimsical human nature—in other words, in placing a gate at the psychological point, a walk along the psychological line.

The walk or drive—I must be understood as referring to both in all generalizations—that carries a capricious human creature to a given point without its having occurred to him that a difference in direction here or there would get him there with completer satisfaction to his captious soul, is a success. This is unquestionably the supreme test.

Of course it is nothing but the line of least resistance again, you see, in the last analysis—only this time it's the human element to be dealt with instead of Nature. But how are we to determine this line? And will it not interfere sometimes with a great many important things, if literally followed?

To the latter, yes it will—sometimes—if *literally* followed; to the former, we are going to determine it by predetermining just where it shall fall. That is, we are going to create the conditions which will establish the direction we wish it to take, instead of accepting the direction already established by conditions as we find them—providing of course that conditions as we find them do not already direct it along the easiest, best and most generally beautiful, course.

For the entrance driveway to a big estate here is a suggestion. The Lombardy poplars were planted to protect young Norway spruces only temporarily, but the effect is such that they have been allowed to remain



A typical suburban lot redeemed by a new arrangement of walks

On a large place this is as apt to be the case if the ground is rolling. Long, sweeping curves will come naturally from following the easiest grade and avoiding mounds and hummocks; but with less land natural contours are less varied and something must be done to supply the lack, nine times out of ten. What to do is the question.

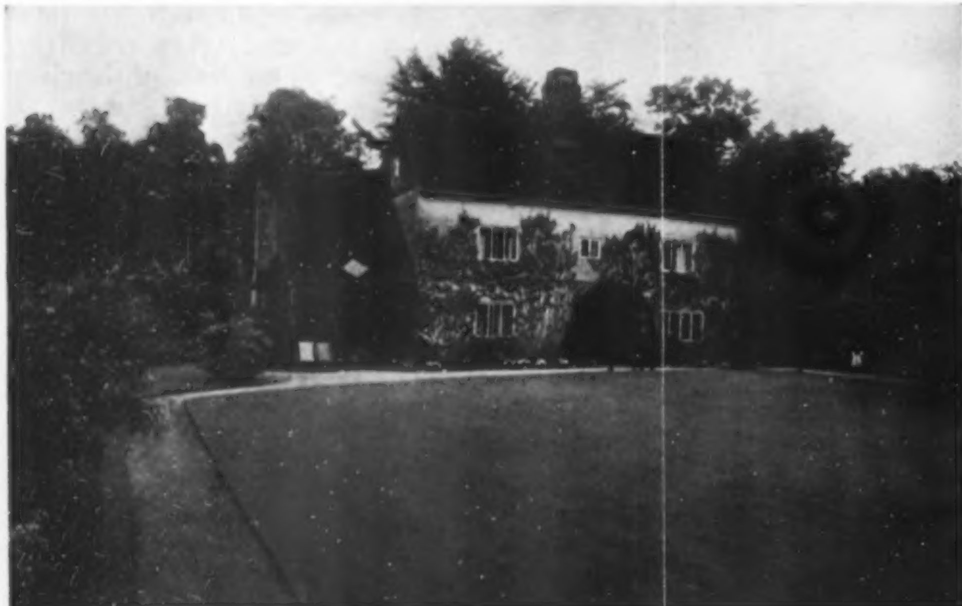
Decide in the first place at what point of the grounds travel towards the house naturally focuses; if you will notice where your own steps tend to leave the sidewalk and stray truantly across the lawn or the place where the lawn is going to be, you will easily fix this. From this point learn the course that is the very best for your walk to follow—the course which will suit you best as you walk over it, and that will look best from house, grounds and street; then, if there is no excuse for deviating from a commonplace straight line, furnish such an excuse.

Plant a tree squarely in the way, with another near enough to give both the appearance of happening to be there. Reinforce these with groups of shrubs if necessary, which the walk will have to avoid. Lead and coax it along in this way until, adjusting itself to the obstructions you have provided, it follows *your* own sweet will with nothing to hint that it could have taken any other course.

In most small suburban places the "direct" line is interpreted to be a line straight in from the street to the front door for the walk, and straight back to the stable or garage if there be one, for the drive—an arrangement as uncompromisingly ugly as anything could possibly be, unless the style of the house is strictly formal and the walk is lined up accordingly, with the drive planted out. But very rarely is a suburban house strictly formal—that is, the main entrance is rarely exactly in the middle of a perfectly balanced house — and very, *very* rarely does a tired individual, sauntering homeward, find it the natural thing to walk to a point directly opposite the door, turn a right-about-face corner and walk in, in a bee line, and up his front steps; though it's not fatigue, as a matter of fact, that makes the idea irritating, in spite of his possible belief that it is.

The small suburban place offers, possibly, the most difficult problem of all in this as in other respects, its limitations being very severe and conventional ugliness being accepted as the proper thing—indeed the only thing. In fact the small suburban place, commoner than every other kind of place in the land, is the one thing of all others that we, as a nation, go on uglifying year in and year out in Simian imitation of each other, with almost never an attempt to break away from our commonplace traditions. But that, as I have said before, is another story.

To show that we are not all aping our neighbors, however, I am going to append the little plan of an unusual departure from the customary treatment of a very small place, which will make some of the things I have been saying plainer than simply telling about them possibly can The entrances are of course the feature which makes this place so emphatically different from all others; which is my reason for presenting it in an article dealing with this subject. But it is worth while to note that, by



This English country house has no great amount of land, but see how an air of spaciousness has been secured by keeping the approach along the outside edge of the lawn, leaving the latter an unbroken expanse

planning these as they are, the whole place is vastly improved and much space saved—which makes it an excellent general example of good landscape gardening.

The purchaser of this not very unusual yet somewhat quaint and attractive house found the traditional walk leading straight to the front steps. This of course cut the already small lawn in two, making two patches about 18 x 25 feet each—the lot is 50 x 100. The walk to the kitchen had to stay on that side of the house because of the general plan of the house, so only two courses were open to him.

One was to move this walk's point of departure from the sidewalk six feet to the left, broaden it to a four-foot walk and when within six feet of the house let it branch into a Y, with the right arm disappearing around the corner of the house and the left terminating at the foot of the steps: the other was to do what the plan shows he has done.

The disadvantages of a service entrance and a main entrance being the same, even on a very small place, are obvious; but this was not the only thing which decided him in favor of the scheme as it is here shown. The unalterable way out and in to this lot is at the left-hand corner — that psychological impulse which is forever at work in this matter, so decreed — and the owner was wise enough to follow its admonitions.

There was no hedge when he moved into the place and almost no planting of any kind; he had therefore an exceptional opportunity to observe not only his own impulse regarding it, but the impulses of his friends as well. And he resorted to all kinds of subterfuge to trick the unwary and lure them into wandering into the house across the little patches of green instead of keeping to the prim, granolithic walk. Nine times out of every ten they left the sidewalk just where the gate now is, and though they did not follow the right angle to the porch which the walk shows, a group of shrubs close to the walk in this angle, backed up by a tree which shades the porch, deludes one now into going that way willingly and contentedly, because it is plainly the most direct—or *seems* to be.

The house is a rambling affair, irregular enough and informal enough to have almost any kind of garden except a formal one; so the hedge-enclosed front lawn now has a border of old-fashioned flowers on two sides, with more growing against the house. To provide a way out to the kitchen entrance as well as a private way in from that side if one happens to desire it, a line of stepping stones has been carried across in front of the bay window to a wicket in the hedge. Similar stones at the end of the porch do away with the tramping down of the grass which is sure to result from much running across, in such a situation. Always remember, by the way, to put *two* stones at the end of such a line to divert footsteps, now this way, now that, so that the grass will be worn evenly instead of just in one place following the last stone.

By this shifting of the front walk the dimensions of the lawn become 42 x 25 feet, the former being the distance across the front from the inner side of the hedge which excludes the kitchen walk, to the inner side of the boundary hedge opposite—and this increased area is all in one undivided stretch of greensward, which makes it appear even more of an increase than it actually is.

The kitchen walk is utilitarian, pure and simple, yet passing between the two rows of hedge as far as the corner of the house and between vine-covered house and hedge from there on, it is by no means unattractive. A stout gate admits it to the kitchen yard, which is completely latticed.

The sidewalk remains of cement, but once inside the front gate—painted white, this is hung between white posts, above which the privet of the hedge is being trained to form an arch—there is no longer a sign of such massive material; the house walks are both appropriately graveled as becomes a simple, cottage scheme.

The hedge is trimmed at shoulder height, rising higher, as already mentioned, at the gate. The seclusion of the place is delightful, yet it is not at all shut in.

Space does not permit me to give further plans to illustrate larger places, but even if it did I doubt very much my ability to select anything more generally suggestive and helpful than this. Walks and drives are simply longer or shorter according to the distance they must cover; they are never very different one time from another, excepting on uneven ground. And even here there is no method of laying them out better than the one described—of this I am long since convinced—unless the circumstances are very exceptional.

It takes a long time to train or pleach trees over an arch, but it is an effective way of marking an entrance gate

A huge chimney of painted bricks that dominates the end of a Colonial house

A chimney of common bricks, laid Flemish bond, that seems particularly appropriate

It is common practice in Colonial work to carry up the chimney flush with the wall

Here the chimneys are of brick with inset plaster panels and cornices to match the gray plaster of the walls

A symmetrical arrangement of chimneys has been here secured—usually a difficult thing to do—and they are of cement

Chimney pots of terra cotta are more frequently used in English work than here in America

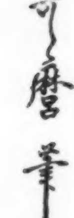
A stone chimney that composes particularly well with the gable end of which it is a part

On half-timber work the chimneys are usually of an intricate pattern in brick or terra cotta

EIGHT TYPES OF CHIMNEYS

PROCESSION PASSING FUJIYAMA — TOYUKUNI

Japanese Prints in Home Decoration



EFFECTIVE FACTORS IN LENDING DISTINCTION TO A HALL OR LIVING-ROOM —WHAT SORT OF BACKGROUNDS TO USE AND HOW TO FRAME THE PRINTS

BY SHERRIL SCHELL

JAPANESE prints are being used more and more in house decoration, nowadays, both in England and in the United States. In this country, after their first wild popularity, they languished for a period, owing to the jaded taste of those who had bought, all too eagerly and indiscriminately, large quantities of them. Of late, they seem to be coming into their own again, and if one sees fewer of them, one also observes that they are much better chosen.

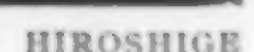
Here in the Eastern states, one encounters them more frequently in country than in city houses, for the reason that the country home is less likely to possess some scheme of decoration antagonistic to their peculiar characteristics. A few good prints, in the living rooms of a country house, with no clashing wall paper or draperies, give a feeling of charm and simplicity that is particularly refreshing.

Wall paper covering of solid and neutral color makes the best background. Certain shades of gray, brown, and green are especially effective, though nearly all the delicate shades can be used satisfactorily. In one country home on Long Island there is a room devoted entirely to Japanese prints. Here the owner has used on the walls the gold paper that is found on tea chests, and it proves exceptionally harmonious as a background. This paper can be secured through most of the large paper shops, or in shops where Oriental wares are sold.

The beauties of a print can be greatly enhanced by the mat and frame. The frame should be narrow and simple in line in nearly every case. Though a dull gold frame can often be used happily, black, brown, gray and even mahogany will usually give more satisfaction. Japanese prints should never be hung on walls with old French or English prints, especially the colored ones; in fact they appear to the best advantage when placed alone. Photographs of the better sort, certain etchings, and pen-and-ink drawings prove more congenial neighbors.

The inexperienced collector will probably have no great difficulty in discriminating between the good and the poor prints, providing he has an eye for color. The old prints can be readily distinguished from the new by the texture of the paper. Old paper is singularly vibrant and soft in quality and has the slightly mellow appearance of the paper of the old European prints. An important point, too, is the register, which must be perfect—the most valuable prints are those of faultless register. These are not only much more beautiful, but, like other antiques, they increase in value every year.

AN IMPRESSION AT KANEIDO TEMMANYU — HIROSHIGE



FASHION PLATE KUNISADA

CHERRY TIME — HIROSHIGE

The colors, like those of the best English prints of the Eighteenth Century, should be soft and delicate, melting one into the other and not defined roughly by the block. In Japan, after the year 1850, as the work of the great school of Ukiyoye became more and more popular, the artists used cheaper dyes, and became more hurried in their work. Some fine reproductions have been made in late years, it is true, but it seems almost impossible for the Japanese, clever as he is, to successfully imitate the old coloring, even when he retains the old blocks. The introduction of aniline dyes into Japan marked the degeneration of the prints, the violent colors taking the place of the old soft vegetable tints. The difference can be readily noticed by those who have access to museums, between those to be found in the collections and those of the cheaper variety sold at Japanese shops.

A knowledge of the block will further help. Many of the finer Japanese shops have these blocks on exhibition, and not until the collector has seen them and has had all the process explained to him, will he truly appreciate the charm of the art.

AN OFFERING SHUNSHO

The subjects attempted by the artists of this school covered the widest range, but an artist would frequently specialize on some particular phase of life that appealed to his fancy. Some of the masters have distinguishing characteristics that the intelligent collector readily notes. Thus in Moronubu, we have the gracefully flowing lines, that were seldom equaled by his successors. Haronubu devoted himself to the portraiture of young women, slim flowerlike beauties of ineffable charm and refinement. In Kiyonubu we find a strength of outline and a forceful sweep, so wonderfully shown in his patterns of old theatrical costumes. Shunsho, one of the most skillful of the artists of his school, was one of the big influences in print making. His work is characterized by its simplicity of line and a reposeful air that is unmistakable.

Shunsho's pupil Hokusai is probably the best known of the Ukiyoye school. His fecundity was remarkable. A moderate sized collection of his prints forms a veritable history of the Japanese during his lifetime, as he depicted thousands of subjects with an extraordinary sense of their human and artistic values.

In his preface to "The Hundred Views of Fujiyama" Hokusai has this to say of himself: "From the age of six, I had a mania for drawing the forms of things. By the time I was fifty, I had published an infinity of designs, but all I have produced before the age of seventy is not worth taking in account. At seventy-five I have learned a little about the real structure of nature,—of animals, plants, trees, birds, fishes, and insects. In consequence, when I am eighty I shall have made still more progress. At ninety I shall penetrate the mystery of things; at a hundred I shall certainly have reached a marvelous stage, and when I am a hundred and ten, everything I do—be it but a line or a dot—will be alive. I beg those who live as long as I, to see if I do not keep my word. Written at the age of seventy-five by me, once Hokusai, to-day Gwakio-ro-jin, 'the old man mad about drawing.'"

TWO GIRLS TOYUKUNI

The work of Kiyonaga, the inspirer of Utamaro and his school, is notable on account of its simplicity and great dignity, and his prints have a nobility of feeling that have excited no less an authority than Professor Fenollosa to use the word "classic" in speaking of them. His open-air scenes are his best, though some of his interiors rival those of Haronubu. His young girls are the most fascinating to be found in the prints, with the possible exception of Utamaro who equaled him at first. Later the work of Utamaro degenerated into exaggeration, his women, no longer elegant or majestic, became mere freaks of tallness and affectation.

Utamaro discovered many things about colors and he was the first Japanese artist to deviate from the traditional manner of treating the face. He was, with Hiroshige and Hoksusai, one of the greatest influences on European art. Theodore Child wrote in 1892 of this influence, "The Paris salon of to-day as compared with the salon of ten years ago is like a May morning compared with a dark November day."

Toyukuni lacks the spirituality and fineness of Utamaro, but his calligraphic stroke is virile and full of individuality. His best work is that which has the stage with its actors for subjects. Kunisada is revered chiefly on account of his backgrounds. After the death of his master Toyukuni, he styled himself "Toyukuni the Second."

Hiroshige is the great landscapist of Ukiyoye, but, like most Japanese artists, he did not confine himself entirely to the one branch, attempting nearly every subject that came under his notice. His work shows the Dutch influence strongly, as his teacher Toyohiro had a large collection of the Dutch woodcuts and often imitated them in his paintings. The earlier prints of Hiroshige are the most beautiful. The introduction of cheaper pigments may be traced in the later prints, although Hiroshige fought—a losing fight, it is true—against their introduction. Hiroshige was an impressionist, he worked in broad manner, effectively subordinating the detail. Among our great painters, no one was influenced more than Whistler, by the art of Hiroshige.

The prints of Yeizan and Yeisen are much in favor with some collectors, a though these artists are not among the greatest of the school of Ukiyoye. Yeisen together with Yeishi imitated Utamaro and some of their work equals his.

Excellent books have been written on Japanese prints by such authorities as Prof. Fenollosa, M. Louis Gonse, M. Edmond de Goncourt, Wm. Anderson, C. J. Holmes, John La Farge, Sadikichi Hartmann, Stewart Dick, Morgan Sheperd, and Dora Amsden.

The large-flowered varieties are rather more difficult of outdoor culture than the Pompon sorts, being less hardy

How to Grow Chrysanthemums

PRACTICAL SUGGESTIONS TELLING HOW THE AMATEUR MAY SECURE ALL THE PLANTS DESIRED FROM A FEW STOCK PLANTS CARRIED THROUGH THE WINTER

BY E. U. GOOD

IT is an easy thing to grow chrysanthemums and anyone that tries it will be more or less successful. That may seem like a wild statement, but it really keeps very close to the truth so far as growing these plants for ordinary use is concerned. Of course this does not apply to the exhibition plants that so delight us at the shows. To get up such as these requires expert care and knowledge and proper greenhouse conditions to handle them.

If a person will take the plants that they have in their windows in the fall and keep them through the winter, these same plants will furnish a stock of cuttings the next spring. When the plant has flowered and the leaves are withering you will notice that close to the pot at the bottom of the stalk of the plant a new growth will spring up, and this new growth will furnish the stock for next year.

If you have not saved a stock it would be well to go to some greenhouse and get some cuttings, which will not cost much. Or, buy the young plants in very small pots. All greenhouses will furnish these. You can start your cuttings from the first of the year right up to the last of April.

The cuttings will start readily in sand—a coarse, clean, masons' sand. The very fine white sand will not answer nearly so well, as it packs down too hard and rots the cuttings. A good propagating bed can be made from a wooden box. Let the box be about six inches deep and in the bottom bore some holes for drainage. Put in the bottom three inches of sand.

Firm the sand, after wetting it. Then put in the cuttings. To do this take a pointed stick, make a hole with it in the sand, insert the cutting then, press the sand about it. Over this box put a covering of glass. This cover is to be raised and lowered to keep the temperature even. About 55 degrees will be right. Make the cuttings about three inches long, cutting at an eye, and remove the lower leaves. Put the stem about an inch deep in the sand. During the heat of the day be sure to raise the glass and to shade the box with a paper. If left to the full glare of the sun the little cuttings will not last long. It will take about three weeks to root the cuttings.

When the little plants are ready for shifting from the bed they should be put into small pots, or they may be grown in boxes. For ordinary use it would be better to use the pots. After potting put them up to the light.

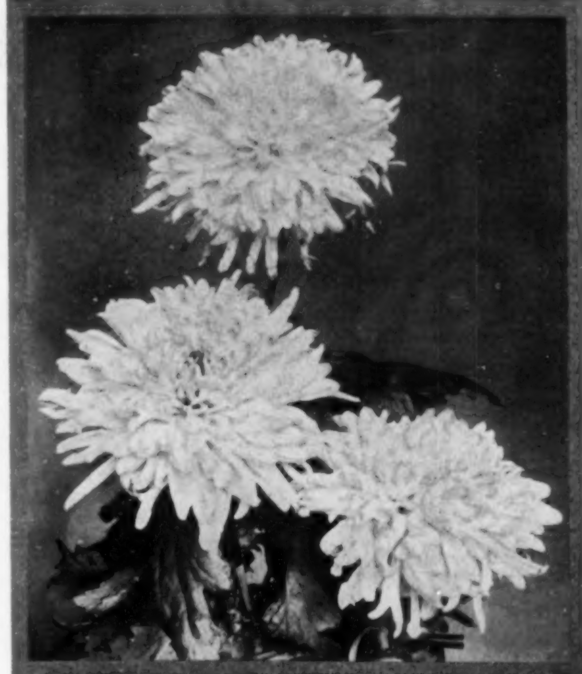
When you pot your plants be sure that you have good drainage in the bottom of the pots or boxes. No matter how small the pot, it is better to put something in the bottom that will let the water run through and not collect it and sour the soil. The condition of the soil also is important. Clayey, sandy, hard soil will not answer, and the plants will not do well in it. You want a soil that is spongy, composed of leaf mold, loam and old cow manure. These mixed well together will be suitable. When potting always leave sufficient room to hold the water on the top of the loam when watering. This will let the water soak to the bottom of the pot, whereas if the loam is flush with the top the chances are that no water will reach the drainage.

Your plants will require shifting from time to time, so, to judge the need of repotting, just knock a plant out of the pot and look at the roots. If the plants are allowed to remain until they

get pot-bound, that is until the roots are crowded in the pot, the plant is apt to get a check.

When the weather is suitable, around the early part of May, put your plants outside in cold frames, where they can be protected with sash placed over the beds. Water them regularly and give them plenty of air during the middle of the day. Don't suffocate them. The plants want plenty of water and air.

Chrysanthemums will raise up a nice stock of pests if not watched. To prevent this, syringe the plants often, and also place tobacco stems on the pots. Or spray with tobacco water. The fumes from the tobacco will have a restraining influence on the pests. If they get ahead of you, give them a dose of whale oil soap. Use about a pound of the soap to ten or twelve gallons of water. This soap is not very nicely perfumed, but it is wonderfully effective. When making your purchase get it in packages already cut up; it is called chipped soap. This will save you considerable labor and much handling.



Under ordinary cultivation, without excessive disbudding you will get more of these medium-sized blooms

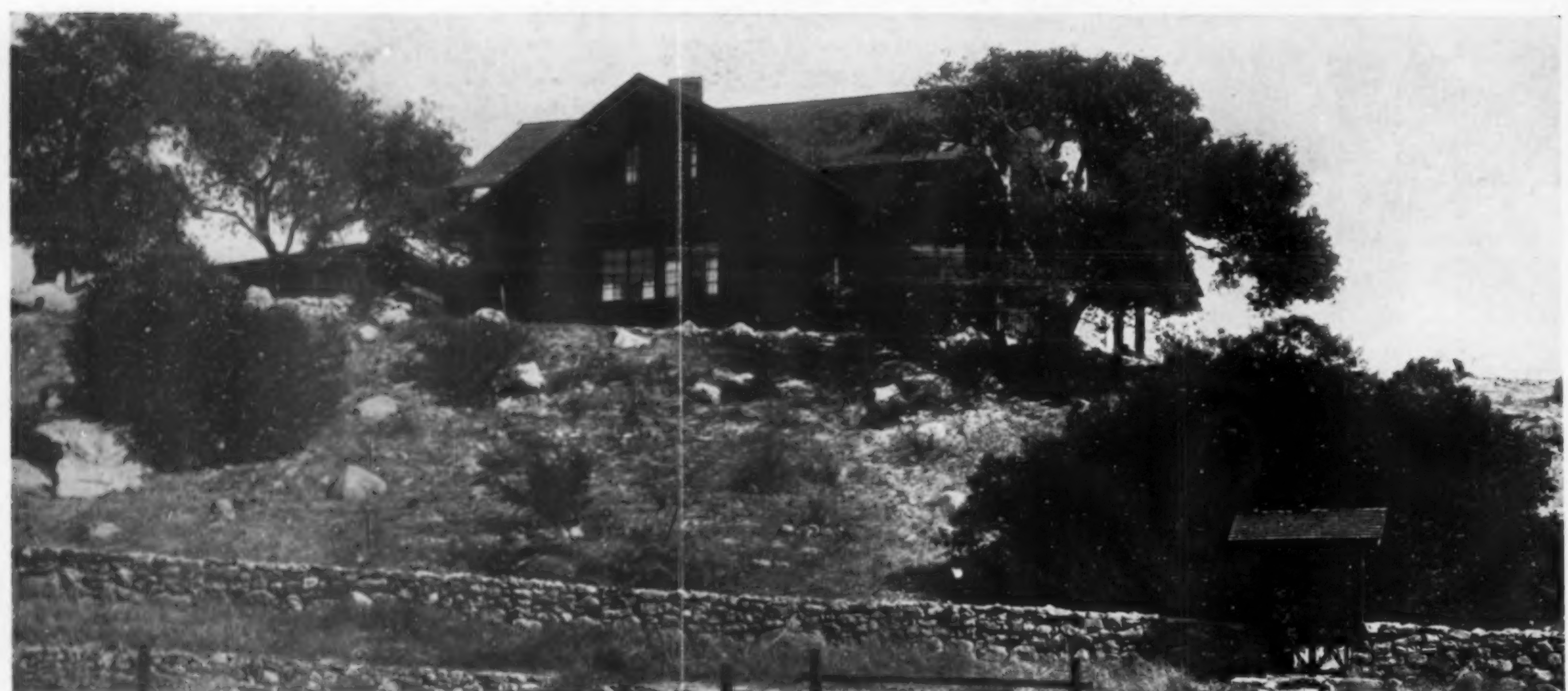
You can plunge your plants out in the ground in pots, or you can put them right in the ground out of pots. The first way is the best. They should be put in pots that will allow them to grow and make root and it may even be necessary to give them a couple of shifts before the fall. Keep them well watered and syringe often. Along towards the latter part of July give them a feeding with liquid manure. You can make this by putting about a bushel of cow manure in a large barrel of water. Put the manure in a bag and let it soak for a few days. When using this, dilute about half with water and give about three times a week. This will work wonders with the plants and help to make good specimens. Don't give it oftener than three times a week. Once in a while a little nitrate of soda might be given with good results. Use about one ounce to four or five gallons of water. It must not be thought that if a little soda is good a lot is proportionately better. This is not so. Stick to the proportions given above and the results will be good. Give this about once or twice a week, at the most.

If all the buds that form are allowed to mature they will be small, but if numbers are taken off those that remain will be much larger and more sightly. Therefore it is a good idea to disbud so as to get larger flowers. With the regular greenhouse men this is a work that requires considerable skill, for on it depends the success of the flowers. For ordinary house use the simple operation of removing some of the buds will be instruction enough.

If your plants have grown straggly it may be necessary to stake them. The best way for small plants is to use wire. This will answer well enough to keep the plants in the shape you want so as to let the flower develop well. Very large plants will require something more substantial, such as bamboo.

Now would be a good time to get a stock of plants to build upon next spring. In the fall it is an inexpensive operation to gather a lot of plants, either that have been given you or to your friends. Most people throw the plants out just as soon as they have finished flowering and here is a person's chance. These old plants can be easily carried through the winter and will give hundreds of cuttings in the spring. Take the old plants and winter them in a cool place where you can keep them just alive. A little frost will not injure them. A cold frame that is deep is a good place to put these. In the spring when stock is wanted these old plants can be taken out and started and each one will give dozens of plants. These, handled as suggested above, will give you a lot of respectable looking chrysanthemums. There are many types of chrysanthemums, and the literature on the subject is already enormous. In general the large-flowered forms are more popular than the small-flowered ones, especially at exhibitions. The Incurved, Japanese Incurved, and the Japanese types are the most important in this country. The flowers of the Incurved and Japanese Incurved types are likely to be more compact and hence better for long shipments. These and the Japanese types are the ones most commonly grown by the florists for cut flowers. Anemone-flowered forms are considered as curiosities.

How much more satisfactory it is for the amateur who wants flowers for decoration, to grow a profusion of bloom rather than one gigantic flower to each plant



"Felsengarten" is a remarkable example both of the judicious selection of a style and of wonderfully successful composition in conjunction with its rugged site

A California Chalet

FELSENGARTEN, A HOME IN THE VENTURA VALLEY, DESIGNED BY HUNT & GREY, ARCHITECTS, WHERE A SWISS TYPE HAS BEEN ADAPTED TO AMERICAN NEEDS

BY HELEN RAY

IN southern California, untrammeled by inherited conventionality, many novel types of domestic architecture court the eye from out the luxuriant drapery of Bougainvillea and Passion vine.

The bungalow and Spanish patio seem especially popular in the towns and cities, and have an inherent propriety in this land of brilliant sunshine. No less adaptable to the rock ridges and green mountains is the style of the Swiss chalet, which in the city seems meaningless.

The chalet here shown, designed by Hunt & Grey of Los Angeles, is built in one of the lovely mountain valleys with which this State abounds. It stands upon a rocky ridge overlooking the long valley, and has the happy, easy look of "belonging" which is the reward of careful designers. It nestles between two sheltering live-oaks, whose boughs almost dip into the windows of the living-room; doing the double duty of shading and decorating the house and also furnishing, rent free, the leafy homes of many bird neighbors.

The building lot has been "treated" just as little as possible in order to preserve the natural and wild look of things. As the picture shows, the boulders have been left to lie just as found, and among them all the native growth of wild flowers luxuriate in the late winter and early spring: blue Brodiæa, yellow violets, white forget-me-nots and always the feathery fronds of the coffee fern.

A massive stone chimney, with a fireplace measuring ten feet across the chimney breast, distinguishes one end of the building

After entering the roofed gate, the footpath winds up the hillside over stone steps, cleverly fashioned from the rocks found on the hillside, and out upon stepping-stones that land you at the front door. The pious Tyrolese greeting "Grüss Gott!" is quaintly painted in bright green lettering over the door, and from a wrought-iron arm or bracket at the side swings a bell with chain to announce your arrival. On entering you find the same German thought carried out in other motives of gay lettering. Between the beams one reads the happy words "Frisch—Frei—Fröhlich," and over a doorway, the watchword of the household, "Immer Gemütlich!" In three small panels over the rude door leading from dining-room to kitchen, the daughter of the house has painted a little Tyrolese mountain climber with alpenstock, a Tyrolese peasant girl, and, in the panel between them, the words "Glück auf!" the climbers' cry of "Good luck!" Elsewhere little prim green pine trees are painted between the

rafters. The living-room is finished with battened board walls and raftered ceiling, all of Oregon pine stained a russet brown. The chimney, ten feet broad at the base and six feet thick, is a massive feature done in the rugged style which is the main characteristic of chalet construction. An idea of its massive strength may be obtained from the illustration of the south elevation. In the long, low living-room (26 x 18 ft.) it is a dominant feature, where cord wood logs ablaze furnish cheer and decoration in the cool winter evenings. The hearth, of the rudest masonry of weathered stones, and the great iron hooks mounted in the masonry of the chimney breast furnish support for a tall iron trident to handle the logs with and a huge bellows of carved black wood.

The room is lighted at night by candles in the oddest of rustic sconces and candelabra. A small log is suspended from the rafters by iron chains and fitted with tall wax candles. The light of these and the firelight on the velvety brown wooden walls at night is indescribably beautiful.

The living-room walls are of battened boards, the second floor joists remaining unceiled—all of Oregon pine, stained a russet brown

The primitive quality of the room is further emphasized by the wooden furniture, much of it hand-made and hand-carved, and by the "whittled" boards of the balustrade leading to the second story.

Draperies of a pale brown monk's cloth are stenciled with conventionalized pine trees in green. They are folded primly over heavy wooden poles set in wooden brackets, simply outlining casement windows, through every one of which are the most enchanting views of distant mountains, near foothills and luxuriant valley. French windows open on the long east porch (40 x 12 ft.) through which, on fine days, the dining-table is pushed and dinner eaten *al fresco.* What a sauce for the appetite is the fresh aromatic air; what a feast to the eye, the dream mountains on the horizon; what melody for the ear, the meadow lark's trill or the mountain cascade's cadence as it tumbles through the canyon!

On the first floor, in addition to the combined living-room and dining-room, which are shown in the photographs, there is the kitchen, a pantry between that and the dining-room, a screened porch—considered a necessary part of the kitchen in California—and a bedroom and bath. On the second floor there are four bedrooms, a toilet room and a sleeping-porch. All of the bedrooms are well equipped with closet space.

At one end of the veranda is a picturesque well, with old oaken bucket and stone curb. Bamboos and papyrus have been planted at one side, and ivy, destined to cover the timbers that support the bucket. The Deodar cedar, the Irish juniper, the Japan cryptomeria, the Mediterranean heather and the Colorado blue spruce form an interesting setting of conifers for the well plat.

An idea of the luxuriance of the live-oak as a winter tree in California may be obtained from the first photograph. The owner has built a platform among the boughs, twelve feet in diameter, where afternoon tea is served—a pleasant feature of mid-winter life in California and one that the eastern sojourner likes to enlarge upon in writing back to ice-bound and snow-blockaded friends.

The little chalet has been christened "Felsengarten," because of the rocky setting to its flower gardens, which unfortunately are so placed that they cannot be adequately photographed.

The draperies in the living-room and dining-room are of pale brown monks' cloth, stenciled with pine trees in green

The effective woodwork that takes the place of the balustrade is made of pine boards with a sawed-out pattern

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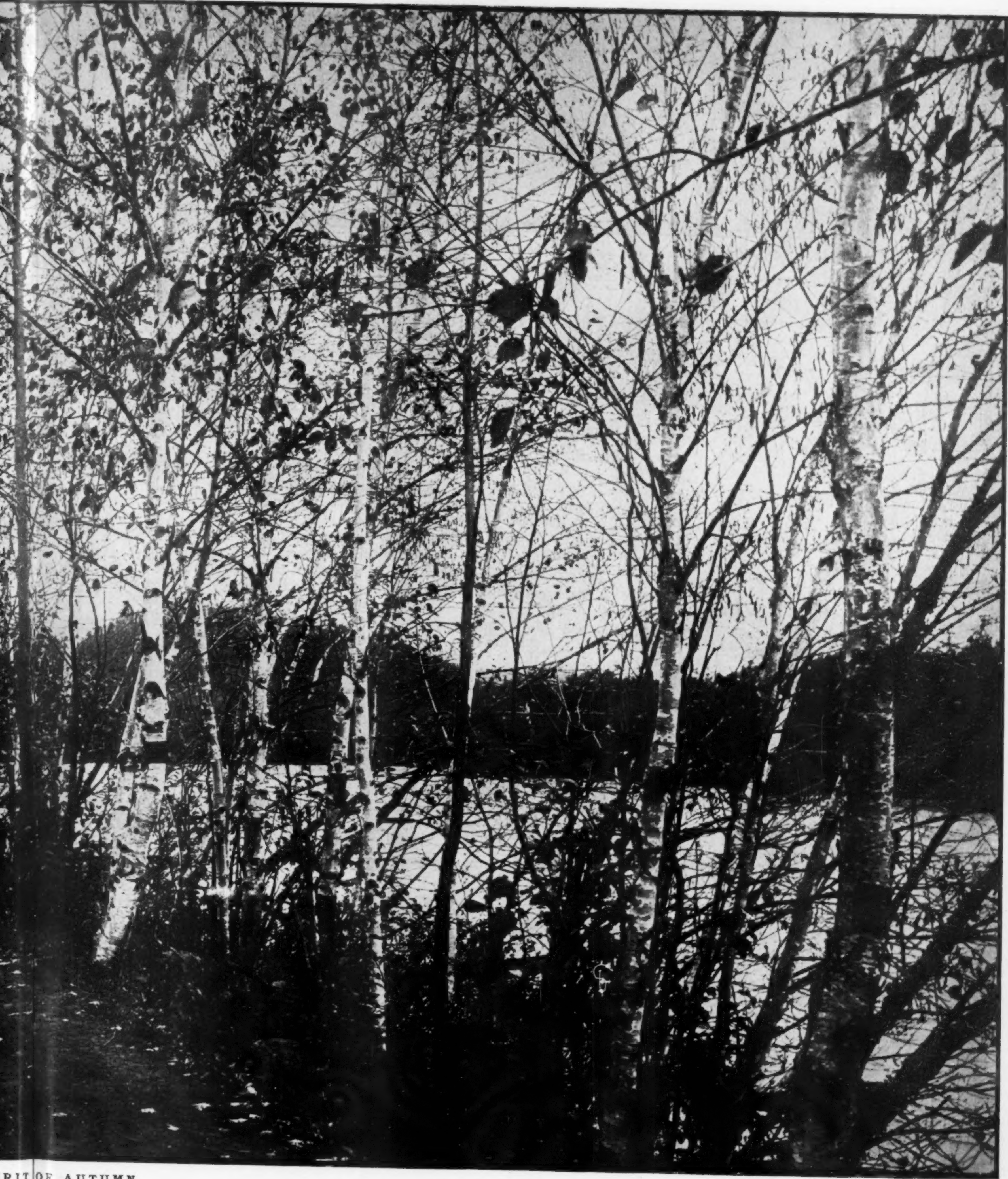
THE SPIRIT OF A



RIT OF AUTUMN

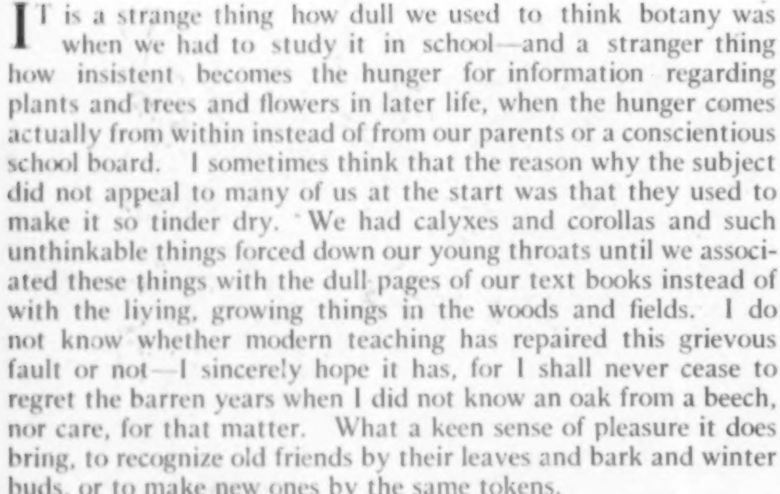
The leaves of the Norway Maple remain on the tree considerably later than those of the native maples, and the key fruits form no small part of the tree's decorative value. The panels at the sides show the Sycamore Maple

All the Maples

THE APPEARANCE AND CHARACTERISTICS OF THE COMMON AMERICAN MAPLE TREES—HOW TO KNOW THEM APART—WHAT THEY ARE GOOD FOR

BY HENRY HODGMAN

Photographs by the author



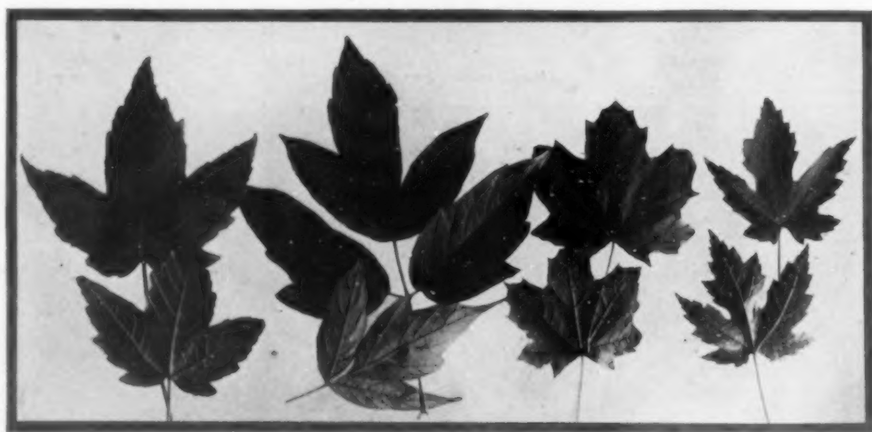
IT is a strange thing how dull we used to think botany was when we had to study it in school—and a stranger thing how insistent becomes the hunger for information regarding plants and trees and flowers in later life, when the hunger comes actually from within instead of from our parents or a conscientious school board. I sometimes think that the reason why the subject did not appeal to many of us at the start was that they used to make it so tinder dry. We had calyxes and corollas and such unthinkable things forced down our young throats until we associated these things with the dull pages of our text books instead of with the living, growing things in the woods and fields. I do not know whether modern teaching has repaired this grievous fault or not—I sincerely hope it has, for I shall never cease to regret the barren years when I did not know an oak from a beech, nor care, for that matter. What a keen sense of pleasure it does bring, to recognize old friends by their leaves and bark and winter buds, or to make new ones by the same tokens.

Take the maple trees, for example. Do you really know whether that one that shades your sidewalk is a Silver Maple or a Norway Maple? Would it not interest you to become better acquainted, provided you do not have to know a whole lot of technical details about pistils and glandular teeth and samaras? I think it would, which is my reason for writing this article.

There are eight distinct kinds of maples to be found growing comfortably in this eastern country of ours, not to mention the little Japanese maples whose crimson foliage is coming to be such a decorative feature of our lawns and shrubbery borders. These common maple trees that everyone ought to know are: the Mountain Maple, the Striped Maple or Moosewood, the Sugar Maple or Rock Maple, the Silver or White Maple, the Red Maple, the Ash-leaf Maple or Box Elder, the European Sycamore Maple, and the Norway Maple. And it is not the hardest thing in the world to know these, one from another, by means of their leaves, their winged nut fruits or their bark, so that you will never again have to say, indefinitely, "There is a maple tree—or is it a pin oak?"

In the first place, only three of our important tree families have their leaves one opposite the other—the maples, the ash trees and the horse-chestnuts. If the leaves are simple (each leaf surface complete in itself) rather than compound (consisting of several leaflets on a common stem), the tree is a maple. If the leaves are not to be had, look at the winter buds and twigs. The buds of the maple are small, and the scars left by the fallen leaves are small, narrow crescents. Horse-chestnut buds are large and waxy, the leaf scars resembling a horse's hoof prints; ash buds are dull and blunt, with rough, leathery scales. Of the twigs, those of the latter two tree families are stout and clumsy; those of the maples are slender.

Those of you who spend your vacations in the mountains, particularly those of New England, have seen the Mountain Maple at home, even if you have not recognized it. It is a small, shrub-like tree, found along every highway and bordering the brooks and lakes. Together with its mountain brother, the Moosewood or Striped Maple, it forms a most prominent part of the underwoods, usually more abundant than the latter variety. It seldom reaches a height of more than twenty or twenty-five feet, and, from its mountain-loving character, is mainly a Northern



Sycamore Maple. Ash-leaved or Box Elder. Norway. Silver
The leaf is sufficient evidence to identify the varieties

The Red Maple is also known as the Swamp Maple, the Scarlet Maple and the Soft Maple

species, extending along the high lands as far south as Georgia.

The leaves of the Mountain Maple are smaller than those of the Moosewood, and there are more of them on the twigs. After the leaves fall in the autumn the smaller branches have a distinct and characteristic crimson color, while, near at hand, one notices that this red bark is covered with a whitish pubescence. Before falling, the leaves turn to a deep red. Because of its beauty of coloring, its hardiness, its freedom from disease, and its low growth, the Mountain Maple deserves a wider and more extensive use for ornamentation and planting in shrubbery groups.

In summer the Striped Maple or Moosewood (so called because that animal feeds upon the leaves and branches) is readily distinguished by its large, goosefoot-like leaves, with thin blades and an intricate network of veins. The upper side of the leaf is dark, yellow-green, the underside being much lighter and thinly marked by short red hairs. At the time of falling, the leaves turn bright yellow. In the winter the bark is marked by pale delicate stripings on the red or green surface. A characteristic of the Moosewood is the wide angle which divides each pair of key fruits.

The Sugar Maple can be easily recognized at any season of the year. In winter the opposite branches, tipped with sharply pointed conical buds, tell the story; in summer the broad leaves, well rounded in the angles dividing the three main lobes, and lacking the milky stem juices of the Norway Maple, mark the species; in autumn the brilliant red, orange, and yellow of the leaves give the clue. Rock Maple and Hard Maple are other names applied to the Sugar Maple, which is fortunately one of the most widely planted of our shade trees.

The Silver or White Maple has also been extensively planted as a shade tree. The white under surfaces of the leaves, and the deep, wish-bone shaped divisions between the lobes are characteristic marks. In the valley of the Ohio River the tree attains a height of over a hundred feet, with a trunk three or four feet in diameter, but through the Northern part of its range the tree is smaller. Blooming very early, usually in March, the pollen-bearing flowers are greenish yellow, and the seed-bearing flowers are usually greenish but sometimes conspicuous for their crimson scales and pistil ends. Although the quick-growing Silver Maple is considered one of the best trees for street and ornamental planting, it has long, ungainly limbs that break in the wind; and it also has the fault of being a host for the Maple-tree bark-louse.

The Red Maple is appropriately named. In winter the bark of the twigs is red; in spring the same color appears in the blossoms; in summer it is in the key fruits; and in autumn the red leaves are the tree's magnificent banner. In the leaves the angles between the lobes are not deep, and both lobes and angles are acute. Swamp Maple, Scarlet Maple, and Soft Maple are other names given this most conspicuous tree of our American landscape. It is a lowland tree, found in swamps and along river banks.

The Norway Maple makes one of the best trees for lawn use. It is rather low-headed for street use

The rich olive green of the twigs in autumn and winter is one of the distinguishing traits of the Ash-leaved Maple, or Box Elder. It is the exception to the rule of simple-leaved species in the Maple family, for each leaf has from three to seven leaflets, usually marked by curiously unsymmetrical forms. After the leaves fall in October the long clusters of key fruits remain, thickly clothing the branches, until gradually whipped off by the winter winds. The Box Elder is noted for rapid growth, dense foliage, good coloring and comparative freedom from disease. With age, however, it shows a variable growth and some untidiness.

Still another maple that has been extensively planted as a shade tree in the Eastern States is the European Sycamore Maple. It is vigorous, hardy, free from disease, attractive throughout the year and furnishing in summer a dense shade. The leaves are somewhat like the Red Maple in outline, but much denser in texture and with broader lobes towards the tip. The veins, too, are quite distinct, particularly on the under surface, and show fine hairs along their sides. The upper side of the leaf is a dark green, the under surface being distinctly lighter, and they turn yellow in autumn.

We owe the Norway Maple also to Europe, and it has proven itself a thrifty, hardy species in this country. The thin leaves, green on both sides, remain on the tree considerably later than do those of any of the native maples. Resembling in lobing the leaves of the Sugar Maple, those of the Norway Maple have basal lobes that extend much further out. But the sure test lies in breaking of a leaf stem; if a milky juice slowly exudes, the tree is a Norway Maple. Like the Moosewood, the Norway has its key fruits joined at an extremely wide angle, and the handsome pale green clusters form no small part of the tree's claim to a widespread popularity.

The Norway Maple has a very dense and round head and is excellent for lawn use. It is rather too low-headed, however, for street use, although the photograph at the top of this column shows an attractive street with a row of these trees on each side.

The Japanese Maple is a shrub or small tree of dense though graceful habit. The foliage is particularly beautiful, especially in the spring when it shows delicate shades of green and red, and again in the autumn when the leaves assume the most striking tints. Japanese Maples grow best in partly shaded situations and in well drained, rich soil.

Japanese. Mountain. Red. Sugar
The photographs show the upper part of the leaf above, the under side below

An example of careful planning in the location of a register in a Hot Air system

It is possible often to conceal the radiators of Steam or Hot Water systems under a seat

The Available Heating Systems

THE GREAT PROBLEM OF KEEPING WARM AND HOW IT MAY BE SOLVED—THE COST OF THE VARIOUS AVAILABLE SYSTEMS BOTH FOR INSTALLATION AND MAINTENANCE

BY JARED STUYVESANT

NO matter how carefully you have thought out the complex matters of architectural style, no matter how deeply you have gone into the subject of building materials, no matter with what care you have selected your furnishings and interior decorations, your house may be the keenest sort of a disappointment if it is not comfortably warmed in the winter time.

It is astonishing how very little people know about the various methods of heating the home. Of course it is a technical matter associated in many minds with such intricate details as the proper strength of beams for a certain span, or the laying out of a plumbing system. As a matter of fact, this matter of heating is not so complex as it seems—that is, the fundamental principles are easily understood and one may readily learn to know the essentials of each system in common use.

Of course, if you do not want to take the time for this, the thing to do is to leave the matter to your architect or go to a heating engineer and commission him to instal whatever system he considers best, and if you do this you will doubtless have a comfortable home at a not very much greater cost than if you make your own investigations.

For some reason, however, the majority of home builders have an almost insatiable desire to "see the wheels go around" themselves—to know the why and wherefore of the whole matter. If you are one of these, let me outline briefly the fundamental principles of each of the common systems used in heating homes and add a word or two as to their respective costs of installation and of maintenance.

In the first place there is a system known as Hot Air and it is, perhaps, the system that is in most general use at the present time in houses of moderate cost. It is the cheapest system to instal. It does away with bulky radiators which so often, if not carefully disposed, disfigure the rooms. It has the advantage of bringing into the house a continuous supply of fresh air—the feature which recommends the system very strongly over the use of Steam or Hot Water, which latter two systems heat over and over again the air that has remained in each room since it was last ventilated. So much for the good qualities of Hot Air. On the other side of the case there is the objection that the inflow of air brings with it a great deal of dust—a fault that is not inherent in Steam or Hot Water. The cost of maintenance is higher than either of the other two systems. This is because you naturally have to burn more coal in heating a steady supply of fresh cold air. On one side is the cost and on the other side the advantage of having fresh air.

To get down to actual figures, which, however, can be only approximate, a hot air furnace will burn, say, thirteen tons of coal a year in a house which would be heated by a steam heater burning ten tons or by a hot water heater burning nine.

Hot Air heating has been very much improved within the last few years. The older form of furnace was merely a red hot stove in a box. The air from the outside was drawn into the bottom of the box, passed over the red hot iron and was forced into the rooms, usually at a very high temperature, and devitalized through the loss of oxygen, or "burned" as it was commonly known. Nowadays the better qualities of furnaces have much larger radiating surfaces and they warm a much greater volume of air in a given time but to a lower temperature.

One of the common objections offered to the use of a hot air furnace is that it cannot be made to heat one or two faraway rooms against the wind. This is to a certain extent true, and it is unquestionably better to use Steam or Hot Water where a house is large and not compactly planned, approximating a square. The best types of hot air furnaces provide for this off-quoted difficulty in two ways. One type of furnace has vertical ser-

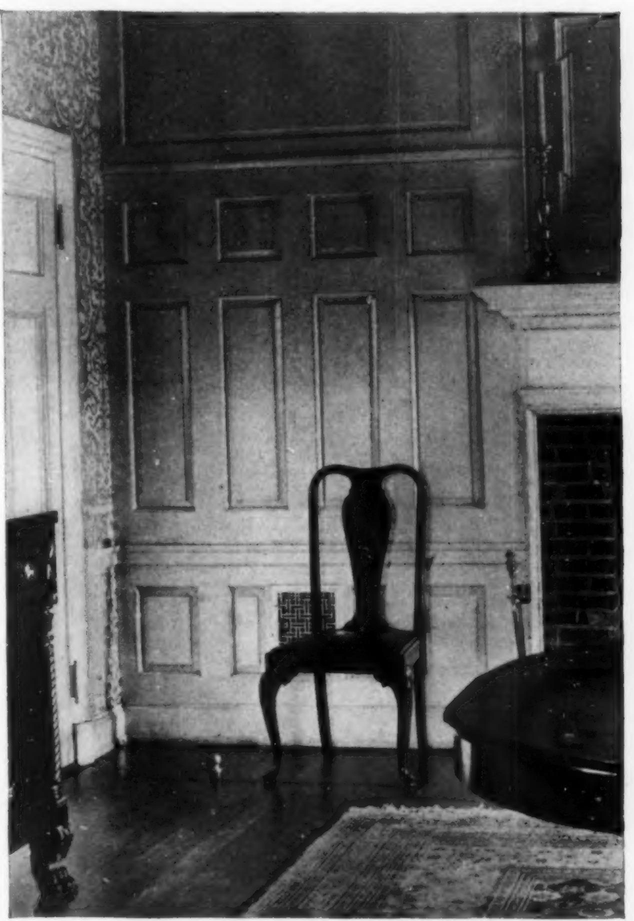
pentine tubes surrounding the firepot, instead of a continuous space. One or more of these separate tubes may be connected with the duct leading to a difficult room and the warm air will have to go there. The advantage is also solved occasionally by putting a hot water coil over the firepot and heating the refractory room by means of a hot water radiator.

Steam heating for houses is given the additional name "low pressure," to distinguish it from the high pressure system used in office buildings. It consists of a boiler, usually made up of tubes, heated by coal in a firepot, and a system of wrought iron pipes through which the steam is forced to the radiators located throughout the house. The whole system is closed, air pockets being vented by means of air valves on the radiators. Then there are two classes of low pressure Steam heating systems. One has its radiators connected to the system by but one pipe, through which both the inflowing steam and the returning water of condensation flow. The other system has the inflow entering one end of the radiator at the bottom and it has also an outlet pipe at the other end. The latter type is very much like the Hot Water system, but there is always the fundamental difference that Hot Water heating always requires radiators of about thirty per cent greater area.

The advantages of Steam are that it requires less coal than the Hot Air system and less radiating surface than Hot Water. It responds quickly to firing and is easily controlled by shutting off the valves of individual radiators, separating them from the system. It has the advantage over Hot Air of being readily carried to remote rooms. On the other hand, Steam has the disadvantage of not producing heat until the fire has been made hot enough to bring the water in the system up to two hundred and twelve degrees. This in practice means that the whole house becomes quite cold at night and has to have the fire started early in the morning to heat things up again.

Hot Water is a system that has come into very much wider use in recent years. Although it costs more to instal than either Hot Air or Steam, it has the advantage of burning less fuel in a given time. In this system the boiler, pipe system and radiators are similar in a general way to the system installed for Steam, but the whole thing is full of water instead of merely the boiler as with the latter. Hot Water has the advantage of producing heat at low temperatures so that the fire does not have to be forced so hard at any time. A much more even heat is the result and the water in the system does not become cold in the night. This same factor, however, makes the Hot Water system a difficult one in which to bring about quick changes, for the reason that all the water in the system has to be heated or allowed to cool, and this takes considerable time.

The ideal system, of course, is that known as the Indirect, or, sometimes, as the Direct-indirect. It does away with bulky and at times unsightly radiators in the rooms and also provides for a constant flow of warmed air into the rooms. The radiating surfaces are grouped together, usually below the first floor joists, and, through the enclosed space around these, fresh air is drawn from the outside, warmed by contact with the coils and passes up through heat ducts into the various rooms through registers. The system is not only the most expensive, however, to instal but it burns approximately as much coal as a hot air furnace.



The Direct-indirect system does away with radiators in the rooms. The air is warmed over coils heated by steam in the cellar and brought into the room through a register, as in the Hot Air system

Still another nomenclature for the available heating systems recognizes three kinds: the Direct, the Semi-direct and the Indirect. In the first of these comes heating by air and also the system that is above referred to as the Direct-indirect, in which air is warmed by passing around radiating surfaces heated by steam or hot water in the cellar. The Semi-direct uses radiators in the rooms themselves, heated, of course, by the circulation of steam or hot water from the boiler in the cellar. The Indirect system provides radiators in the rooms, but instead of heating the air that is in the rooms it draws fresh air from outside through openings in the outside wall made back of and at the base of each radiator.

It is astonishing what liberties people will take with furnaces or boilers installed for heating, when they would be afraid to touch any other piece of machinery without a working knowledge of its make-up. See to it that the person who manages your furnace or boiler is thoroughly familiar with its details. It would do you no good to have a satisfactory system if the operator does not know how to manage it. Practically, all of the better known manufacturers supply with each furnace a printed set of rules and suggestions which should be nailed up on the coal-bin as a permanent record in case of a change of operators.

One detail of furnace management is not well covered in most of these printed instructions. It has to do with the cold-air duct which brings the fresh air in to be warmed. Have a door in this duct, which, by the way, should be made of galvanized iron rather than of wood—so that in stopping the passage of air from the outside it opens a side of the duct into the cellar. This is for use only at night or when there is a high wind blowing directly into the duct opening. Do not get into the habit of taking the air in from the cellar at all times. It is not healthful. Some heating experts counsel against taking air from the cellar at all. They usually provide an arrangement of dampers by which you can draw the air down from a large open register in the main hall. This means economy in fuel but it also means giving up the great advantage of the Hot Air system, and that is the introduction of fresh air from the outside. If the dust brought in by the air is too much of a nuisance you can shut out a great deal of it by the use of a cheesecloth screen across the outside of the cold-air duct. This necessitates a larger duct than the usual one having a cross section equal in area to three-quarters of the total area of the heat pipes. And by all means see that the cheesecloth is frequently renewed or it will defeat its own purpose.

An Old House and Garden of Essex

A REMODELED COLONIAL FARMHOUSE IN THE CONNECTICUT VALLEY THAT HAS BEEN ALTERED TO SUIT MODERN REQUIREMENTS WITHOUT SPOILING ITS OLD-TIME SIMPLICITY, IN BUILDING OR GARDEN

BY A. RAYMOND ELLIS

Photographs and plans by the author

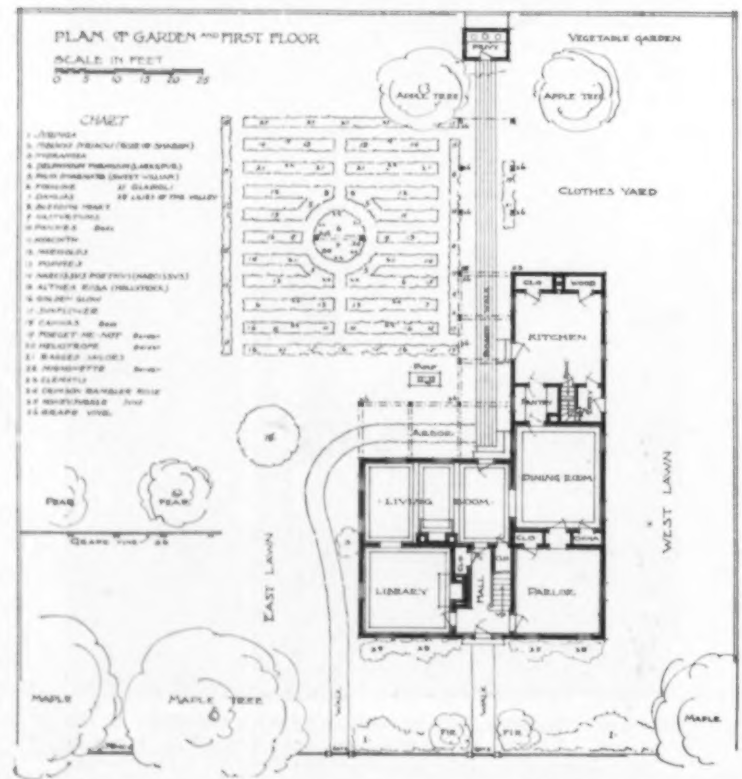
THE term "Colonial" has been applied to all American architecture prior to the nineteenth century; but in reality it was but a copy of the later Renaissance style of England, called "Georgian," simplified to meet the poorer conditions that prevailed in the colonies. Strictly speaking, few examples of Georgian are found in New England. There a type was developed that is truly Colonial, and distinctive from the work found in Maryland and Pennsylvania. It is this distinctive Colonial style that claims the little remodeled farmhouse herewith illustrated and described.

The beautiful Connecticut Valley, undulating and fertile, nestling between two low ranges of mountains, possesses a wealth of just such comfortable houses, in some cases going to rack and ruin for want of a tenant, surrounded by the r mnants of a garden setting, still struggling to rise above the weeds.

These homes, erected when Essex was a thrifty ship-building town, were built by skilled craftsmen, of hewn timber used in building ships. So well was their creative genius developed that their works still serve as models for modern homes, copied by architects for their clients to use as country seats. Many of these old homesteads have been bought cheaply and remodeled, the timbers being so well preserved that much of the material could be used again.

The Rogers estate, which is shown in the accompanying photographs and plans, is one of this type. It comprises several acres of land, house, outbuildings, an old-fashioned garden and a group of stately old maples. The place is capable of greater possibilities than have been realized in the remodeling, but it may serve as a stimulating example of what may be accomplished with a limited amount of money, both in the immediate outlay and in the cost of maintenance.

A view over the old-fashioned garden towards the back of the house



The living-room and dining-room were each remodeled from two rooms

The house is quaintly set about twenty-five feet from the highway and, almost hidden by its magnificent maples, is passed unnoticed. Upon passing through the house to the living-room on the south, however, the aspect is changed. From the rear, the land falls gradually to a little stream five hundred feet away, and in this vista the charming old-fashioned garden lends its color to the solid green of the arbors, sunny and inviting, blending harmoniously with the rich purple shadows cast on the white walls of the house. The east lawn, smooth as a piece of green velvet, is used for a croquet ground, where the old-time game is played in the cool shade of the big maples.

The only changes were made in the living-room and the dining-room. There had been a partition dividing the former into two rooms, with an old chimney. This partition was knocked out and the fireplace added; then two heavy girders to support the second floor were put in, repainted, and the room was complete. The dining-room was made also by throwing two rooms into one. An interior trim of simple white-painted woodwork is found in the main portion. The kitchen, pantry and entry are painted a light brown. In most cases the floors needed only smoothing up and painting. The second floor contains good chambers, a trifle low, but well lighted and ventilated, and fully as comfortable as some I have seen where unlimited means were available.

The house is heated entirely by the fireplaces and stoves. In the second floor, registers are placed which open into the ceiling of the first story, allowing the heat to pass through into the chambers; the result is entirely satisfactory. The house is not plumbed, but a pump furnishes pure water. It would be a comparatively simple matter to install one of the many types of mechanical pumps to keep a supply of water in a tank.

The old-fashioned garden has been reclaimed and the beds carefully filled out according to the planting chart on the plan. In remodeling an old place of this kind the great danger is a temptation to overdo the matter, thereby losing the atmosphere of quaint simplicity that is the chief merit of both house and garden. Do not put in circuitous paths, winding about and leading nowhere; very simple curves or straight lines, leading almost directly to your destination, are so much better. Then, too, in planting, do not use too many varieties. Enough of each flower should be planted to get good healthy masses of color, so that the beds and borders will not appear scraggly nor seem to be struggling through a dense foliage. It is a mistake, also, to plant exotics or many of the later developments in horticulture. There are plenty of the real old-fashioned flowers and shrubs from which to make a selection.

The old boardwalk is bordered on each side by grapevines, and everywhere there is the picturesque informality of mellow old age

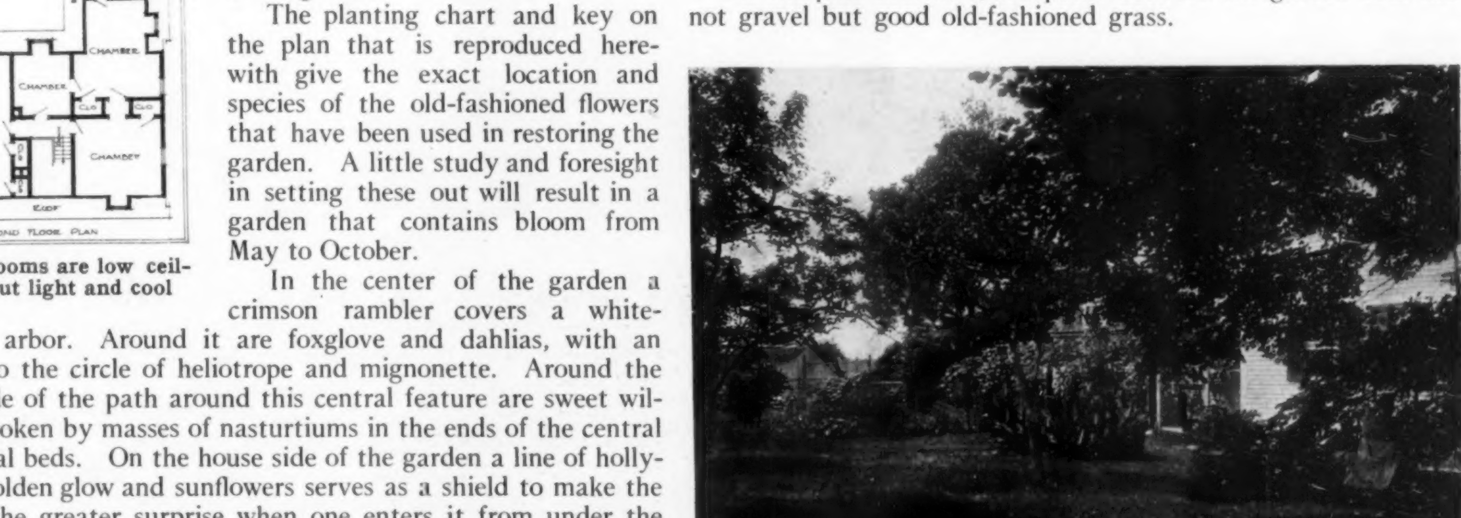
The maple trees here on the Rogers place have existed for many years—in some cases more than a century. It has apparently done no harm, however, to introduce a few dwarf apple, pear, plum and cherry trees. Not only have they given that elusive quality of scale to the garden, but they are most welcome inhabitants at fruit-bearing time.

The planting chart and key on the plan that is reproduced herewith give the exact location and species of the old-fashioned flowers that have been used in restoring the garden. A little study and foresight in setting these out will result in a garden that contains bloom from May to October.

The bedrooms are low ceilinged but light and cool

In the center of the garden a crimson rambler covers a white-painted arbor. Around it are foxglove and dahlias, with an edging to the circle of heliotrope and mignonette. Around the outer side of the path around this central feature are sweet williams, broken by masses of nasturtiums in the ends of the central horizontal beds. On the house side of the garden a line of hollyhocks, golden glow and sunflowers serves as a shield to make the garden the greater surprise when one enters it from under the grape arbor. Along the eastern border of the square enclosure another row of hollyhocks and sunflowers forms another shield. To the south the last bed contains gladioli—a brave row of them across the lower edge. Next, towards the house, are poppies and poet's narcissus, bordered with forget-me-nots. Beyond this are the ragged sailors, edged with mignonette. Then come the marigolds, bleeding-hearts, a bed of hyacinths and one of poppies, bordered on the inner circular path with the sweet williams. Marigolds and poppies grow in the outer parts of the middle beds, then more narcissus, ragged sailors, foxglove, poppies and some larkspur. Grapevines are found in abundance on the arbor enclosed in the corner of the ell, while clematis and honeysuckle have not been left out. Several of the good old-fashioned shrubs are placed in important positions—syringa, Rose of Sharon, and hydrangea, and across the front of the house, where the sun doesn't reach, there is a splendid showing of lilies-of-the-valley.

As the plan indicates, the paths between the garden beds are not gravel but good old-fashioned grass.



The east lawn is shaded by maple trees, some of them a century old

A fireplace usually gives an excellent opportunity for building in seats and bookcases

This Southern California home shows an unusually successful built-in buffet and seat

Built-in Conveniences for the House

SUGGESTIONS FOR SEATS, BOOKCASES, SIDEBOARDS AND OTHER FEATURES THAT WILL MAKE YOUR NEW HOUSE SEEM PARTLY FURNISHED BEFORE THE CARPENTERS LEAVE

BY MARGARET GREENLEAF

THE value of built-in furniture from the standpoint of economy, and as useful and decorative adjuncts to the home, must be experienced to be fully appreciated. Such pieces should, to give the best effect, conform closely in color and finish with the standing woodwork of the room of which they are practically a part.

When the house plans are in the making and before contractors' estimates are asked, such window-seats, inglenooks, bookshelves, corner cupboards, and buffets as may be deemed desirable should be included, for at this time they add but little to the estimate as a whole, whereas if they are later figured upon separately, or put in as separate jobs, the cost runs up decidedly.

There are now many good architects who specialize upon the small house, and some of these make much of quaint and effective built-in pieces in the interior arrangement.

When looking over a completed house in which such features are included — and where the color and finish of the wood trim and the tint of the sand-finished walls are harmonious and attractive, the prospective occupant will feel that the house as it stands is almost livable, and be encouraged to think that the trouble and expense of furnishing and decorating will be small.

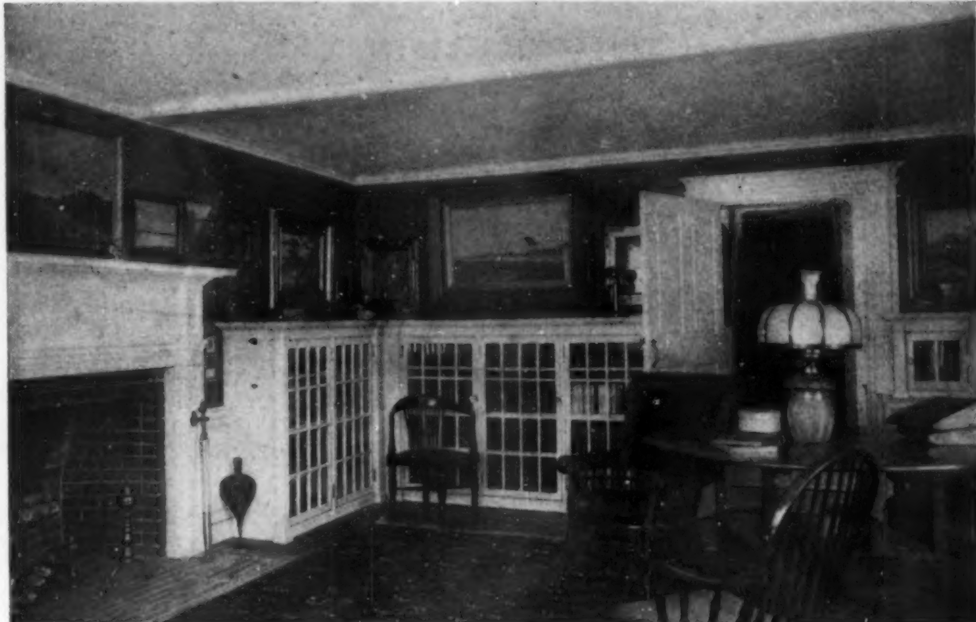
Frequently when a man is about to build the house which will be his permanent home, his desire is to embody in it *all* of the good features of his neighbors' homes, and those which he has gleaned from long and careful study of the published plans and pictures of exteriors and interiors. It is then a large part of his architect's work to eliminate and choose for him the possible features from the chaotic selection offered. When once the type of house has been determined, it is much easier to decide the detail and finish which will be appropriate, and while in the designing of the built-in features it is the effort of the good architect to escape from the ordinary stereotyped styles, he can often find some suggestion in a house of another man's planning which will prove acceptable embodied in his own, and as it is especially true of architecture that "there is nothing new under the sun," this adaptation is by no means unusual.

A corner cupboard from a Colonial house antedating the Revolution

As representative of the craftsman style of house which is much favored to-day, the living-room shown in the first photograph at the top of this page is of particular interest. The wood trim and furniture of oak are stained and finished in weathered effect, the delightful gray-brown color toning well with the oatmeal shade of the tinted wall.

The atmosphere of the room suggests comfort of living, its harmonious color and well chosen and suitable furnishings rendering it thoroughly homelike. The built-in seat at the right of the fireplace, with the high paneled back, and the glazed bookcases set in the wall at the lower end is distinctive and pleasing. Also the simple, sturdy mantel is typical and good,

A frequent pitfall to the inexperienced is the finish given this built-in furniture. Often it seems desirable to the amateur to make these pieces appear as *furniture* rather than as a part of the room. With this idea such pieces are treated with a different finish from that used on the standing woodwork, and always with disastrous effect. If the corner cupboard in a room, where ivory finish woodwork prevails, is stained mahogany and is



In building in bookcases, or any other features, it is a safe rule always to have them of the same wood and finish as the standing woodwork

A built-in seat by the stairway, with a lid, is a wonderful convenience

complemented by a mahogany mantel in the same room, this will stand out aggressively, and the room will present a restless effect which is most unsatisfactory. In the true Colonial house the doors are frequently all mahogany, while the standing woodwork is all enamel, showing the beautiful ivory tone which is so typical, but the mantel is always finished in the same ivory tone, and with the exception of the hand-rail of the balustrade there is no mahogany introduced save in the doors as mentioned.

The effective use of white enamel, as a finish for the interior trim, including the built-in and glazed bookshelves, is well evidenced in the library shown in the first photograph on this page. The quiet restrained treatment of this room is very pleasing, and the architectural detail of the mantel, bookcases, and other standing woodwork is satisfying.

In the interior of houses designed upon other lines than the Colonial, white enamel finish for the woodwork may be correctly and effectively introduced as, for instance, in the bit of a hall with stairway which is illustrated in the photograph adjoining the one previously mentioned. The built-in seat here is particularly interesting, and, while taking up but little space, it is practical and also well supplements the stairway of which it is really a part. The detail of the balustrade of this stairway, by the way, is attractive and unusual.

The corner cupboard illustrated is from a very old Colonial house built in Portsmouth, New Hampshire, antedating the Revolution. The beautiful carving over the door and the columns which frame it, with the Gothic type of the inset panels are a part of the interesting standing woodwork of this room. The open doors of the cupboard show the practical possibilities of three-cornered shelves.

A very unusual design for a built-in buffet and window-seat is shown in the dining-room of the Southern California house shown at the top of the preceding page. Much of the wall space here is devoted to buffet and china closet. Where the paneled wainscot is unbroken it is topped by a wide shelf holding decorative steins and choice bits of pewter and brass. The low window-seat is fitted with a deep drawer, and, set beneath the sunken window, serves to connect the two sections of the buffet which flank it, filling the end of the room most effectively.

Where one must live in a house planned for another's needs it is often possible to introduce some pieces of built-in furniture advantageously. A window-seat, for instance, may be put in by an amateur or unskilled workman, and, properly upholstered, it will present a good effect and serve all purposes. If there be certain crudeness of construction which must be hidden, a valance, either plaited or plain, which will extend from the seat line to the floor, will be correct and cover a multitude of sins. The style of valance used should be determined by the valance of the window draperies; that is, if the window shows a plaited valance the same should appear on the seat.

If inglenook seats are desired and the fittings of the room are along the craftsman or Mission lines, high-back benches, such as are yet used in some country school-houses, could be utilized, stained like the standing woodwork of the room, and the seats made comfortable by a mattress pad covered in some suitable material.

The window-seat is an acceptable feature in the bedroom also, and can be made a serviceable part of the room. In the photograph shown a very charming arrangement of window, seat, and window draperies is shown.

Still another convenience that should be arranged for in the drawings, or while the house is being built, is a full-length mirror panel for the closet door of a bedroom.

Even the bedrooms need not be without built-in conveniences, such as a combination window-seat and shoe closet

Practical Talks with Home Builders

FIRST CONSIDERATIONS—THE THINGS YOU WILL HAVE TO PAY FOR EVENTUALLY IN ADDITION TO A MERE HOUSE—A CHECK LIST OF ESSENTIALS

BY ALEXANDER BUEL TROWBRIDGE

[This is the first of a series of intimate, helpful talks with those who are about to build. The aim of the series is to offer untechnical suggestions to prospective home makers in the hope that many will be helped to estimate in advance, with some degree of accuracy, what they must have, what they can do without, and what they may put off for completion at some future time. The talks will be written mainly for those of moderate means rather than for those who would not be worried by an unexpected increase in the total outlay.]

THE prospective home builder is often ignorant of the many conditions which should control his choice of property and assist in the preliminary calculations of expense. Carried away by his enthusiasm, by his desire to see the fulfilment of a long cherished dream, he is often impelled to begin work sooner than is desirable. Not until the house is well under way and he begins to learn of many important items which should be included in his contracts to insure the comfort of his family, does he realize that he has acted too hastily.

So let us start in with the first problem that should come to the home builder's mind, namely, the preliminary considerations in connection with the search for a piece of property. The writer has in mind the owner who expects to build in the suburbs or in the open country. He who chooses the former location is spared the necessity of bothering about many of the questions which are here presented, but the builder in the open country or in the newly developed communities that are springing up, mushroom-like, all over the country must consider them all. Therefore to such I would say:

Don't be carried away by the clever wording of an advertisement or the plausible story of a salesman; by the ease of payment offered as an inducement; or by the most alluring and difficult to resist of all influences, the beautyof the site under consideration and its environs. Instead, write on a piece of paper the following eleven questions and apply each question to the site which attracts you. This will guide you in a selection and if the property does not possess all of the advantages inferred in the questions and you still feel like purchasing, you will at least be able to conclude negotiations with eyes wide open.

1. Is the property provided with a good water supply, or must a well be driven and engine, pump, tank, etc., be installed?
2. Are the schools in the vicinity modern, sanitary and in charge of trained teachers?
3. Can good milk be obtained easily or will it be necessary to buy a cow, build a cow barn and provide for the cow's pasturage, daily care and milking?
4. Can clean ice be bought at a fair price, or must an ice-house be included in the calculations for total cost?
5. Are you to have the use of a public sewer or must a sewage disposal plant be installed?
6. Is the site so far from the nearest railroad station as to compel the use of horses or an automobile, thus rendering necessary a stable or a garage? Remember that if you visit the property in the real estate agent's automobile, the distance from the station to the property will seem about one-half its true distance.
7. How does the railroad rate compare with other roads?
8. How does the local tax rate compare with that in other communities?
9. Will electric light be brought to the property or must you calculate for a gas generator?
10. Does the proposed site need much grading, planting, seeding, etc., with numerous loads of new top soil?
11. What road building, if any, will be needed on the property?

It would be possible to add other pertinent questions referring to the character of the ground, its exposure to the sun and to the prevailing breezes etc. These questions are omitted because it is assumed that a piece of property would not be under consideration which was not high and dry and had not good exposure toward sun and breezes.

In this first talk it will not be possible to discuss in detail all of the eleven questions. The most important to emphasize is that concerning water supply. No matter how attractive a location is found it will be a total failure without good water and, many would say, plenty of it. If it comes from a country lake bordered by farms and cottages, avoid it as you would the plague. If it is pumped up from driven wells or comes from flowing wells, as it does in many parts of Long Island, it is likely to be the best that can be had. Also, if one has children to be educated, what greater mistake can be made than locating a home in a place where the children must attend an unsanitary, badly lighted and badly ventilated school, in charge of partially educated teachers? One cannot expect to change these things by agitating the questions locally. The schools are supported by local taxation and many rural communities are unable to raise the money needed for improvements. The milk question is also of importance, particularly where young children are concerned. How many families have gone to the country only to resort to the absurd custom of sending to the city for milk at fancy prices! In connection with the ice problem the writer has in mind a commuter whose ice bill in a certain rural community, not many miles from New York City, varied during the six warmer months of the year from $14 to $28 per month. This was due to local high prices and to an inadequate and totally unsatisfactory manner of keeping the ice after it was delivered. It is cheaper and better to build an ice-house and to stock it in winter, but the cost must be included in the first calculations if one wishes to guard against this form of unexpected expense. The question relating to sewage disposal is the next in importance, as it also concerns the family health. The old-fashioned cesspool should not be used, no matter what the farmer neighbor says on the subject. The health of your family demands that, in case you have not the use of a public sewer, a modern sewage disposal plant be installed. Such plants may be built for moderate amounts and ought to be a part of the general estimate.

The remaining six questions are important even though they do not directly concern the family health. Any suggestion which will aid an owner to see ahead clearly the various steps in his home building project, will contribute to his peace of mind and incidentally to his health of body. It will not do to put off these considerations through recourse to the old saying "Sufficient unto the day is the evil thereof." If they are left to be solved when they arise an embarassing situation is sure to occur. The owner will find either that he is located in the wrong place or that he is obliged to go much deeper into his pocket than he had expected.

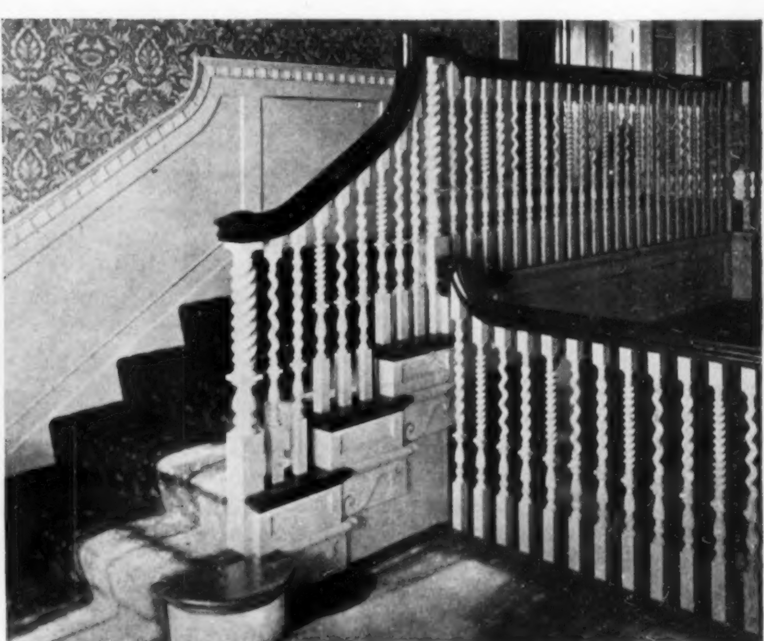
Here is a curious screen effect that serves to lend an air of greater privacy to the upper floor

The better forms of Colonial stairways have the balustrade and hand-rail end at the bottom in a volute

A very simple and inexpensive form of stairway that would be well suited to a house of the craftsman type. W. D. Brincklé, architect

There is nothing that gives such a broad spacious appearance as a stairway separating at the landing and continuing up on both sides

It usually results in a better appearance and requires less space to change the direction once or twice rather than having a straight run



In the more elaborate Colonial stairways the balustrade alternates in three patterns. The hand-rail should be of mahogany

SIX TYPES OF AMERICAN STAIRWAYS

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

Readers' Problems

ROOM TREATMENT

I am writing in accordance with the suggestion and offer in HOUSE AND GARDEN, and hope for your assistance in a new home I am building; in fact, I feel sure you can give me some timely hints as I have already received such help indirectly from the magazine.

First, There is a room I am particularly desirous to make Japanese. It opens off the ball room and is 14 x 14 ft. I shall have seats built in on three sides and a gas grate. There are two windows, electric lighting. Please give me some suggestions as to fixtures, decoration, etc.

Second, there is another room we call the lounging room, 14 x 14 ft.; this is to be finished in Mission oak. It has a gas grate and seats built-in. What would you suggest for a frieze above a high wainscoting? There is a cross-beamed ceiling.

Third, what decoration for living-room walls 20 x 30 ft.? The same style of beamed ceiling, and an 18 or 20-in. paneled base of cherry. Three windows, one very large, 7 ft. wide.

Fourth, what would you advise for main hall, 14 ft. wide, finished in oak—it extends through the house. The pergola joins at the rear of the hall. I will be most grateful for any suggestions. Have a parlor 20 x 14 ft., one 7 ft. window, one short high window.

Can you give me some advice as to where and how I could procure rugs in New York? Where can I get samples of wall hangings, cloths, tapestries, etc.?

We take pleasure in giving you the following suggestions in the way of color scheme, decoration, and furnishings for the rooms you described in your letter. We will take these in the order in which you mentioned them in your letter. If these suggestions do not seem sufficiently complete, and if you will send a rough draft of your floor plans, we will be glad to take the matter up further.

For your Japanese room we would recommend that you finish the woodwork either with a gray stain and dull surface, or stain it a decided black with dull surface. The same treatment should be given the seats built about the room, and no cushions should be used save the small round pads which are so characteristic of Japanese furnishing.

This solid mahogany antique secretary was considered a bargain at $95

Your electric light fixtures can be made distinctly characteristic. It is possible in many of the exclusive Japanese shops to find lanterns which are either reproductions of the real thing, or many of them genuine antiques. The former can be bought at reasonable rates, but the latter will be found more expensive. These can be fitted with the bulbs and used successfully for lighting the room.

There are Japanese and Chinese rugs to be had also, the genuine and reproductions, either of which could be used on the floor. Since a typical Japanese room has very little decoration, and no chairs or tables, it is a difficult matter to adhere closely to this school and have the room interesting and livable. However many beautiful pieces of decorative pottery, bronze, or porcelains, the Japanese householder may own, but one of these is exhibited at a time in the room. This does not appeal greatly to the Occidental idea, although there is much to say in favor of the simplicity which the Japanese preserve. But there are beautifully carved teakwood chairs which are of Chinese make, and can be safely introduced in a Japanese room, also low tables and stands of the same carved wood. Wicker chairs known as the Hong Kong design may also come into a room of this kind effectively.

The draperies should be very simple and hang in a straight line to the sill of the window, and in your room they should be gray in tone. The wall covering may be Japanese grass cloth in a shade of blue which is strong and yet soft in color. We take pleasure in sending you a sample of this. The ceiling tint should be a delicate shade of gray. The rugs will probably show these two colors, with some black and orange introduced.

Japanese embroideries in panels may be placed at intervals upon the wall, and on some of the teakwood stands, certain choice pieces of Japanese bronze or porcelain should be set, holding flowers arranged after the Japanese fashion.

For the frieze in your lounging room, in which the Mission oak woodwork and furniture appears, we would recommend that the seats be upholstered and tufted, using a soft

shade of green upholsterers' velveteen. The windows to be hung with crinkled silk curtains over ecru net extending only to the sill line. A frieze showing gilded pine cones and tree tops in dull green against a blue gray sky line would accord well with the yellow tan grass cloth, or fibre paper wall covering which we will advise and of which we send samples.

The floor covering in this room should be either an Oriental rug, or some one of the excellent domestic weaves showing blue, dull green and tan in small design. The tint between the beams of the ceiling should be a deep café-au-lait.

For your living-room walls, since its dimensions are sufficiently imposing, we would recommend a figured tapestry paper in shades of dull soft blue, olive green, and gray. Overdraperies of dull blue silk over net next the glass of the windows, upholstering material of tapestry, following the design and color of the wall paper, would look well on the window-seat.

For the hall a two-tone yellow tan imported paper, or the Japanese grass cloth of similar color is recommended. You fail to mention the wood finish used in the parlor, therefore we will reserve this suggestion until we have received this information.

Regarding the purchase of your rugs we send you addresses and full directions for obtaining information about purchasing these. We also send a full line of samples of materials recommended, and addresses where these can be obtained.

An antique, with leather seat, valued at $28

CHINA

I am wondering if HOUSE AND GARDEN will help me in the selection of so trivial a matter as the china for my very modest dining-room. The room was furnished in exact accordance with the suggestions your department supplied to me. The wall covering is in tones of brown, green and tan above the plate rail. The lower wall is wainscoted, the oak stained dull brown. The rug is in two tones of green (Wilton). The furniture is oak, stained brown like the woodwork. I cannot afford very expensive china. I would like you also to recommend to me the style of glass to use.

We are glad to send you suggestions for the china you desire to select. There are many good designs made in what is known as open sets; that means that if at any time pieces are broken they may be supplied. Our first choice for the china would be a plain banded decoration. This may be procured in china of good quality and reasonable prices. The design shows a narrow gold line set on either side of one of apple-green, or the plain gold band may be preferred. The green, however, makes a most attractive table and harmonizes perfectly with any floral decoration that may be used. It strikes a more cheerful note than the all white or white and gold above referred to. While floral decoration appears on much of the more expensive china, it is not advisable, the more strictly conventional designs being in decidedly better taste.

There are excellent sets of glass offered in many of the shops just now, comprising the full complement of table glass from water to liquor glasses. These range widely in price and pattern.

WALL COVERINGS

Could HOUSE AND GARDEN supply me with some special advice regarding wall coverings which are not wall papers. I shall be very appreciative of any information along this line furnished me. I would further say that this department has been of infinite assistance to me in the past.

We are glad to be able to promise you an article treating fully the question of wall covering. This will appear in the December number, and will be complete and practical. We thank you for your appreciation of the department.

The carving and curved central portion make this antique sideboard a rather valuable one

COLONIAL FURNITURE

I am desirous of securing some good pieces of pure Colonial furniture for a New England Colonial home to which I have recently fallen heir.

Would you be kind enough to give me some information regarding the style of straight chair which would be most appropriate to use in a living-room which has some Chippendale pieces. I would be interested also in some advice regarding the style of table I may use in this room. I do not want a large table. I would like as well suggestions for a mahogany sideboard, not too large. I have yet to pick up the other pieces for my dining-room, but would like the sideboard to begin with. I would like something with carved supporting columns and claw feet.

For the living-room I am particularly anxious to have a typical writing desk, something with book-shelves above and the leaded glass doors is my idea, if this would be correct. Could you tell me where I could see cuts of this furniture.

What character of wall-covering would you advise for the three rooms on the first floor, and the large central hall?

We are glad to reproduce some photographs of typical pieces in line with those you are seeking.

The sideboard shown is a genuine antique and is considered a bargain at $150.00. This piece shows the characteristics you describe—claw feet and the carved supporting columns.

The bookcase desk shown in the photograph is an antique and is priced at $95.00. Any collector would be interested to obtain such an authentic piece. The same applies to the table shown in the photograph. This is also genuine and an interesting example of its kind.

Regarding the wall covering we would say that you should limit your choice to the style of wall paper which is typically Colonial. For instance, in the hall a paneled effect in two shades of gray would be suitable. The drawing-room opening from this should show an all-over design of leaves in gray on an oyster white ground, toning well with the shade of the hall. For the dining-room a picture tapestry paper in dull blue, tan, smoked gray, and green could be used. For the library on the opposite of the hall an embossed flock paper in Gobelin blue would look well.

An antique mahogany card table worth $85

Mr. Hall will gladly answer queries pertaining to individual problems connected with the garden and grounds. When an immediate reply is desired, please enclose a self-addressed stamped envelope

The Flower Garden

FALL PLANTING There are a great many flowers that do better from seed planted in the fall of the year. The carnation is hardy and the plants from seed sown in the fall will bloom next season. Others, among those of which the seed can now be sown to advantage, are the hollyhock, chrysanthemum (perennial), phlox, poppy (Oriental), aster (hardy Alpine), campanula (Canterbury Bells), aquilegia (columbine), digitalis (foxglove), and primula (*vulgaris*). Pansy seeds are planted largely in the open ground in the fall for spring bloom. An examination of the autumn catalogues issued by the nurserymen and seedsmen will enable one to extend this list for fall planting. Send for catalogues and enjoy one of the greatest pleasures of gardening—the pleasure of anticipation.

CHINESE PRIMROSE The fringed Chinese primrose (*Primula Sinensis, fimbriata*) is among the most satisfactory winter-blooming plants. In an ordinary window, with but little attention, light and heat, it will bloom all winter and spring. Use a four or five-inch pot and have the potting soil very fertile. Flowers are pink, white, crimson, and blue. Put in a few extra ones for Christmas gifts.

SUMMER BULBS When the tops of flowers grown from bulbs, such as gladioli, dahlias, etc., die down, the tops should be cut off an inch or so above the surface of the ground, the bulbs dug and dried in a cool place. When well ripened, store in a warm room or cellar for the winter. If the place where storage is to be made is not perfectly dry and frost-proof, pack the roots in boxes or barrels, covering with dry sand or any other suitable material which will prevent shriveling or freezing.

Cut off the tops of dahlias and other summer bulb plants; take up the bulbs and dry them

HARDY PERENNIALS A great many hardy perennials do best when planted at this season of the year. They get well established during the winter and are ready to start growing with the spring. Prepare the ground well before setting them out; spade to a depth of eighteen or twenty inches, and generously enrich the soil. The perennial flowering pea (*Lathyrus*), blanket flower (*Gaillardia grandiflora*), peonies, Japanese, German and English iris, and hollyhocks, are among the large variety of old-fashioned garden flowers which can now be planted to great advantage.

HARDY ROSES If a rose bed is planted now good bloom may reasonably be expected next spring. The plants may be set out any time before the ground freezes hard with perfect safety, but should be mulched when real winter weather sets in. The White American Beauty is one of the best white roses grown, and is hardy everywhere. The General Jacqueminot is a very desirable red rose. There is no finer pink rose than the Paul Neyron. For a dark crimson, the darkest of all, Prince Camille DeRohan sets the pace. Hardy climbing roses, of which there are many varieties, should be planted during the autumn.

PRUNING All kinds of shrubbery, vines and trees should be pruned when transplanted. Standing naturally, the plants take in the necessary nourishment through the roots, but when the roots have been disturbed by removal of the plant the proper nourishment cannot be supplied until new rootlets are formed. Pruning helps to husband the sap in the plant on which it must subsist while "taking root." The removal of the top and branches in a measure compensates for the injury sustained, estimated at from one-third to one-half, by the roots in transplanting. The treatment may seem severe, but the result will be stronger

growth than can be otherwise obtained. Just how to prune in a general way may be perplexing to some. The most that is required in the case of trees and shrubbery is the shortening in of the branches regularly, and removing all dead or sickly wood from the trees. This process will induce close, even growth and preserve the best form to the tree or plant. Always cut the branches smoothly from the under side. Pruning which is not done now should be done early in the spring before the sap starts up.

PERSIAN CYCLAMEN

The Persian cyclamen is a treasure for pot growing and furnishes beautiful flowers for winter and spring. Each bulb throws out several flower stalks. The foliage is finely variegated, making a charming plant for the living-room or the window. The color of the flowers range through shades of pink, crimson and white. Plants require plenty of air and light, but not too much heat.

ARRANGEMENT OF SHRUBBERY

Shrubs should always be planted in groups and they should be grown together in an easy flowing mass. They can be grown as a border around the lawn, to break sharp corners of the building, or to screen unsightly objects. In the general arrangement high-growing shrubs should be planted behind the low-growing ones unless both sides are exposed to view. In such an instance the high-growing ones should be put in the center with low-growing ones on both sides. In making a selection harmonize both height of plants and colors of bloom, having regard to a succession of bloom. Harmonizing in every way, an admirable selection can be had from the viburnums and syringas for the largest, the former blooming in June and the latter in May; altheas and hydrangeas for medium sizes, blooming in August and September; forsythia and spirea for smaller growth, blooming respectively in May and July. The shape and size of the bed can be only a matter of personal choice. With this selection, planted as suggested, a period of pleasing bloom running from May to October would not be unreasonable. An article in the last issue tells of blooming shrubs in greater variety.

Take up tuberous-rooted begonias when foliage becomes blighted and save them for spring

TUBEROUS-ROOTED BEGONIAS

When the cool nights blight the foliage of the tuberous-rooted begonias, the plants should be dug up, the tops removed and the roots allowed to dry gradually in a cool, sheltered place. When thoroughly dry and ripened, clean off the small rootlets, wrap each bulb in soft cotton, and store them in a moderately warm place until spring.

HARDY BULBS

Lilies and other flowers grown from hardy bulbs, which are to be left in the ground all winter, should always be planted on beds slightly raised above the surrounding ground to insure proper drainage throughout the year. When the tops die down cut the stems off and cover the beds two or three inches deep with leaves, or long, strawy manure to guard against sudden changes of freezing and thawing.

Protect the lilies and other hardy bulb plants with a mulch through the winter

The Vegetable Garden and Orchard

TRANSPLANT TREES

There is considerable work now necessary about the vegetable garden and in the orchard. If a shade tree is needed to be set, now is the time to transplant it. If a fruit tree is desired, put it out now; or if one already out is found to be diseased, remove it and replant at this time. Between the falling of the leaves and the freezing of the ground is the best time for planting trees.

It is a good plan to rake the top earth for about an inch in depth, from around fruit trees and make an application of air-slaked lime. Let this remain exposed for about two weeks, then replace the top soil and mulch for winter protection.

DON'T BURN LEAVES

Have a general cleaning up about the yard and save all leaves instead of burning them. Incorporate these with lime and rakings into a compost heap. The compost will be found both convenient and useful for broadcasting before spading the vegetable garden in the spring.

PROTECTION OF VEGETABLES

Plants of lettuce, cauliflower, cabbage, etc., that are to winter over for early spring settings should be put into the cold frame.

By giving the lettuce bed protection in the way of a covering with an old sheet or straw held above the plants, nice heads of lettuce may be had in the open until Christmas.

Beets, carrots, turnips, celery, and late potatoes should be stored in a cool dry cellar for winter use.

EARLY SPRING VEGETABLES

As the beds are cleared of existing crops they should be thoroughly composted and dug over. Then sow, broadcast or in drills, corn salad, kale and spinach, and enjoy them for early spring use.

(*Continued on page* vi.)

SEEDS. With the work outdoors done—with the soil turned over and fertilized and ready for the long winter months—come in and sit down and let us consider the garden's next essential.

If there can be no garden without soil neither can there be one without seeds,—and though the gardener can never hope to know in a lifetime as much about these tiny mysteries as a little honest attention will teach him about dirt, still there is much to learn; much that *may* be learned and a little that must. Suppose we take the last-mentioned first.

In planting seeds the inexperienced usually err on the side of thoroughness, burying them beneath a weight of earth that promptly smothers all their aspirations. Hopelessly they give up the ghost and go the way of all dead things, instead of the way of the living—and the gardener grumbles, when he has only himself to blame.

The earth covering should never be deeper than five times, and usually not more than three times, a seed's greatest diameter when planting out of doors. In frames or flats indoors a covering equal to the seed's diameter is sufficient, because in the latter situations the moisture and temperature can be artificially regulated. The greater depth out of doors is simply to insure against drying out and chilling the seeds where there is no means of governing these factors.

Whether you are going to plant indoors or out, water the soil where the seeds are to go thoroughly the day before putting them in. This will bring it to just the right degree of mellowness at the time of sowing.

Seeds go into the ground in drills, in hills, singly or broadcast—that is in continuous rows, in clusters, one at a time, or scattered like grass—according to the plant which they will produce. The packet in which each variety comes has printed upon it the method to be followed with the seed enclosed, so that part of it is easy.

If it tells you to sow in drills, lay a board down upon the proposed bed or wherever the seeds are to go, for a "ruler," draw a line along its edge with a pointed stake for a "pencil," dragging it deep into the soil or lightly along its surface according to the depth of drill the diameter of the seed demands; scatter the seed into this little trough and brush the earth that was pushed out of it, back over them. Then pat it lightly down with a float—a "flatiron" contrivance of wood, 6 x 9 inches or thereabouts and an inch or two thick, with a small piece nailed upon its upper side for a handle. It can be made of any old pieces of wood that happen to be available.

Seeds sown singly in rows should have the same long drills marked for them, the seeds themselves being dropped in at regular intervals instead of continuously. Hills are just shallow, saucer-shaped depressions into which the requisite number of seeds are dropped, separated so that they will not touch each other. Then the earth is drawn over them; as the seedlings shoot up, gaining in height, more earth is drawn up from the sides until the hill is formed which supports the little plants and deepens their roots.

Scattered or broadcast sowing is like the sifting of pepper from a shaker, and the earth over the seeds is sifted on in the same light fashion if any at all is used to cover them. Usually seeds that are scattered are simply firmed into the ground by pressing with the float, the idea being always to bring the grains of soil close against the seed on every side, keeping it evenly moist by capillary action and allowing no irregular spaces for air to intervene and shut off this moisture. Air is essential, to be sure, but not an excess of it on one side and none on the other.

The beginner is apt, however, to give an excess of water rather than of air. The proportions should be such that the soil will slowly crumble apart in the hand after being squeezed—and this proportion should be *constantly maintained*. Too dry soil or too wet, maintained in that condition all the time, is not so bad as the alternations between the two extremes which careless gardening permits.

So much for the practical details of seed handling; and now for one or two things that ought to be understood—and that are interesting to know.

A seed is the case in which, carefully folded and ingeniously packed away, lies an embryonic plant, with the food necessary to sustain it for a certain period of its life above ground. In some seeds this plant is developed enough for microscopic dissection to reveal it plainly, in others it is very rudimentary.

Usually it has two plump divisions called cotyledons—four syllables, cot-y-le-dons, with the accent on the first; there is, however, a class of plants which have only one, but they will come later—and these, as they push their way up through the earth, spread apart and look to us like leaves. Consequently we usually speak of them as the first or seed leaves, although they aren't leaves at all. It is between them and protected by them that the actual growing point of the plant waits—the plumule or true leaf bud whence the real plant is to arise, with the plant's true leaves.

The cotyledons are only caretakers—the nursemaids of the baby plant itself—which feed and guard it until it has grown big enough to draw its own sustenance, through its true leaves and the little roots that have been keeping pace underground with the leaves' growth, from the elements about. Until a true leaf is formed, every plant lives on the food stored away with it in the seed, no matter how microscopic that seed may be.

Not until the true leaves have developed, generally speaking, are seedlings strong enough to bear handling and transplanting. Some of your seed packets will tell you to transplant when the third leaf appears, or to thin out when the true leaves appear; which means of course the third leaf after the cotyledons in the first instance, the first pair of leaves in the second—for sometimes the true leaves appear in pairs, opposite on their stalk, while others come out singly, one on one side, the next on the other. Always follow such directions carefully and do not anticipate nor wait beyond the stipulated time.

Once you have watched a seedling—any seedling—through its rudimentary growth from funny, round or oval, sturdy little cotyledons to two or three true leaves and noted the marked difference in the appearance of the latter from the former, you will wonder why you never noticed it before—if you have not. Seed germination is one of the most interesting things in this very interesting world, though it is common—almost as common as the dirt.

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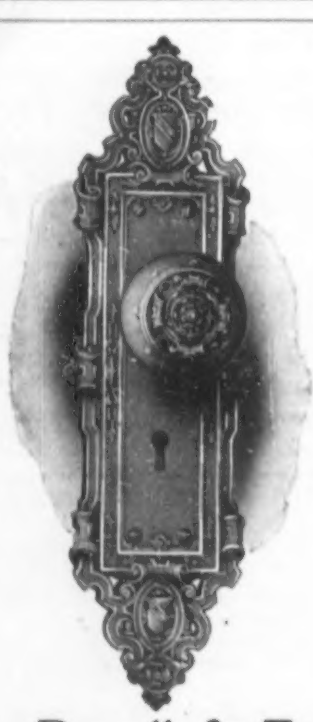

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Garden Suggestions and Queries

(*Continued from page* 185)

SMALL FRUITS The strawberry bed should have attention now. The plants should be thinned out and the beds heavily mulched.

Transplant the red raspberry, and mulch heavily when the ground freezes hard.

Readers' Problems

HOUSE PLANTS Can I grow plants in a house with an eastern exposure? I have been very successful for the past two winters with southern exposure but have never tried the eastern, as I will have to do this winter.

You need not view as a doubtful proposition the growing of house plants with an eastern exposure. With proper care you should attain reasonable success. Assuming that the room will be kept at a reasonable temperature, and the foliage not permitted to touch the glass, you ought to get fair results. It will be best to increase the fertility of the potting soil—the working into the soil occasionally of a little pulverized sheep manure will greatly aid in maintaining plant vigor and securing luxuriousness of foliage color and growth.

THE AMARYLLIS Please tell me something about the Amaryllis; the varieties, if more than one, and the habits of the plant.

There are several varieties of Amaryllis. It is highly prized for winter flowering, especially the Pink Amaryllis (Belladonna Lily). This variety bears large, well expanded flowers, lovely rose pink, finely penciled with silvery white, and deliciously fragrant. It can be kept in pots all the year or bedded out in the summer. The Amaryllis Halli (*Lycoris Squamigera*) is hardy and can be planted among the shrubbery or in the hardy border in the fall or in the spring. In the early spring it produces a crop of beautiful green foliage which ripens and falls off in July. After remaining in an apparently dormant condition for about a month, as if by magic flower stalks spring from the ground and grow to a height of two or three feet and bloom in umbels of eight or ten large lily-shaped flowers. The color of bloom is a delicate lilac pink shaded with clear blue.

HARDY HYDRANGEAS When is the best time to plant hardy hydrangeas, and what treatment should be given them during the winter after planting? Also tell me how to keep geraniums over winter in an unoccupied house if such is possible. I have tried them in the cellar two winters and lost every plant. One winter I took them up and hung the plants up so they could dry and the next spring found them all dead.

It is impossible to keep geraniums over winter in any portion of an unoccupied

house in your latitude. Neither the necessary warmth nor ventilation can be given to continue the life of the plants. Hardy hydrangeas do best planted in the fall. The nurserymen announce them ready for delivery from October 15. Planted in the fall they will get established before the ground freezes. When the ground freezes, however, you should apply a mulch, four to six inches, of rough barnyard manure and let this remain until spring. This prevents alternate freezing and thawing, the greatest danger to plants newly set out. Fall planting will give you practically a full year's advantage over spring planting.

The Making of One Country Home

(*Continued from page* 154.)

home." It was the best investment I ever made; we have all we want for a very small sum, and we lead the simple life, which we could not do in a more pretentious house. We never have afternoon teas, but we do have corn roasts in the woods, and we have trout fishing and shooting in season. Only the other day a wild deer jumped our front wall and ran through our meadow into the woods. As for woodchucks, you have only to throw a stone down the hill to start one on the dead run over the vine-covered stones. And all this rural life but an hour and a half by train from New York and then twenty minutes by motor to your door. You can get to your yacht at Black Rock within half an hour, if you want to, and you can motor over to call upon Mark Twain at "Stormfield" in less time. It is a great country and it is still unspoiled.

A Populous Dwelling

PERHAPS the largest house in the world is in Wieden, a suburb of Vienna. In this domicile there are 1,400 rooms, divided into 400 suites of from three to six rooms each, and they at present shelter 2,112 persons who pay an annual rental of over 100,000 florins.—*N. Y. Evening Post.*

Enemies of Hardwood Trees

HARDWOOD trees in the forest are attacked by many enemies. The mistletoe, the "witches' broom," and the Southern mosses are all parasites that weaken and even destroy the trees. But by far the greater number of diseases of trees are caused by fungous growth. Some fungi destroy the leaves, some rot the roots, and some girdle the bark. Chestnut orchards have been destroyed in many places in the East by a kind of fungus which girdles the bark and kills the tree.

Then there are many kinds of fungi which rot the wood of standing trees, with no outward sign until after the value of the tree has been destroyed. The white heart-rot is the most common of these. It attacks the oak, walnut, hickory, beech,

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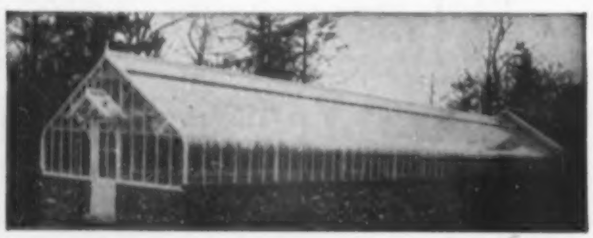

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maples and many other trees. The heart-wood of the tree is changed by the action of the fungus into a light-colored, flaky sort of substance which has no strength and can no longer be called wood. Such a tree may live for many years, even though badly diseased, but it has no value for timber.—*Journal of Agriculture.*

Moistening the Air of Rooms

TO keep the furniture from drying out in a furnace-heated house, fill a glass rose jar with cold water and put in a dozen sprays of "wandering Jew." They will take root in the water and grow with little light. On cleaning days remove the plants, wash the jar and fill again with water. This not only helps to preserve the furniture, but the moisture makes the air much more comfortable.

Greenhouse Possibilities

THERE seems to be a very widespread impression among people who own small suburban or country homes that a greenhouse is the top-notch luxury of their kind of life. We are too apt to associate the possession of the greenhouse with the great estates and to forget that there is more than one kind and size of greenhouse.

Let me tell you of one or two examples that may be within your own reach.

Once upon a time—to start not a story but a record of fact—a woman, tired out

A lean-to greenhouse makes a charming addition to the living-room. This one cost a very moderate sum

with strenuous New York office work, went back to the country to manage her father's farm. Merely as a source of pleasure and recreation she added a sort of lean-to conservatory or greenhouse to one side of the living-room, and during the first year spent many of her spare hours growing just the usual flower favorites.

Later, however, the little addition developed into something of a money-making proposition. The young lady's sister joined forces with her and they succeeded in raising bedding plants which were readily sold to people in a neighboring city.

They raised not only flowers but started such things as beans, corn and other

vegetables which they grew in small muslin bags. These were buried in the soil and served to off-set the shock of transplanting by holding the soil in the roots when taken up.

The photographs show what a really charming addition to the living-room this very practical greenhouse made.

This particular form of greenhouse suggests many possibilities in the way of glazed enclosures opening off from the living-room or dining-room. If you have a large bay-window, or even a single one to spare for the purpose, a frame work

An outside view of the lean-to greenhouse. Why not build a small one out from a spare bay-window

can be put on the outside of it to provide a small conservatory—just large enough for one to step out into the middle of it.

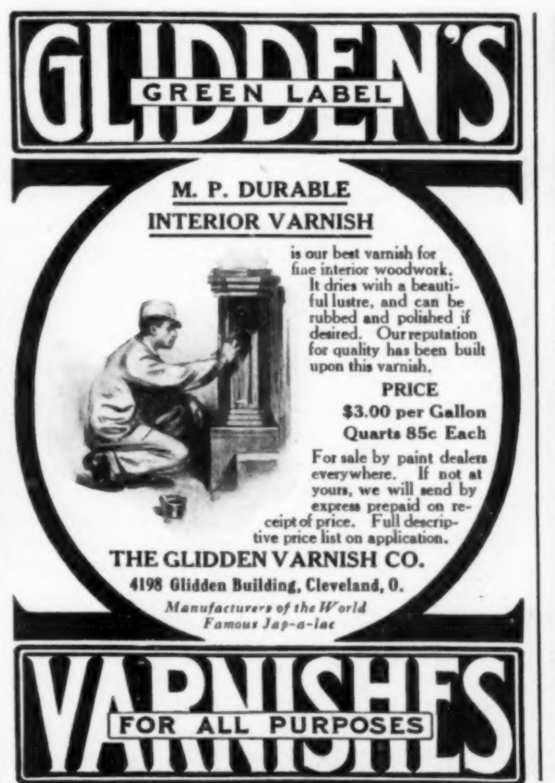
Of course, it is necessary to heat a greenhouse of any kind, and the most common way is by means of hot water coils. If you already have a hot water of steam heating system it would not be a difficult matter to have a coil hung on the outside wall of the enclosure and connected with the nearest pipes of the existing system.

The other greenhouse that is illustrated herewith is a two compartment house fifty feet long. It has a work room at one end about 18 x 10 feet in size, the walls of which are shingled.

In this instance the owner, Mr. W. H. Singer, of Edgeworth, Pa., found it difficult to have his place looking as well as he would have liked because of the impossibility of growing in his cold frames plants in sufficient quantity and of good enough

Palms and other plants of luxuriant growth are kept in the shaded compartment of Mr. Singer's greenhouse

quality to put out in the early spring in his sunken garden. He wanted that particular part of the estate to be transformed in a day from the winter sleep to luxuriant



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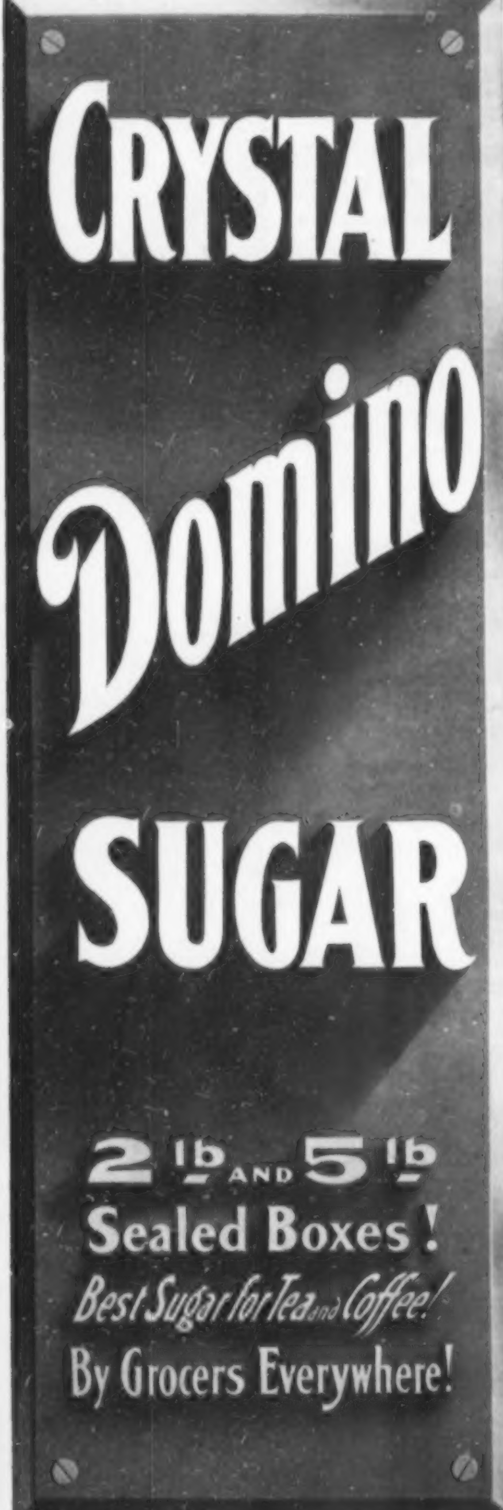


growth. This necessitated large plants, almost ready for immediate bloom. The greenhouse was the only solution.

The first compartment next to the potting room is used for bedding plants and others that are to be set out in the spring.

The owner of this 50-ft. greenhouse can make his garden bloom in one day by setting out plants started inside

The second compartment, which has a shaded roof, is reserved for palms and other luxuriant semi-tropical plants of that kind. The larger specimens of these are set out in pots about the grounds when warm weather comes.

In a detached greenhouse of larger size, such as the Singer example, an independent hot water heating plant is installed. So equipped, the house cost about $2500.

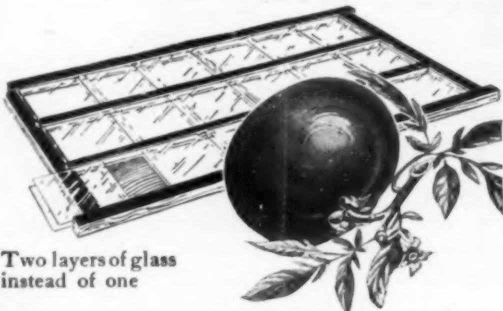
Pruning Trees

THE objects to be had in view when pruning trees are: to get symmetrical and evenly balanced heads, and to provide for sunshine and free circulation of air into all parts of the tree tops, and yet keep the foliage dense enough to protect the tree's trunks and branches, as well as the fruit from the hot rays of the sun. If pinching and disbudding have been properly followed, there will be no need of winter pruning. It is a mistake to start a young tree with a great number of branches, as they soon become crowded, thus preventing a good fruiting.

Pruning too heavily will also arrest the fruit production. Fruiting buds will not be formed where the shoots are pruned to a few buds, which are thus forced into forming new shoots. Where trees are becoming crowded, it is a good plan not to remove all that need removing in one season, but remove a portion and finish the work the next season. Pruning an old orchard needs to be done judiciously, and an experienced hand should have the job.

The pruning needs to be done during the dormant season, and when the weather is not freezing, if convenient. All branches that are liable to interfere with adjoining ones should be cut out and the centers of the dense growth thinned out. If any side branches are making stronger growths than the others, they should be checked in the terminal shoots.

All pruning and training of trees should be done while they are young. A person needs training in childhood; just so with a tree. The adage comes up before us all so plainly, "As a twig is bent, so is the



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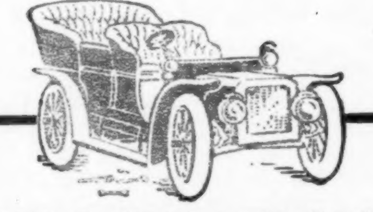

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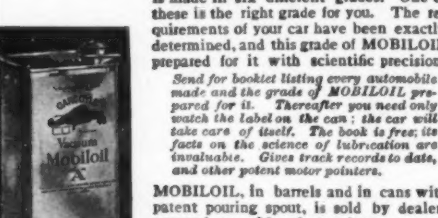

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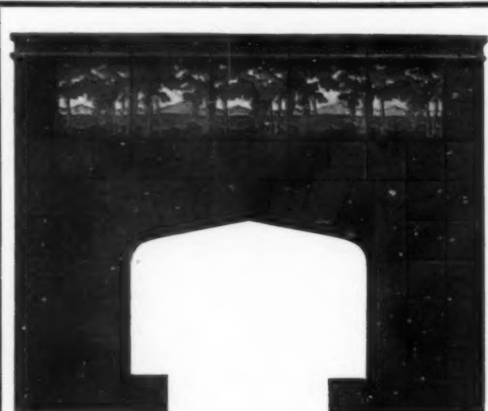

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tree inclined." We will admit that many orchards have been greatly benefited by pruning in their middle life, but they cannot be as successful as the ones trained from infancy. A great deal more labor is required, the tree undergoes a shock physically, and ofttimes the life of the tree is shortened, besides leaving unsightly scars.

Where a large branch is removed the wound should be covered with grafting wax or paint so as to prevent decay and help to keep out insects.—*Exchange.*

Do Automobiles Damage Roads?

WHETHER automobiles really inflict damage upon macadam roads is a question that came up for discussion during the recent meeting of the road supervisors of Pennsylvania, which was held at Norristown, a few miles from Philadelphia. One outcome of the discussion was the decision to construct parallel strips of macadam and asphalt road for the purpose of testing the relative effects of automobile and horse-drawn traffic. The assertion was made that automobiles were largely responsible for the deterioration of the roads. This was resented, the argument winding up in the offer of a supervisor who uses an automobile to stand the bulk of the expense of building two strips of road exactly alike, the one to be used for automobiles, the other is given over to other types of traffic.—*Automobile Topics.*

Cleaning Painted Walls

OIL-PAINTED walls must be washed with soap and water, using a soft flannel cloth, and taking care to wring it well before using. Use cold water to finish and dry well with linen duster.

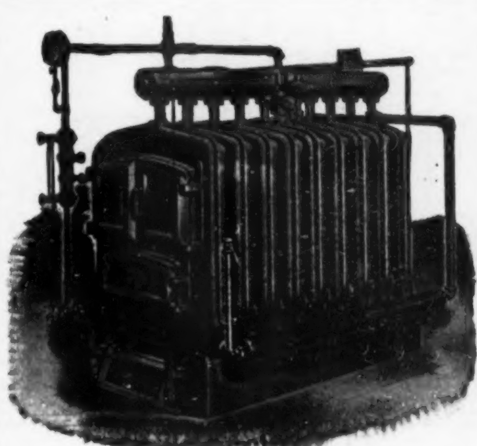
Varnished woods should be rubbed with a chamois leather wrung out of cold water, then polished with soft duster.

To polish a varnished floor rub well with equal quantities of beeswax and turpentine. Another method is to take equal parts of olive oil and spirits of turpentine, wet a cloth with these, rub the wood hard, then rub with a dry cloth. This is also good for black walnut furniture and sewing machines.

Where paint is stained with smoke, some ashes or potash lime may be used. A soft linen cloth should be used for wiping dry.—*Building Management.*

The City Cleanly

ONE of the features of the new San Francisco is its sanitary condition, making it one of the cleanest and healthiest in the country. After a proper agitation of the subject of sanitation, a conference was held and a committee appointed to conduct a crusade. Meetings were held with representatives of various industries, and in this way no opportunity for ignorance was allowed. One of the dangers feared heretofore was the bubonic plague, and the results in the diminution of cases have been most satisfactory.



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Above all things begin keeping pure-bred fowls. Do not start with mongrels and if you have them change at once to any breed you like best. The Americans will best fill all requirements. They are good layers and are ideal market fowls. Select the kind and color you prefer and you'll give them the kind of attention that brings success.—*Home and Farm.*

How to Control Black-rot in Grapes

BORDEAUX mixture prepared according to the 4–3–50 formula (commercial copper sulphate 4 parts, fresh stone lime 3 parts, water 50 parts) has been found to be as effective in preventing black-rot as the formulas in which larger quantities of copper sulphate and lime are used.

Five or six applications, beginning when the shoots were eight inches to one foot long, give generally as good results as when one or two additional earlier applications are made, showing apparently that no particular benefit is derived from dormant applications or from applications made when the shoots are less than eight inches long.

Where unsprayed grapes were a total loss from black-rot in 1907 the rot on the sprayed plots was reduced to 28.3 per cent. The next season, 1908, when the rot was almost equally bad on unsprayed vineyards, the rot on the same sprayed plots was reduced to much less than 1 per cent, showing apparently the great cumulative effect of treatment for two seasons.

The gain due to spraying varied in the different vineyards, according to the sever-

ity of the rot, the number of sprayings, the productiveness of the vines, and the cost of materials and labor, from $10.60 to $62.30 per acre.

The experiments have shown the necessity of covering the vines thoroughly with a fine spray of properly prepared Bordeaux mixture. When the black-rot is serious or the foliage is very heavy it is necessary to use trailers and have the nozzles directed by hand, as fixed nozzles will not properly cover the foliage and fruit.

The tests of various lime-sulphur preparations have not yet been sufficient to determine their value as a preventive of black-rot.

Neutral copper acetate, 1 pound to 50 gallons of water, has been found to be the best nonstaining preparation tested in these experiments for final applications.

—U. S. Dep't Agriculture Bulletin.

How to Exterminate "Pusley"

PURSLANE or "Pusley" is one of the most persistent of weeds and is not exterminated without effort and persistency. Begin the cultivation of the soil as soon as the plant appears. If the weather is hot and dry, go over the ground with a cultivator as often as it appears, not allowing a single plant to attain sufficient size and age to show blossoms. If the weather is damp or showery, and the plants get large enough to show blossoms, it may be necessary, after loosening them with the cultivator, to rake them into piles and wheel them to one side in a wheelbarrow. By all means aim to keep them from reseeding the ground. This plan, persistently followed one season, will be likely to greatly diminish their number the next year if it does not entirely exterminate them. It is an annual weed.

—The Country Gentleman.

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"THE total yearly drain upon our forests, not counting losses from fires, storms, and insects, is some twenty billion cubic feet," says R. S. Kellogg, assistant forester in charge of the office of forest statistics, in a publication just issued by the Forest Service on "The Timber Supply of the United States."

"Our present forest area of 550 million acres may be roughly estimated to consist of 200 million acres of mature forests, in which the annual growth is balanced by death and decay, of 250 million acres partially cut or burned over, on which, with reasonable care, there is sufficient young growth to produce in the course of time a merchantable, but not a full crop of timber, and 100 million acres of more severely cut and burned over forests, on which there is not sufficient young growth to produce another crop of much value.

"Taken as a whole, the annual growth of our forests under these conditions does not exceed twelve cubic feet per acre,

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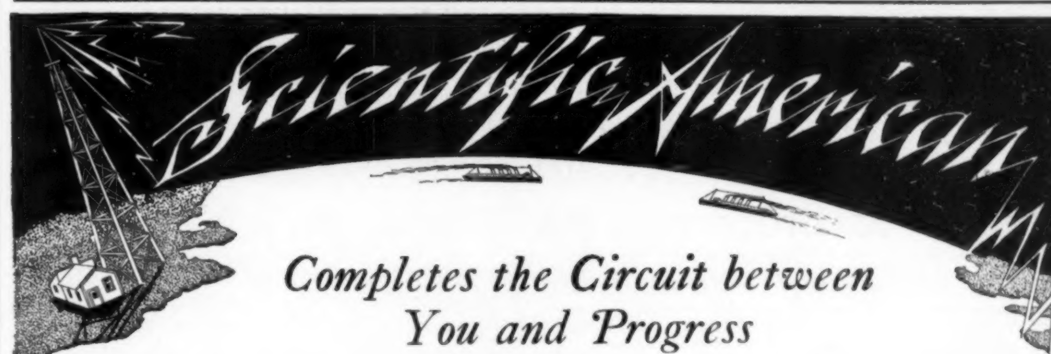

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a total of less than seven billion cubic feet. That is, we are cutting our forests three times as fast as they are growing. There is menace in the continuance of such conditions. While we might never reach absolute timber exhaustion, the unrestricted exploitation of our forests in the past has already had serious effects, and will have much worse if it is allowed to continue unchecked.

"White pine, for instance, which was once considered inexhaustible, has fallen off seventy per cent in cut since 1890, and more than forty-five per cent since 1900. The cut of oak, our most valuable hardwood lumber, has decreased sixteen per cent since 1900, and that of yellow poplar twenty-two per cent. The same story will be told of other woods if they are not conserved.

"The fact that timber has been cheap and abundant has made us careless of its production and reckless in its use. We take 250 cubic feet of wood per capita annually from our forests, while Germany uses only thirty-seven cubic feet, and France but twenty-five. On the other hand, Germany, who has learned her lesson, makes her state forests produce an average of forty-eight cubic feet of wood per acre. We have as fast-growing species as Germany, or faster, and as good or better forest soil if we protect it."

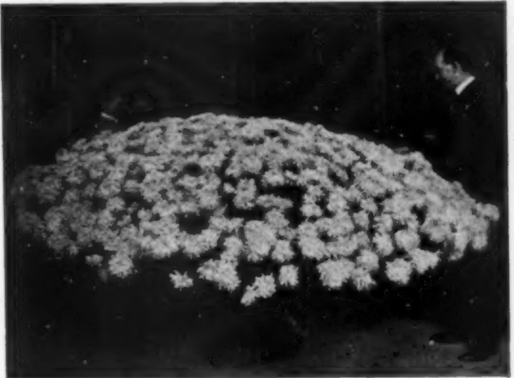
Why Spraying Pays

THE fruit-growers of Wisconsin (the conditions are quite similar in adjoining and surrounding States) have to share profits with or fight the codling moth, apple and plum curculio, gouger-tree aphis, oyster-shell bark louse, apple scab, bitter rot, apple rust, plum brown rot and shot-hole fungus. The list, given by Prof. James G. Milward of the Wisconsin College of Agriculture, in an address before the summer meeting of the Wisconsin Horticultural Society, is certainly a long one and apparently somewhat invincible. Fortunately, however, most of these pests are controlled by spraying with the combination mixture, viz., Bordeaux and arsenate (either Paris Green or arsenate of lead). Many fail to realize the importance or necessity of spraying. Others who have become convinced of its merit oftentimes fail to continue the work until the danger from insects and diseases has fully passed.

Prof. Milward, in endeavoring to determine what percentage of fruit harvested in the single State of Wisconsin is sound has examined the output of several important orchards in the State. He has often found as high as 75 per cent of the crop infested with worms. On the other hand, he has seen orchards which have repeatedly yielded unsound fruit, turned by a system of spraying into profitable orchards which have yielded as high as 90 per cent of sound fruit. The fruit in these orchards has been superior in quality and the trees have become more healthy and vigorous.—*Wisconsin Farmer*.

A Record Chrysanthemum

ONE of the greatest curiosities and likewise one of the much admired prize exhibits displayed at the New York Horticultural Society's Flower Show last season, was a gigantic chrysanthemum plant. It measured nearly ten feet in



A prize chrysanthemum plant measuring nearly ten feet in diameter and bearing 1200 blossoms

diameter, and had 1200 blossoms. This striking and beautiful specimen was a type of the Japanese chrysanthemum known as "Miss Miriam Hankey," and was grown by Mr. W. H. Waite, gardener for Mr. Samuel Untermeyer, Greystone-on-Hudson, N. Y. An idea of the enormous size and spread of the blooms can be had from the two figures of the men standing in the background. The plant represents but one year's growth and was developed from a two-inch cutting. A special greenhouse, 20 x 24 feet, was built to accommodate the huge flower during its growth. The color of the blossoms is lavender with a cream center. This is considered to be the record-breaking chrysanthemum of the country for size, magnificence of coloring, and number of its blossoms. Mr. Waite says that no magic nor secret methods were employed in growing the big chrysanthemum, other than intelligent and painstaking attention, together with careful and frequent chemical treatment, fertilization etc.

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Their Bungalow

Just as a pair of robins build
Their love-wrought nest without the aid
Of some conceited bird who dares
To tell them how it shall be made,
So John and Mary proudly planned
Their home, and deemed 'twould be a sin,
Amid their rosy dreams, to let
An architect come butting in.

Alas! it was not wisely planned,
For doors and windows, so they find,
Are out of place; some rooms too large
And some too small; but, never mind!
With pride they show their house to friends,
Who, as they view it, come to know
Why John and Mary will persist
In calling it their "bungle, oh!"
—*Nixon Waterman, in The Saturday Evening Post.*

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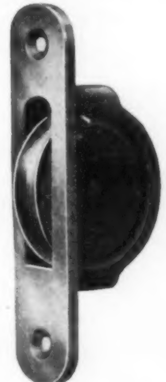

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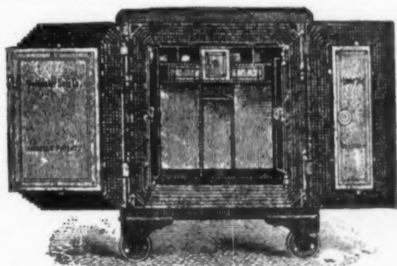

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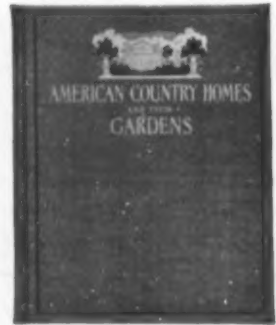

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