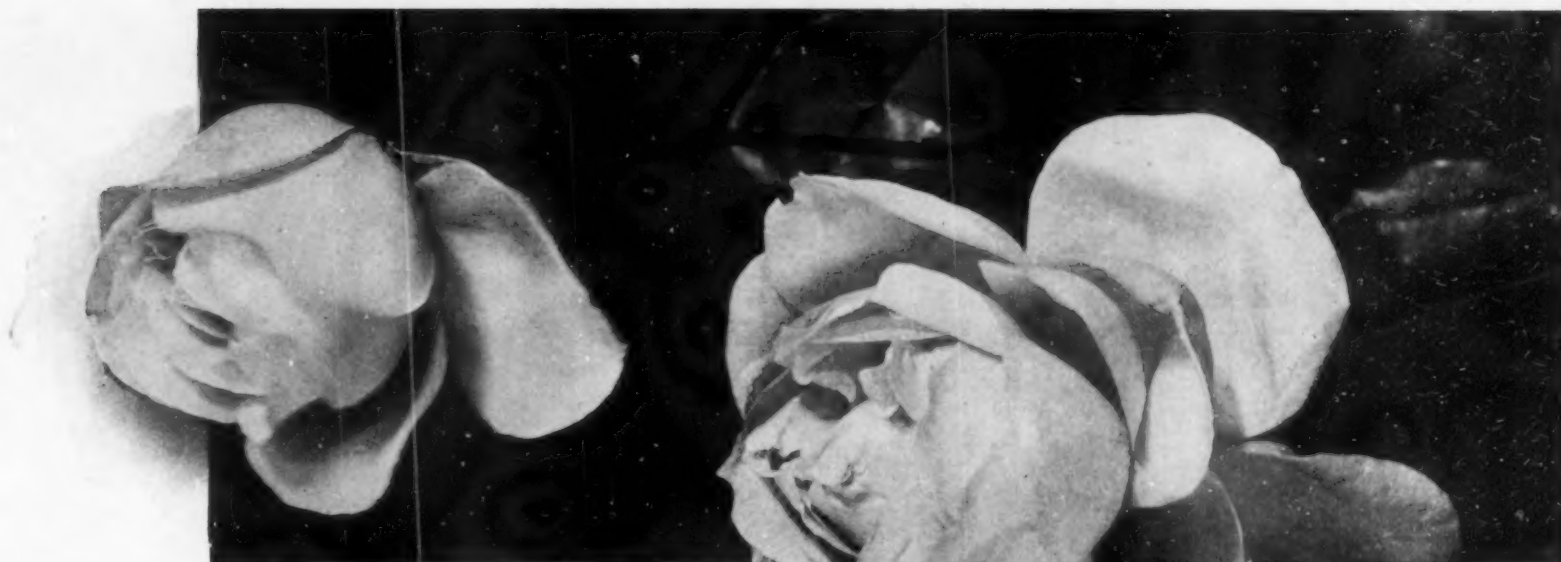




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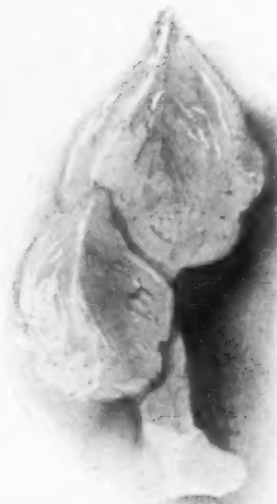
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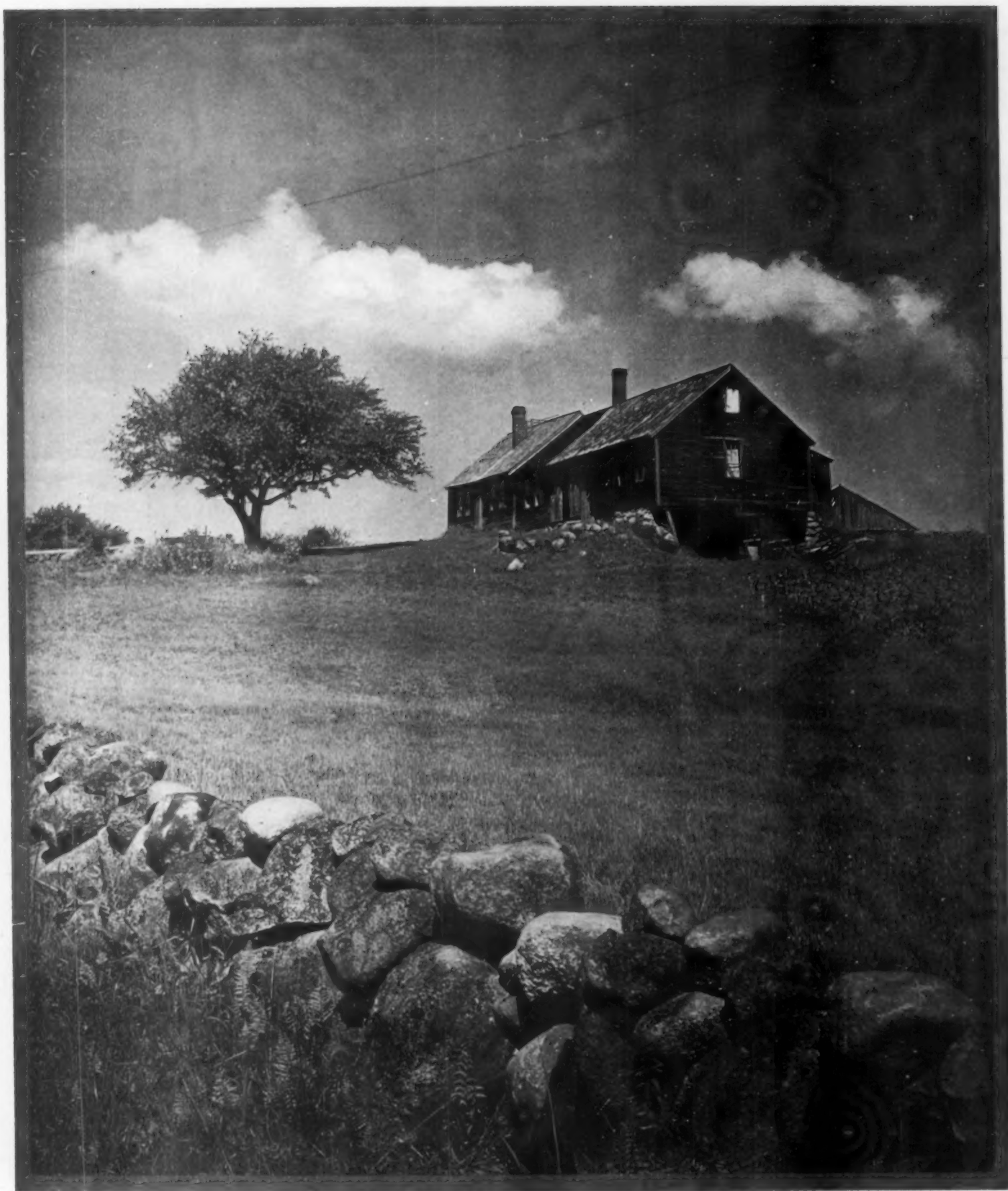
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In many parts of New England the once thriving farms are now abandoned and falling into decay, for the sturdy men who built them have gone away to other activities or different places. Yet the call of those rolling hills and fertile meadows is just as enticing as ever to those who care to hearken to it



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The Spanish Mission Style of House

THE ARCHITECTURAL STYLE THAT IS BEING DEVELOPED FROM THE OLD SPANISH MISSIONS
—FOREIGN INFLUENCES AND EASTERN IDEAS THAT GO IN TOWARD MAKING THE NEW TYPE

BY GEORGE C. BAUM

[The problem of choosing an architectural style for the American country or suburban home is one of the most puzzling that confront the home-builder. In order to bring about a better understanding of the more common types and with the idea of clarifying, as far as possible, this whole matter, we have asked a number of prominent architects to present each the case for one particular style. In previous issues the characteristic features of the Colonial, Dutch Colonial, Half-timber, English Plaster, Chicago School of Architecture, Swiss Chalet type, the so-called Northern Tradition, and the Tudor style were developed and illustrated at length by prominent architects interested in each of these types. The present article is the last one of the series.—EDITOR.]

THE words "Spanish Mission" bring to the mind but one thought,—a group of buildings scattered over Southern California. The buildings and the location seem to be synonymous; the one suggests the other. Instantly the mind pictures a warm and sunny climate, a group of palm and magnolia trees, in the shadow of which nestles a low and rambling building, covered with vines and rose bushes. Charming! we exclaim. Yes, charming beyond description. California, the land of sunshine and roses, and, as Stoddard says of Southern California, "we think of it, and love it, as the dreamland of the Spanish Mission."

The Spanish missionaries coming up from Mexico were the first to settle in California, having as their ambition the conversion of the Indians. They began their enterprise with rude adobe huts, but as they became prosperous and successful, these huts gave way to extensive buildings, constructed in the form of a quadrangle, surrounding an inner court. The best examples can be seen in the remains of Santa Barbara, San Juan Capistrano, San Fernando Rey, Carmel, San Gabriel, San Luis Rey and San Miguel.

This mode of building around an open space, forming an inner court or patio, was brought over with the Spaniards from their native land.

It was just the style of building best adapt-



A Spanish doorway on a house at Rye; Cram, Goodhue & Ferguson, architects

ed to their needs, and frequently a number of patios were used as the demands required.

Within these enclosures their cattle and herds were driven at night for protection, where they were safe from the savages and wild beasts. These settlements were in reality large ecclesiastical farms with their cattle grazing on the adjoining plains, and the grain growing in the surrounding fields. Here also the Indians were gathered and instructed in the art of civilization, religion, trades and farming. Isolated as they were in those days, it was necessary for each mission to provide for its own wants; therefore, rooms and apartments of different kinds were set aside for their particular purposes, and all gathered together, as it were, under one roof.

The most prominent portion of the building from the exterior would be the church, with its dominating belfry, while around it would be collected the bedrooms or cells for the monks, the refectory, the kitchen, hospital, schoolrooms, workshops and sundry buildings.

This is, in short, the history and description of the so-called "Spanish Mission" style of architecture. These settlements were made by Spanish religious orders engaged in frontier work, and this class of men naturally would not bring with them artists or architects, so they built with the best talent



The mission of San Luis Rey in Southern California. The tiled roof, arched cloisters, bell tower and facades are prominent characteristics

and skill they had at their disposal, following the examples familiar to them, such as appear in Spain and Mexico. They naturally built simply and substantially, but in that simplicity lies all their charm and beauty. Large, plain wall spaces are characteristic of this type of building, and when man finished his work, nature started to embellish it with her clinging vines and overhanging trees, transforming them all into a picture of charm and beauty. Any attempt at gorgeous enrichment and elaboration would have been fatal to the artistic and enchanting results.

The most characteristic points of this style of architecture can be described as a low building with heavy walls of adobe brick, covered with stucco; a low, pitched roof, covered with tile, and wide, projecting eaves, casting the deep shadow so necessary in a sunny location; belfries, formed by the projecting of the walls above the roof, pierced with arched openings to carry the bells, while the inner courts were surrounded with arches, forming spacious and picturesque cloisters. The windows on the first floor were frequently enclosed with turned wooden grilles, a remnant of the iron grilles of Spain, and used for protection. The walls were of solid brick, covered with stucco, and have at times reached a thickness of six feet. Floors were frequently covered with large brick tiles, twelve inches square.

This style of architecture sounds



The Gillespie house at Santa Barbara shows many classic features adopted as suitable to the climate and location. Cram, Goodhue & Ferguson, architects



The long pool adds an attractive touch to the approach to the Gillespie house. It is Persian in its inspiration

very well, but how does it apply to the average modern suburban home? For the more Northern climate where winds and storms predominate, and where the cold is severe, this style is not at all practical. There a building compact and sheltered is desirable, but where the sunshine abounds, and where winter is of short duration, this type of building is most fitting. In the South the Spanish Mission is at its best,

but the architectural treatment when properly adapted to the conditions of the North, gives a most pleasing and happy result. Other types of buildings seem to have been the popular types to follow for suburban homes, many of which have become monotonous, while the Spanish Mission has been overlooked. This type is not splashy or elaborate, but can be enriched in a quiet way to great advantage.

What are the requisites of a private residence or home? In common, it could be described as a place for rest, a place to eat and a place to sleep, a place for thought, and a place to entertain one's friends. The question is, how best to accomplish this within reasonable means.

The Spanish Mission house has the advantage of being easy and simple of construction, void of the complications of building principles, as in many of the other styles frequently adopted.

This simplicity does not detract from its beauty; but when properly handled, simplicity can be relieved by



The patio is a requirement of the Spanish house and is a most acceptable addition, even with its Greek lines



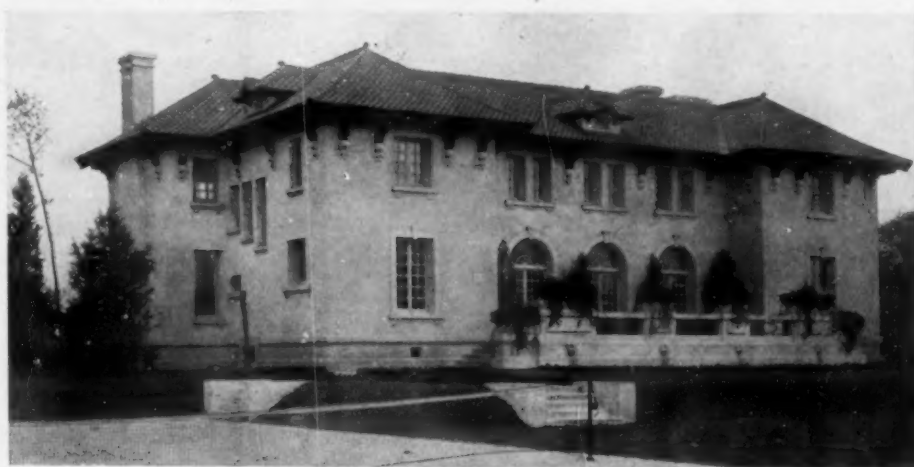
As yet there is no absolute Spanish mission type, but various influences are conjointly used as in the Gillespie house

the grouping of motives and by the adornment of trees and shrubbery. The appearance of the building is one of quiet and rest, refreshing to the eye; its stucco walls are cool in summer, yet not oppressive in the winter. It has been said, "nothing is so much to be desired as repose in form and color," and the Spanish Mission gives it. The interior can be arranged to suit any condition. The tendency of the present day is to build the house reducing the number of stories in height, thus eliminating the climbing of stairs. A house spread out has the preference. This gives the possibility of the inner court or patio which forms the center of the Spanish family life. These courts are built with arches forming cloisters one story high, or as supporting arches carrying a second story above.

In the center generally is a fountain, around which are gathered potted plants and palms; here the family gathers and friends are received and entertained. The normal man, in his private life, hates publicity and craves retirement.

Houses thus built present this to the best advantage, as the interior of the building can be made very attractive and livable. The exterior walls can be opened by use of arches or posts, giving spacious porches for those who desire them. In the larger courts, trees were planted, and rose bushes were cultivated.

From the fountain often ran streams



A modification of the mission type that preserves some of the distinctive features, yet is a suitable style for Northern localities



A fountain and recess in the Gillespie house give the effect of coolness, valuable in the locality

of water carried off in open channels, around which flowers were planted. These interior courts of the Spanish Missions were used first as centers for protection, within which the monks were safe and free from anxiety. Here they would congregate in leisure hours and take their exercise. Then they began to beautify the open space, which resulted in the adoption of forms similar to the luxuriant and

charming formal gardens.

The writer does not advocate the Spanish Mission as the best type of architecture to be followed universally, but this article is intended to show how it can be adapted, and how appropriate it is to suburban life.

First and foremost we must build with the materials at our disposal. We are entering upon a period of wood famine. The lavish use of wood as in former days, must be curtailed, and it will soon be out of the question as a building material. We are by necessity rapidly advancing to the concrete and cement age, following the footsteps of the old world. Concrete is being used in buildings in this country more to-day than ever before. It is easy of construction when properly handled and does not require skilled labor in its formation. Thus the expense is reduced. This is a marked advantage, especially in the country where masons for stone and brick work are scarce and often must be transported from the city. The out-

(Continued on page 90)



The arched doorways and gable ends here are mission characteristics; the porch is an addition not found in the prototypes



A house showing another variation from the mission type, yet retaining its tiled roof and characteristic arches



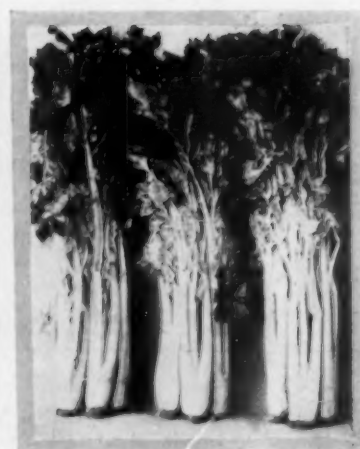
Early Model beets started early and then transplanted



Livingston's Globe is an early, small tomato of fine quality



Early Black Beauty is one of the best all-round eggplants



Golden Self Blanching celery is a tried and proven sort

New Vegetable Varieties That Have Made Good

MODERN IMPROVEMENTS ON OLD FAVORITES THAT HAVE DEMONSTRATED THEIR WORTH—SPECIAL CULTURAL DIRECTIONS OF VALUE

BY F. F. ROCKWELL

Photographs by

N. R. Graves, E. J. Hall

and Others



Squashes: Early Bush, to the left; Vegetable Marrow, at back; Delicata, in the foreground



There are several new strains of the Netted Gem type of melon larger than the original

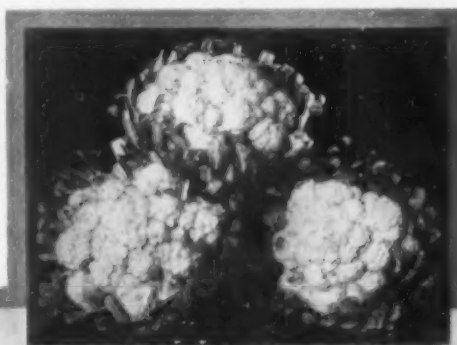
TO the mind of the uninitiated the "creation" of a new vegetable variety is quite a mystery. They look upon each new sort described in glowing terms in color-plated catalogues, as absolutely distinct from anything that has preceded it—and quite naturally, for so they are informed time after time. As a matter of fact, however, the number of new sorts which are definitely different from their predecessors is very small.

In the popular fancy such plant breeders as Burbank are looked upon as wizards, who, one would think from press reports, sit down with an opium pipe and conjure up mental pictures of undreamed-of plants, fruits and flowers, and forthwith adjourn to the laboratory and concoct them of earth, air and water and necessary black magic. In reality, however, the black art they use is for the most part patience and care. "New" varieties are created generally by "selection," which is nothing more nor

less than choosing the plants which are to serve as seed producers. It is used in two ways: either to get an "improved" plant or fruit by using only the best specimens, year after year, for seed; or to get a new "type" by choosing specimens for some particular characteristic, such as earliness, size, color or quality.

The other method, which comes nearer to meriting the term "created," is to "cross" or breed two different varieties. Out of hundreds of such new sorts developed here and there one is found that is an improvement over one or both parents; and even then it is sometimes impossible so to "fix" the new variety, even after generations, that it will not revert to one of the old types.

I mention these things in order that the reader may be better able to estimate for himself a little more accurately the real merits of new introductions. It is to be regretted that many American seedsmen are given



Above is the dry weather cauliflower, a boon for those who have had poor results with other varieties; at the left is the Davis Perfect cucumber; at the right, the Melting Sugar melon

over to the novelty habit—and not infrequently, when there is a dearth of new sorts, we get the old ones under new names. On the other hand, credit should be given those who devote a great deal of time, energy and money to the developing and discovering of new sorts that are real improvements.

Most of the varieties described below have been given to the garden public during the last few years, and while some—such as the Gradus pea or Golden Bantam corn—have already become household words, many others are not so well known as they should be. Practically all these varieties I have not only grown myself, but know to have been accepted by gardeners generally.

Asparagus.—Giant Argenteuil has become a great favorite since its introduction from France some years ago. It produces giant sized stalks, of fine quality. Palmetto, however, still holds its own, and in a careful six-year test, held at the New Jersey Experiment Station, out-yielded all other sorts by nearly one-third, and I consider the quality as good as that of any.

If you order any asparagus plants this year, be sure to get the pamphlet of cultural directions usually accompanying them, and do as it says. A mistake often made in caring for established beds in private gardens is neglecting them after cutting is discontinued in the spring. Next year's crop depends on this summer's growth. Keep clean and cultivate frequently.

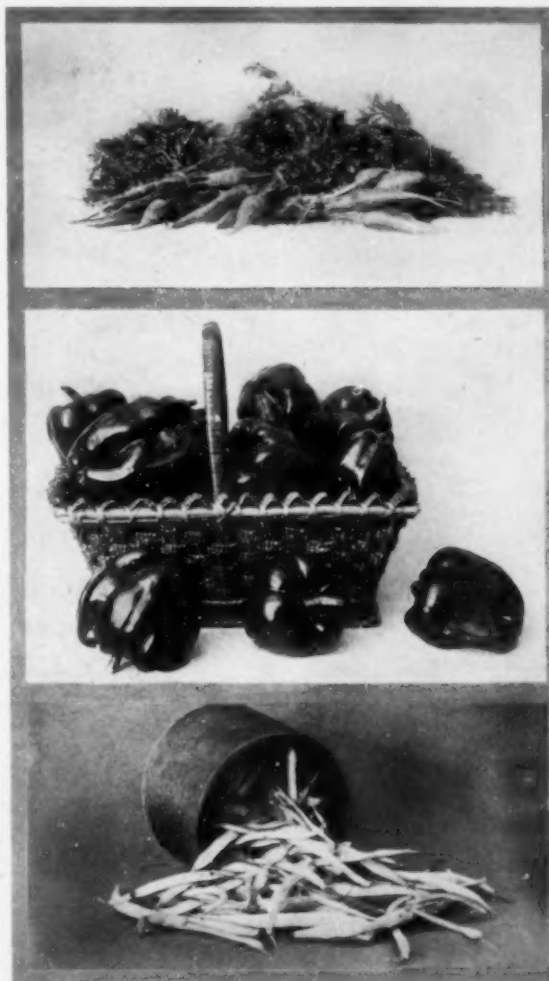
Dwarf beans.—In the matter of bean varieties I think the seedsmen might have spared us a little. There are too many that can't be told apart except by the tags. Good progress has been made, however, in eliminating the annoying "stringiness" of the older sorts. Stringless Green Pod is a favorite early variety. In place of the old Yellow Six-weeks, Brittle Wax is one of the earliest of the wax sorts. New Kidney Wax is a distinct improvement in the kidney type.

The last few years have seen great progress with the dwarf limas, which should now be used in every garden. There are two types—the Kumerle or "potato," of which Fordhook is the best sort I have found, because it is more bushy in form; and the dwarf tree lima, of which Burpee-Improved and New Early Giant are sorts that make a decided acquisition.

Burger's Green-podded Stringless is a real improvement in the pole beans. For yellow pole beans I have found nothing yet better than Sunshine or Golden Cluster—the former being more stringless. In pole limas the New Giant Podded is the best I have yet



Tie cauliflower leaves to make white heads



Three tested varieties: Chantenay carrots, Chinese Giant peppers, and Stringless White Wax beans



The new Bush muskmelon should make this fruit available for the smallest garden

found, and a very real improvement, especially in its habit of bearing near the ground on lateral branches.

The secret in getting early beans is to plant shallow in the lightest soil, and to risk losing the first planting. Two times out of three, or more, you'll come through, and there's little lost if you don't. Let your beans alone when the foliage is wet. Plant limas with the eye down, when there is prospect of fair weather for a day or two: they rot in the soil very easily. To get early pole limas, start inside in pots of sandy soil—two vines of the new Giant Podded are ample for one hill.

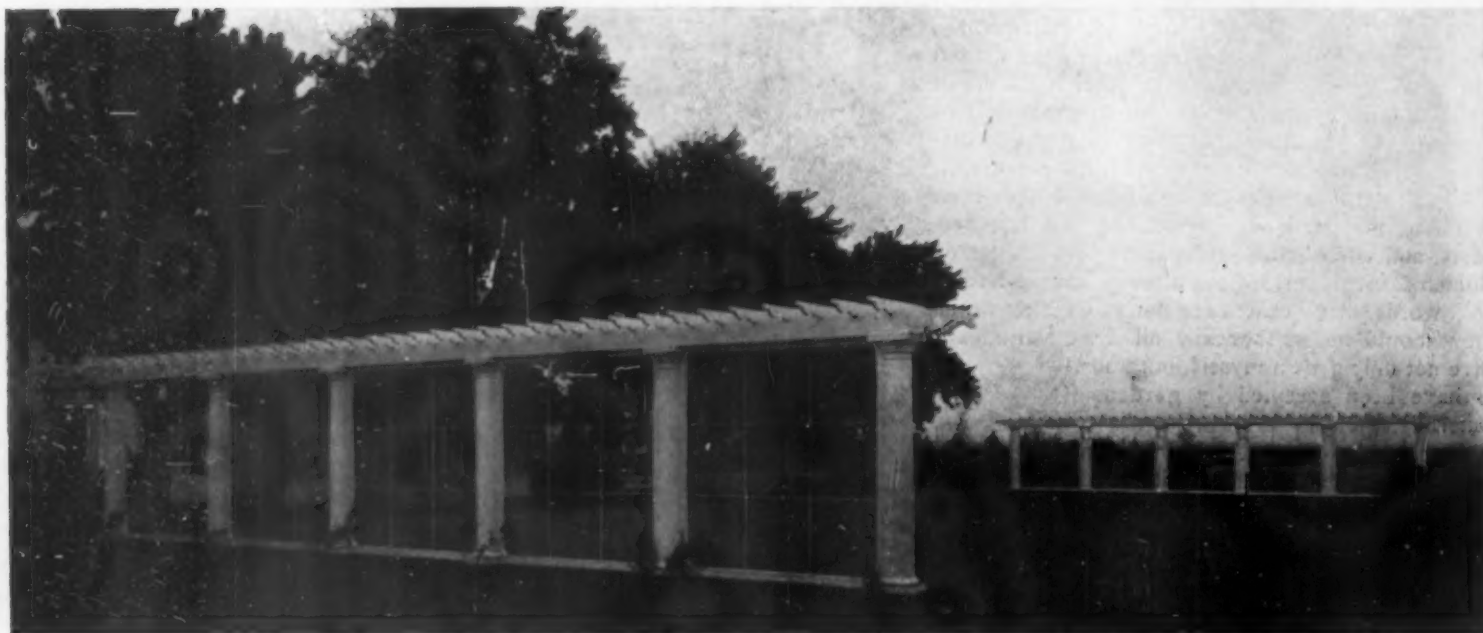
Beets.—Among beets there are no remarkable improvements. Early Model is a very excellent early sort, and Columbia, for summer use, is very good. They are better in quality than the older Crosby's Egyptian, and Blood Turnip, which are still used by commercial growers.

It is surprising how many private gardeners still depend on beets sown in the open for their first supply. They can be started and transplanted, like lettuce or cabbage, with the greatest ease. Set four inches apart, with one foot between rows. For best quality make several sowings during the summer, and cook as quickly as possible when preparing for the table.

Brussels Sprouts.—I consider Danish Prize an improvement over the popular Long Island Improved, in that the heads come even and are thicker set. Wroxton is a new variety just being introduced from England. I have not experimented with it yet, but should think it well worth trying. Brussels Sprouts are very easily grown, and one of the most delicious late autumn vegetables. They will stand any amount of freezing after maturity; it only makes them tender. Be sure to sow a packet this June.

Corn.—Most of the progress with sweet corn recently has been in the introduction of yellow varieties. Burpee's small early Golden Bantam was the first of these to leap into popular favor, and it is still the greatest favorite. Besides its extremely sweet quality, it has two other characteristics which make it especially valuable for the home garden. It is very dwarf in growth of stalk, and is exceedingly hardy, so that it can be planted earlier than the shriveled grain sorts. Seymour's Sweet Orange, Golden-Rod, and several other later yellow corns are now largely replacing the older white favorites for home use, and I think deservedly so, in spite of the natural prejudice against yellow corn because of its resemblance to

(Continued on page 82)



The grass court under suitable conditions is built more cheaply than one of dirt and may be a beautiful feature on the place. The back-stops in this case are decorative in an interesting way. Oswald C. Hering & Douglas Fitch, architects

How to Make an Attractive Tennis Court

WHAT IS NECESSARY TO DO TO MAKE THE TENNIS COURT AN ATTRACTIVE FEATURE OF THE COUNTRY PLACE—DIFFERENT KINDS OF COURTS AND THEIR CONSTRUCTION—THE BACK-STOP

BY GEORGE ETHELBERT WALSH

Photographs by Mary H. Northend, Albert Nietes and others

LAWN tennis is one of the most popular of our outdoor games for both sexes, and it has retained its hold upon the public for a good many years in spite of the introduction of other games and the craze for novelties. Tennis gives just the right amount of exhilarating exercise in the open air that one seems to need, and there are hundreds of thousands of devotees of the game who play it regularly throughout the season.

But the possibilities of making the tennis court a great social adjunct to the country place are not always fully appreciated by those who follow the game. Primarily the courts are laid



This heavy back-stop would be rendered attractive by growing vines

out for practical use, but this should not interfere with their artistic development to make them attractive features of the garden. If one has the land sufficient for a tennis court it should be utilized with the idea of making it a pleasant place for quiet rest and recreation on warm days.

For instance, the wire net erected at either end back of the courts should be converted into screens of living green by planting vines on the outside, or if one prefers it can be covered with the climbing rose bushes to make it a glorious color effect. Better even than the ordinary wire net, an artistic screen of lattice work or trellis can be



Sometimes a tennis court must have an outside foundation and must be built inside of stone retaining walls. It is durable but quite expensive

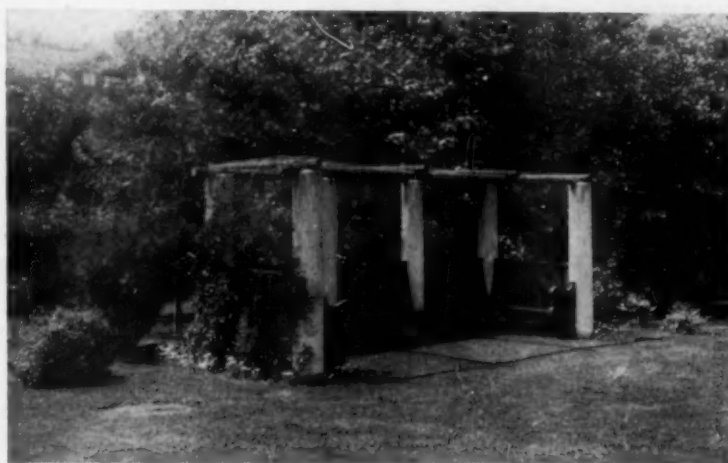


The level dirt court is the most common and more durable type and may be kept in condition by constant rolling

erected. This can be covered on the back with almost any of the climbing vines. Roses, honeysuckle, clematis, trumpet vine or moon flower are all suitable for this work. With a little pruning and training the screen can within a season or two be converted into a beautiful garden ornament.

Tennis courts are, of course, made in a variety of ways, but for a garden feature the grass court is the most effective. A clay court is more costly, for the ground must be excavated to a depth of eight or ten inches so that a proper foundation can be made of stones, cinders and gravel. But even a grass tennis court must be laid with the greatest care and provision be made for drainage. In fact the drainage problem is one of the most important in selecting a site and in building a court, and if overlooked there will be many promising days when you cannot play owing to water and mud surface.

The site for the court should have a perfectly unobstructed space of not less than 60 by 120 feet, and wire netting 10 to 12 feet high should surround the inclosure at least 15 feet back



A little shelter for onlookers is a necessary adjunct to the court and may be simply and artistically constructed

tennis court will never give satisfaction. Before the next layer of gravel is placed on the trap-rock, provision must be made for drainage. There are several methods of draining a court, depending partly upon the nature of the soil and the preference of the owners.

For ordinary soil a good method is to lay the drain-pipe near the net and at right angles to the courts, dividing them in half. The drain pipe may consist of stone sewer pipes cut in half or

(Continued on page 70)

from the lines. To make a good dirt court it will be necessary first to dig off the surface to a depth of at least one foot, and level it roughly with a spirit level. The cost of this excavation in ordinary dirt is not more than ten or fifteen dollars, but where rocks must be blasted away the cost may be five or six times as much.

After leveling the foundation a six-inch layer of trap-rock, such as used in macadamizing roads, or any broken stones ranging in size from a walnut to an egg, should be placed in the excavation. This must be leveled off also to keep the grade. An uneven

The Mathematical Spider

BY WILLIAM A. VOLLMER

THE WAY THE SPIDER SPINS HIS INTRICATE WEB

THERE is so much in the point of view that our ideas and attitudes become frozen and petrified because we see one side. accept it as the complete perception and squat there in smug complacency. A walk to the other side of the object would in many cases be a discovery as great as that of Columbus. With the spider, generations of old woman tales have made us loathe it as dangerous even to life. As a matter of fact, no one has ever entered the medical record as "died from the bite of a garden spider." There is a deal that we lose in this spirit that makes us kill every little garter-snake and destroy the painstaking efforts of the spider. For me the legend of Pallas Minerva and Arachne did much to remove the prejudice, for I learned to see in the spider the persecuted object of an unjust wrath. Ovid tells the story with minute detail in the *Metamorphosis*. Arachne in the pride of her weaving skill, engages with Pallas in a contest for supremacy in the making of tapestry. Though the mortal Arachne might have been more clever, her



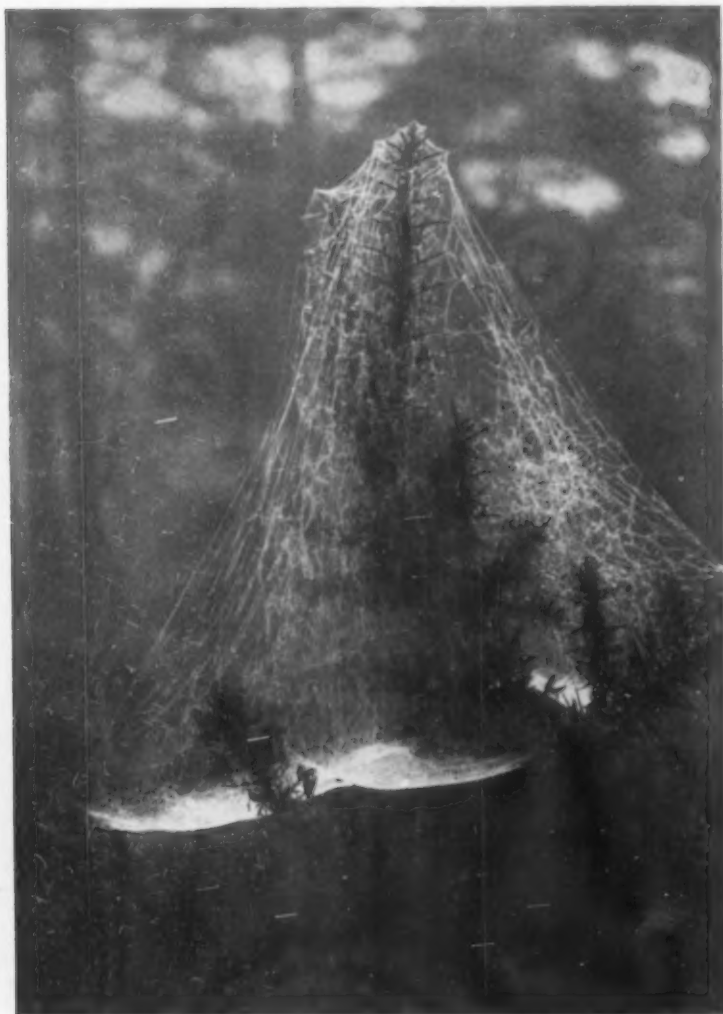
An orb web hung at the top of a bush with extra lines to serve as fenders

HOW CLEVERLY HE CONTRIVES TO LIVE BY TRAPPING

choice of subject was ill chosen in that she portrayed the frailties of the Olympians in her woven fabric. Pallas, enraged at the slighted dignity of the immortals, changed Arachne into a spider and doomed her to continue forever at her spinning in the form of that creature. It is from this legend that the generic name of spiders was taken. Spiders then evidently excited the interest of the Greek mind mainly through their ability to weave.

It is this faculty that continues to interest us to-day. Not alone the marvelous dexterity of weaving delicate thread into the geometrically figured webs that swing in our gardens and on hedge and fence, but also in the cunning which devises these gossamer threads as snares to trap prey and thus obtain a livelihood. These are the things that are well worth considering by those whose inclinations or opportunities preclude a scientific knowledge. The web and its weaving and the spider's use of his snare will bear some elucidation here.

Most of us have taken notice of the dew-starred filaments glistening in



Some spiders weave a mass of crossing lines connected with a cobweb-like sheet below. Prey is entangled and drops to the sheeted web or is made prisoner in the maze



In the center surrounded by a free space is the closely spun hub where the spider generally stays

the early morning sun and have paused in admiration of the work. Few of us have given it further attention than this, have not wondered how it was constructed any more than we have wished to solve the why or wherefore of the curiously voluted petals of the orchid or the iris. Let's begin, then, some evening and go where the webs hang and if we use a little patience we may learn with what nice judgment and fine artistry the little creatures build.

There are several main types of webs that we may notice. One is the orb hung vertically and resembling somewhat a target with many rings divided by a number of radii running from the small hub at the center that corresponds to the bull's-eye. Another web like this in form, is often found hung horizontally. A third type is the closely knit fabric stretched as we see it in the cobweb. Other varieties of spiders combine these forms or vary them, as in the triangular snares that resemble a few segments of the orb web stretched from a single thread, or the maze of twisted short threads that the labyrinth spider spins. This is not the complete scientific arrangement, but is the superficial one that the layman might evolve from an attempt at classification. Nevertheless, a single variety of spider will make but one kind of web that is characteristic of the class. That is, the garden spider, for instance, will always make a horizontal web which, though it may vary a little in position, will always be hung at or nearly parallel to the ground.

If we look carefully some warm evening we shall in all probability find a spider clinging to some stalk and if we are discreet, shall see a vertical web constructed. The small creature that we discover appears ill at ease, runs out on a small branch and back again and gives the impression of waiting for something to happen. If we watch closely we may notice that the spider stops from time to time and raises the tip of its abdomen. Here it is that the spinnerets are located and we may see a thin filament start and be drawn out at length on the breeze. It floats out and if the wind is favorable becomes entangled in one of several twigs that we see opposite. Now the spider seems to test it by slight pulls with his forelegs, and in a little while may be seen to essay a crossing on this slender bridge line. As he goes he drags a thread after him, which seems to unite with the first foundation

line. It is in this fashion that he builds and strengthens the support of the web to be constructed. After a while he will be seen to drop from a point in this main thread by another line that pays out as he falls. This he makes fast to something on the ground and ascending it affixes a thread at or near the center. Climbing upward he may be noticed carrying this new line in one of his claws. He brings it up to the bridge line and crossing to a point near one extremity of this makes it fast. Thus far there is already built a strong suspension line, another connecting this with the ground, and from this ground line still another traveling off at an angle and joining the main line, with which it makes a triangle. The upper part of the dropped line and this last one will be radii in the completed web.

So the animal goes on spinning; sometimes carrying a line and fastening it, sometimes lowering

himself to reach a point of vantage where he affixes a thread and reascending carries it up his vertical ladder and running to the center again attaches it, until all the radii are constructed from this central point and tacked on to foundation lines or tied to projections on stalk or grass blade.

The work is that of a clever artisan understanding the need of counterbalancing strain in one direction by cords placed in opposition. If the numbers on a watch may be imagined to represent the ends of the radii, for purposes of illustration we may say that instead of running the threads from the center point to the figure one, and then to two and then to three, and so on around the dial face, the spider will put in the scaffold threads from one and two, and then going back to the ground line (from twelve to six) will jerk the threads and appear to test them. The next radii will be those to figures seven and eight of the watch. So the animal proceeds, testing the strain on cords, tightening here and reinforcing there, always placing a thread where human intelligence would judge it to be most advantageous. When all the lines radiating from the center have been satisfactorily finished, the spider proceeding from the center spins a spiral that crosses the rays. He generally makes a center part or hub somewhat more closely woven, and then leaving a free space commences weaving the spiral until the outer edge is reached. This first spiral serves as the scaffold for the completed web, for now the spider may be noticed weaving cross threads of a different material. These are the sticky coated webs that ensnare the insects. The threads are tacked down as were the others, but the spider seems to stretch them in fastening and when they are released they show globules of liquid. This is one of the causes of the beautiful glisten one sees on webs. If we examine them with a glass there will be seen a regularity of arrangement of the tiny beads that is not unlike a necklace of pearls strung in alternating sizes. As this sticky web is spun out behind the spider, he bites away the original scaffolding and leaves the orb entirely coated with this viscid liquid except at the hub, where he seats himself awaiting prey. This course of construction eliminates the danger of the spider's entangling his own nest. Most webs are built after this fashion, but though they vary in size or shape they all display the same skill in engineering, the same mathematical appreciation of offsetting stress by putting a line almost at the very point our former instructors would have demonstrated by parallelograms of forces to be the logical place.

Although I have spoken of the foundation lines spun out on the air and entangled with an opposite object, as the general procedure of orb weavers, they sometimes do carry their line in one of the claws, walk over to the desired locality and when the right point is reached, reel in the slack with their jaws and make it fast. This is not so common, or to my mind so interesting as the sublime confidence with which the spider launches its delicate thread in the air and waits, trusting that it will reach the desired place. Spiders will sometimes spin themselves a basket and lowering themselves to a position of strategic importance, let a line float out in the breeze. If it catches in the right place, they swing off upon it. Jonathan

(Continued on page 75)



An orb web hung from a suspension line. Every time an insect is caught in the web it means that the spider must start at once and repair the destruction which always occurs



When dew covers the sticky threads the web looks like a large diamond sunburst flashing in the sun



The house is of stucco over lath and fits well into its surrounding of trees because of a roof of green, variegated tile and greenish chestnut window trim. The lattice and the metal work are also of harmonious dark green tone

Homes That Architects Have Built for Themselves

THE HOUSE OF HERBERT E. DAVIS, ARCHITECT, AT GLEN RIDGE, N. J.—HOW A HOUSE WAS PLANNED FROM IDEAS OF ITS INTERIOR RATHER THAN EXTERIOR

IF Herbert E. Davis, architect, of the firm of Davis, McGrath & Kiessling, were to be asked to name the central, dominating influence that was always uppermost in his mind when he planned his own house, he would doubtless say that it was the comfort, convenience and artistic tastes of his own family. That is very much what the average man would say, but in the matter of

building houses, an architect is several grades higher in importance and authority than the average man. Some reason that sounds a little more professional or more learned might be expected from an architect. But there was nothing technical or theoretical in Mr. Davis's way when he began to plan for his own home. He had his technical knowledge to help him and his experience to guide him, but he used these things as subservient allies and not



The garage is lattice covered and has an attractiveness often absent in buildings of this type

as arrogant masters. He left it for them to assist in the details after he had first started the major premise of the syllogism, which was that "a house is a thing to live in." The minor premise might have been, "I shall build a house," and then the inevitable conclusion was, "I shall build a thing to live in," and that was precisely what he proceeded to do.

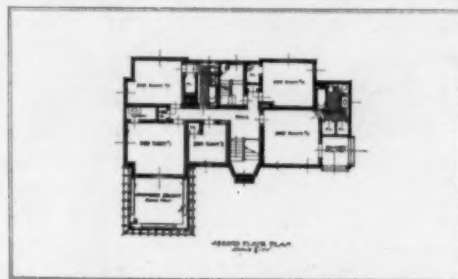
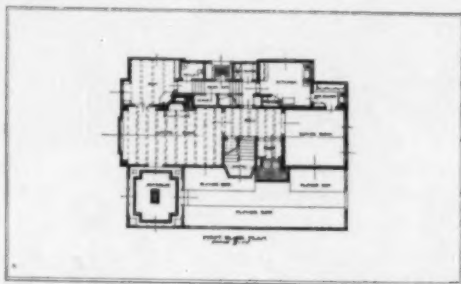
Mr. Davis makes no mystery of his methods in determining what sort of a house he would build in order that his main purpose—satisfying the requirements of his family—might be accomplished. Nor does he violate the ethics of the profession or reveal its secrets when he says simply that he built the house from the inside out and not from the outside in. As to its style, he says he does not know what to call it, but that his inability to attach a style tag to it seems to have in no way

impaired its liveableness or to have lessened the affection of his family for it. They wanted a house with plenty of rooms, well arranged and simply but tastefully trimmed and furnished, and they wanted a house on which vines could climb and near which plants and shrubs could grow as though they naturally belonged there and were a part of the house itself. These were to be the essential elements of the final structure, and it then remained to combine them into their harmonious assemblage in the building itself.

Although the house was to be built from the inside out, first of all there was to consider the size and shape of his lot, the slight slope of the ground, the southern outlook in front and the background of trees. The result was a house with a frontage of 60 feet on the street and a depth of 29 feet exclusive of the sun-parlor extension on the southwest corner. This broad frontage provided ample space for generous living quarters. The sun-parlor should adjoin the living-room, and furthermore should be on the south side and preferably ought to be removed somewhat from the main approach. The dining-room should be on the front side of a house of this shape with the opportunity remaining for a long living-room also on the front. These were manifestly the factors that determined the arrange-



A feature of the living-room is the fireplace of Indiana limestone with no mantel shelf above it, bringing out the beauty of the stained and paneled woodwork



The plans show generous allotment of space both on the ground floor and upstairs



All impression of bareness is relieved by the use of a simple lattice running over the larger blank spaces of the walls

ment of the ground floor, with the dining-room in the front southeast corner, 15 by 16 feet, the living-room 16 by 27 feet in the southwest corner, with the sun-parlor 15 feet square opening at one side, and the den 11½ by 12 feet in the rear on the northwest corner. The recessed main entrance and its vestibule, and the stairs to the second floor, breaking and turning, with a landing half way up, are compactly but centrally arranged, leaving the main hall 8 by 15 feet as a direct, unbroken passageway between living and dining-rooms, practically as an extension of the living-room because of the absence of a door between and because practically the same method of finishing is employed in both. Arranged in the rear are the working quarters, consisting of kitchen, three pantries, toilet and one closet, with direct entrances into the dining-room, the hall and the den, and stairs to the second floor. The recessed rear porch or garden entrance, because of the slope of the ground, is five steps below the ground floor level with stairs down to the cellar and up to the main floor sections.

On the second floor are five bed chambers, two bathrooms, two closets with washstands, six clothing closets, and a sleeping porch, all arranged as shown in the plan. It is interesting to note that each chamber may be

(Continued on page 65)

Six Months of Flowers from Six Plants

A GARDEN THAT WILL BE IN BLOOM FROM SPRING TO FROST BY THE JUDICIOUS USE OF SIX HARDY VARIETIES
—A DESIRABLE GARDEN FOR THE TEMPORARY RESIDENT

BY GRACE TABOR

Photographs by Nelson R. Graves and others



A bush form of clematis (*Davidiana*)

A GARDEN need be neither large nor elaborate in order to produce bloom from the time of the last frost of spring well on past the time of the first frosts of autumn. Six plants will do it—and even the smallest garden space affords room for this small number. Rightly selected, these will begin the floral procession in April and continue it into November—which, being eight months instead of six, is good measure indeed, pressed down and running over. And every one of the six is hardy, requiring only to be planted and let grow.

In the order of their advance they are as follows: April, *Adonis Amurensis*; May, *Iris Germanica*; June, *Paeonia officinalis*; July, *Phlox paniculata*; August, *Clematis Davidiana*; September, hardy chrysanthemum. Of course none is confined to the month to which it is accredited, the bloom carrying over in almost every case to the month following, and sometimes longer.

The earliest of all is the pretty "bird's eye"—the perennial cousin of the annual "pheasant's eye"—of which the finest variety is *Adonis Amurensis*, a native of southeastern Siberia. Coming from a cold and less kindly clime, this blooms very early in the latitude of the Middle States, opening its first broad yellow flowers in April, and continuing to blossom on into June sometimes. The foliage of all the members of this family is finely cut, and masses of the plants are lovely even out of bloom, because of its decorative effect. Its height averages one foot. Use it as an edging before tall growing plants or in masses or clumps, if more than a solitary plant is possible. Give it either full sun or partial shade, in any good soil. It has a preference for that which is light and moist and it fancies rocky places, but these are

not essential conditions for its satisfactory growth. Plants of this are a much surer way of obtaining it than propagation from seed. Indeed, it is doubtful if seed can be obtained. Fall planting is, of course, the best.

Following the yellow of *Adonis* in April comes the deep rich blue of the old fashioned "flag" in May—if a blue variety is chosen. This blue flag of old gardens and dooryards is too familiar to need more than a mention; usually it is the true *Iris Germanica*. Hybrids of wonderful beauty are now offered, however, so that some other color may be selected if one chooses. These are catalogued by dealers under names of their own bestowing, and choice must usually be governed by the description. *Souvenir* is yellow with brown-veined falls, *Florentina alba* is pure white, *Shakespeare* is yellow with carmine falls, and *Lohengrin*, a new introduction, is a giant with pinkish flowers said to be five inches across.

Iris will grow practically anywhere where the sun shines. Moisture is desirable, but not essential, as some suppose. Plant the roots or rhizomes flat in the ground in the autumn—that is, in September or early October—cover them one-half their diameter, and mulch the ground with two inches of leaves as soon as it freezes, for the first winter. Remove this mulch early in the spring; otherwise it will encourage premature growth of leaf which late frosts will nip.

June brings the fragrant and dear old "piney" of old gardens—with as many kinds of flowers as one may choose to have varieties of the plant. There are over a thousand named hybrids of the double flowered form at the present time, beside the many less desirable single varieties. *Paeonia officinalis* is the earliest blooming kind, its flowers opening in late May usually and continuing into June. Of this there are white, pink and dark crimson varieties, according to taste. Choose always double flowered forms, as the blossoms of these last much longer than the single, both on the plant and cut.

Peonies will grow almost anywhere, but they grow so much



With the coming of June the peonies open. One of the earliest blooming and most handsome varieties is *officinalis*



Why are the hardy chrysanthemums not more popular? One can get excellent results from pot-grown plants set out in May



Iris Germanica offers beauty in both color and form, and is to be especially desired because easily grown



The different phloxes lend themselves admirably to mass effects. A good white form of *paniculata* is *Jeanne d'Arc*

better where things are to their liking that it is well worth taking pains to give them what they want. For one thing, they are greedy; therefore, the soil where they are to grow should have plenty of enriching material worked into it to a depth of two feet or more. Cow manure is probably the best fertilizer for them. Put a dressing of it around them in November every year, and work it down in the spring. Give plenty of water always and choose a deep, rich, moist soil for them if possible. They will do well in partial shade, holding the color of their flowers better there than in full sun. Use singly like a shrub or mass them in long rows bordering a path or walk. Do not disturb them after they are established. Unlike most perennials peonies do not need dividing and transplanting every third or fourth year, but may remain for almost any number of years untouched. Roots should be planted in September and should not have their crowns covered with more than two inches of earth.

Phlox is familiar to every one, being a general favorite; like peonies, phloxes may be had in an infinite number of colors and varieties, most of them being hybrids of, or forms of, *phlox*

paniculata. In choosing, be very careful not to get the magenta reds and the scarlets both, for the colors are intolerable together. Indeed, the magenta shades clash with pretty nearly everything else in the garden. Each nurseryman has his own list of hybrids usually, the same as with iris, so that it is difficult to say that any particular one is best. A good white is *Jeanne d'Arc*, another is *Miss Lingard*; of pinks there are *Elizabeth Campbell*, a salmon shade, *Peachblow* and *Mozart*, the latter nearly a white, yet having a salmon tinge; and then there is *Coquelicot*, a blazing scarlet, and *Siebold*, which is brighter still.

Phloxes should be planted eighteen inches apart when they are massed. One plant is lovely, but a group of from six to twenty, in one color, is gorgeous! Cut the heads

away as soon as the blossoms fade and prolong the period of bloom by not allowing the plants to go to seed. Any soil will grow them, but rich, moist soil will give finer plants and bloom. Dig plenty of well rotted manure into the ground where the plants are to go, and reset the old plants every third year, separating each clump into two or three so that the roots may have room to

(Continued on page 65)



The yellow flowers of the adonis are among the first to open in the spring

Modern Bathroom Accessories

WHAT MAY BE HAD TO FURNISH COMFORT AND SERVICE AND ADD TO THE CLEANLINESS OF OUR BATHROOMS—CERTAIN ENGLISH IDEAS

BY LYDIA LEBARON WALKER

Photographs by the author

THE modern bathroom is somewhat of a tyrant. Its immaculate character proclaims and protests against every spot. There is something dogmatic and insistent about its cleanliness. It has a psychology of its own, and the household must be on the alert to live up to it. If advances have been made in its decorative features, presented in a former article, the same is true to even a greater degree of its accessories. Without attempting to designate everything that ingenuity has devised in this regard, it will suffice to take up a few of the newest ideas that seem particularly appropriate and happy in their conception.

It will clear the way at the outset to say that in the accessories the touch of color is absent. One must look for that elsewhere. All is white. It is only in the wall treatment, rugs, towels, etc., that there is any color. For the contrasting whiteness there are psychological and practical reasons. Whiteness and cleanliness have come to be almost synonymous, and if cleanliness be absent white is its instant revealer. There is a fancy just now for having fixtures and accessories of white celluloid; and, indeed, it is the correct finish for everything to which it can be applied. Large objects, such as polish boxes, taborets, stools, etc., now possess this finish, which is even more chaste than white enamel. The latest towel rods are of this substance instead of glass.

If one's hands are not quite as precious as those of Kubelik, one is justified in giving them the best attention. Certainly there is something very inviting about the chaste daintiness of the snowy manicure lavatories which are now used. The little bowls are just large enough for one's fingers. A single faucet commands both hot and cold water. Slender

day, could not fail to be far from agreeable even to the best of servants. The new clothes bags obviate these difficulties. As will be noticed, the round canvas bag is suspended from a neat circular holder provided with fastenings. There are two bags. When one is full it is simply detached and sent to the laundry, the other taking its place. This method does away with any handling of soiled clothes in the bathroom. It is one solution.

There is another new idea applied to the same subject. It is neither basket nor bag, but rather a cabinet, in form and size not unlike the conventional music cabinet. Spring doors in the upper and lower sections, open at the top to admit clothing and at the bottom to release it. There is no further handling than simply to tumble the contents out on the floor. As intimated, the doors close automatically and remain so when not in use. In addition,

supports further emphasize the note of daintiness. These arrangements are not only the newest but the most exquisite for the boudoir bathroom. Naturally many ladies prefer having the services of the manicurist at their homes, and this may readily be done when such perfect provision is made.

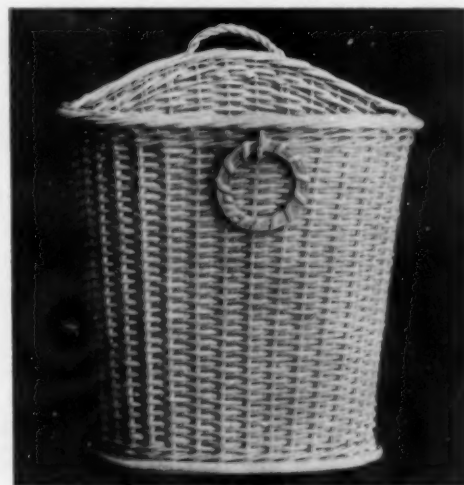
To pass from the hands to the habit, from cuticle to clothes, is an easy transition; so we turn next to the new clothes bags. The old-style clothes basket that has seen such long service in so many bathrooms, has never been entirely satisfactory. As a necessity it has been admitted on sufferance. At best it could hardly be called particularly sightly, and it had the additional disadvantage of being too often in the way. Moreover, the reaching down to the bottom of it and fumbling and tumbling soiled clothing preparatory to the family wash



A removable seat which may be hung in the bath tub is both convenient and practical



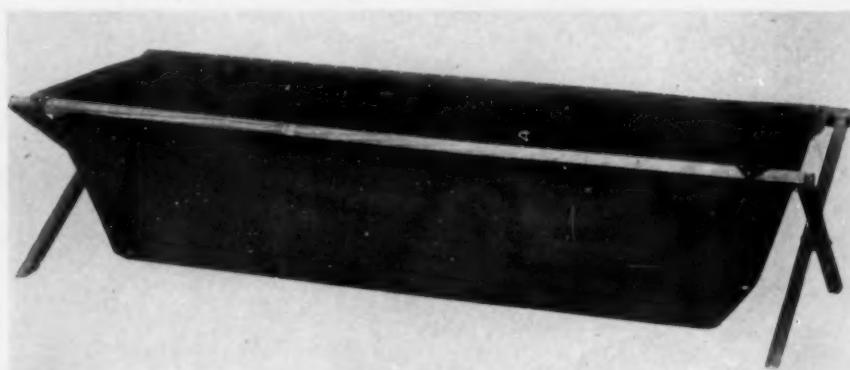
The wicker chair covered with a large bath towel is an English idea



The English consider a waste paper basket a bathroom accessory



A canvas bag makes a convenient receptacle for soiled clothes

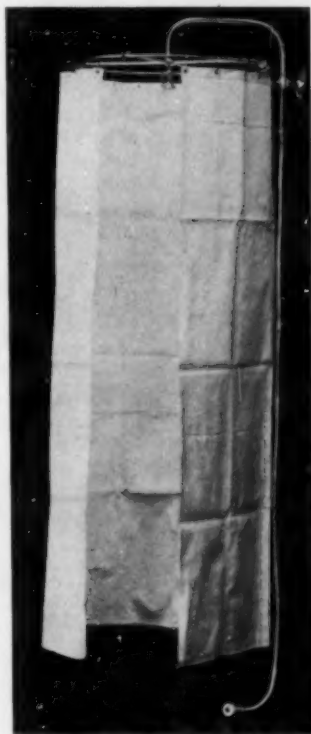


Especially in summer camp or cottage the folding bath tub has much to commend it

tion to its utility, the cabinet has a certain decorative value. While the smooth top will look better in its plain simplicity without being put to any particular service,

ice, it will be found available for additional "shelf room" upon occasion. Probably if one were to choose between the cabinet and the hanging bag, he would select the latter if the bathroom were small and the former where proportions are more commodious.

Other dainty white accessories are the corner stool, the shoe polish box and the flower stand. As conventional chairs are out of place in the bathroom, even assuming that there will be room for them, the corner stool is a tasteful substitute. Its triangular shape permits it to fit into any unused corner without taking up any appreciable space. To sit down while putting on one's stockings seems to be necessary in the absence of gymnastic training. As to the shoe polish box, at first sight one might be a trifle dubious about making anything so immaculate the receptacle of a substance so—shall we say "smudgy"—as shoe polish. Yet the whiteness of the box is its



This form of portable shower is thoroughly satisfactory

salvation, showing every spot and stain which must be removed.

The flower stand is the only strictly decorative accessory considered in these

stalled, should it be a fixture? There is nothing in particular to "fix" it to. Obviously a portable bath is preferable where space is an

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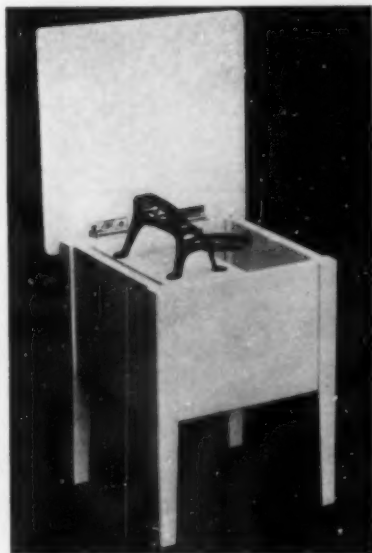
paragraphs. Plants, however, are now considered correct decorative touches in bathrooms. The ancient Greek idea is enjoying a revival. Palms, ferns and

rubber plants are particularly appropriate. Since this is true it is no wonder that the taboret illustrated has been designed especially to meet the requirements. Placed by the window with its burden of greenery it adds a refreshing touch.

Some one may say, "You are considering everything but the bath; surely the bath is a somewhat important element in a bathroom." To which we might reply that the bath is not an accessory, but a fundamental. No doubt a bathroom without a bath would be a very amusing anomaly. Nevertheless, it is conceivable that under certain circumstances, such a condition might exist. Consider, for example, some small, new summer bungalow, pitched in a retreat, which, however attractive, lacks plumbing facilities. Often the rooms are limited to very few. Some cubby-hole somewhere must be reserved for bathing. Very well. Suppose we have the place, how about the bath? Suppose one is in-



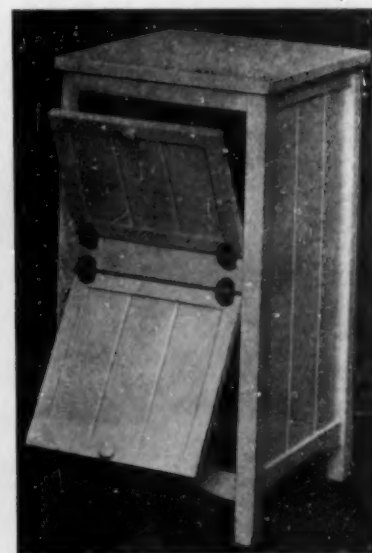
For growing plants in the bathroom a white stand is obtainable



The shoe polishing box need never be an unsightly object



A triangular stool fits readily into corners and is an excellent substitute for more bulky chairs



Upper and lower doors render the soiled clothes cabinet desirable



Up in New England where the formerly traveled highway leads past once frequented roadside taverns now unpatronized, is a fruit country that need not yield the supremacy in apple growing to the West

Adventures with an Apple Orchard

BY JOHN ANTHONY

Photographs by the author

[The same fever that drove the forty-niners gold seeking is to-day impelling many men to try farming. Often pitifully unfitted in mind and body to do the work properly, they soon lose their enthusiasm and fail dismally. But there are many golden opportunities for the able and earnest, of whom Mr. Anthony is one. He has succeeded brilliantly; how he did it is told succinctly in these adventures, of which this is part one. The conclusion will appear in the April issue.—EDITOR.]

THE "why" doesn't matter. It is, the reason that makes you want to leave the city. We didn't fit, city life and I, and it was daily becoming more irksome to get up in the morning to face another day.

My ancestors had come from New England and it was to that country that I made my way. Where the hills rise from the valley of the Connecticut, I knew a region of forgotten farms—a lovely place, the loveliest that I have ever seen, and yet it had been overlooked. Farms were for sale for less than the value of the buildings. Houses could be bought for less than the worth of the land on



A tent was pitched at the end of the orchard to be right on the ground to gain experience

which they stood. The place was dead, the sturdy old farmers were dead, or dying. The strong young ones had gone West; only weaklings remained.

Of course there were exceptions among the farms, and it was to one of these that I made my way. I carried my tent and received permission to pitch it at the end of the orchard and arranged to take my meals at the house. In four weeks I had bought the place. And it is only now that I know what else I bought. Life, hope and faith were not in the deed of the property, but came with it.

But right here I want to make myself clear. I wish to

say that the country offers opportunity to the man who wants to work and work hard; who wants to get up in the morning with the birds and go to bed long after they are at rest; who is ready to fill every minute of the many hours with work and thought and plans. This life is for the man who doesn't like the city because it thwarts him in his wish to work, because it does not give him the chance to develop, to use his energy. If you think that the modern farmer can hang over the fence and talk politics with his neighbor, can drive to town and use half a day gossiping with the loiterers at the store, you want to stay right where you are, and hold down your present job just as tight as you know how. The country is no place for you.

Hiram West was a product of the time when they made men in those hills. His was the strength that looked every man squarely in the eye, on equal terms, yet was not ashamed to admit sentiment of the kind that a less sturdy man would hide. For fifty years Mrs. West had fought the fight by his side and only advancing age made them willing to give over to younger hands the battlefield that they had held for half a century. A family of sons and daughters had gone forth from that hill-top, an orchard of fruit trees had grown up around them, fields had been reclaimed from the forest, a dairy had been built up from cows whose grandparents to the fifth generation had been owned by Hiram West. A comfortable house was theirs, and the big barns were filled to the ridge poles with hay cut from the fields. But best of all was the life which they had made in the home. Every Sunday there was a gathering of every relative within reach; neighbors dropped in and visitors from far and near stopped at the Wests'.

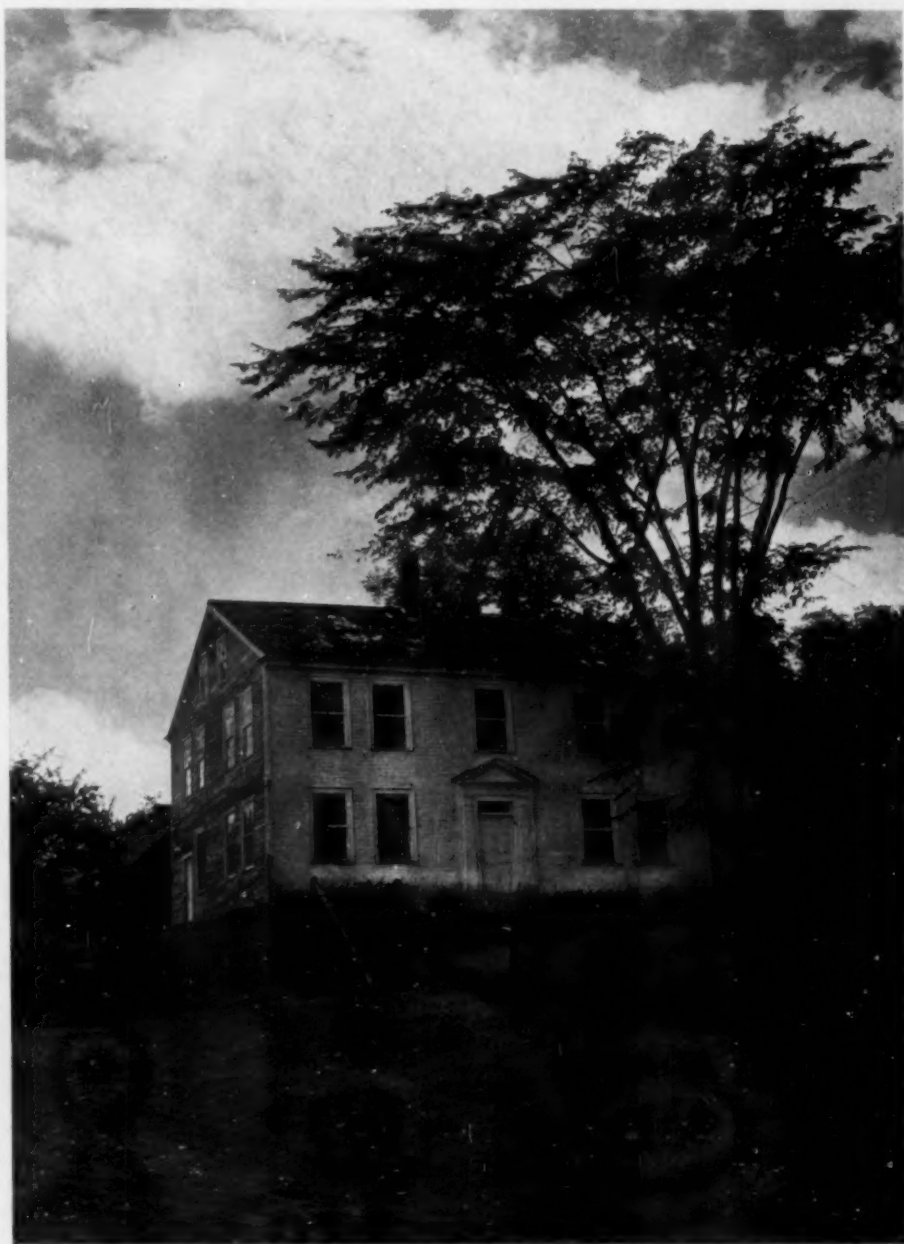
Our first common interest was the spraying of the fruit trees. At the time of the first spraying, just before the buds opened, Hiram had been away fishing. For forty years he had wanted to play hookey at this season, but a New England conscience had held him back. This year he had broken away. So it was

after the petals had dropped, the usual time for the second dose, that my "book" ideas had re-awakened his principles and, together, we began the job. There is much pleasanter work than coating a fruit tree with poison. The mist gets in your face, wanders up your nose, irritates your eyes, is breathed into your lungs and coats you from head to foot. If you take the nozzle end of the game, your sleeves get soaked and your neck acquires an apparently permanent crook, while a pretty solid ache develops in your back if you are on the handle of the pump. The mixing

of the solutions is a messy job. The lime has to be slaked, the sulphur boiled with it, the arsenate added and the whole mixture strained into the barrel. Then there comes the occasional stoppage of the pump, when the strainer on the intake has to be reached and cleaned. This happens just when you are in a hurry and there is a chance given for the stuff to settle and cause more trouble. I know these things shouldn't be, but they are, and I wasn't continuing my course of theory just then. I had spoken of a fine spray and Mr. West had bought a new nozzle. It was his first experience with the misty variety. Hitherto he had used a coarse stream and worked alone. One hand had operated the pump and the other held the hose which squirted a stream of poison over the tops of the tallest trees. Of course there had been some wormy apples, but he had thought them a necessity and it was only when he saw the fine mist settling over every bit of blossom, leaf and trunk that he began to see a light.

"I've been working on the wrong principles," said he. "I have been trimming my trees up in the air, for I could always squirt over them and the boys could reach the apples with the tall ladders. Now I see why they are always saying 'Keep your trees low.'"

And right here I got my first lesson in trimming trees. I learned the necessity for keeping them a manageable height. Not because I had read it, not because I was convinced by sound arguments, but because I had tried to throw the spray over tall trees. Here, too, came my first dawn of hope that I could handle



Farms were for sale for less than the value of the buildings. Houses could be bought for less than the worth of the land on which they stood

this orchard at a profit. Mr. West knew everything and I knew nothing, practically, about the work, but already I had discovered one weakness in his system that I could correct and that would help to equalize matters between us.

"Mr. West, will you give me an old tree to prune?" I asked one day.

The books had been very definite on one point. Have an ideal in your mind. Whether you decide on the low head, the high head, de-horning or heading in, doesn't matter, but you must have a fixed ideal. That has been a sad hindrance to me ever since. I have hunted for that ideal, hunted among my high trees

to pick. A low tree saves work and therefore money. Sun and air must get to every apple on the tree if it is to have size and color. And size and color mean added value. A tree is most symmetrical that has three or four scaffold limbs, or main branches, which support the smaller ones that bear the fruit. These scaffold limbs divide and subdivide as they extend from the trunk of the tree. In trimming an old tree you want to bear this in mind and come as near as possible to these conditions.

Remember, then, that the fruit must have sun and air, the main limbs are best reduced to three or four and the high tree must be lowered. None of these things has to be done the first year,



Where the hills rise from the valley of the Connecticut, I knew a region of forgotten farms—a lovely place, the loveliest I have ever seen—and yet it had been overlooked

and sought it in my low trees, but I have not yet found a symptom of it. Maybe it comes only in very young trees, but anyway it has troubled me so much that most of the trimming of the trees was handed over to others, because I was hunting, always hunting an ideal. My problem was really simple. It was to bring those trees down to manageable height, and to bring them down by such methods as would allow them to keep on bearing meanwhile. They must feed me and clothe me while they were coming up, or rather down, to my theories.

I know very little about trimming apple trees, and I speak with much diffidence on the subject. But there are certain general principles that seem to be common sense. The tree must be kept low, or brought low, if it has grown up in the air. Not because it looks prettier, but because it is easier to spray, to prune and

but all must be borne in mind, as the result to be obtained in two or three seasons' work.

Conditions vary so much that it is impossible to give any rules by which to trim a tree. The shape of the tree, its vigor, the tendency of the variety, the surrounding trees, the lay of the land, all have to be considered. I cut back big, healthy trees to a mere fraction of their original size, because they were shading others of more valuable varieties. My theory was that it was better to take the chance of developing a low tree where it would not shade the other tree, than to cut it out entirely. I have no authority for this, and perhaps even additional fertilizer will not make up for the drain on the soil of two trees too near together. Writers tell you that it is better to have one symmetrical tree,

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What is Meant by Soil

THE EXPLANATION OF A MUCH USED BUT LITTLE UNDERSTOOD TERM
HOW TO TELL WHAT KIND OF SOIL YOURS IS AND HOW TO TREAT IT

BY FRANCES DUNCAN

FOR gardening purposes the earth's crust has two layers—the top soil and the subsoil.

Garden books will advise "clayey soil," "loam," "light sandy soil" and the like, and the would-be gardener looks at his patch—which to him is only plain "ground"—and is quite at loss to know its variety. Yet to attempt a garden with utter ignorance of the soil is like raising children with a cheerful indifference as to diet. Soil, after one gets a bit used to it, is vastly interesting.

The portion of the earth's crust which chiefly concerns the gardener is, as I have said, its two upper layers. Into the top layer, decaying wood, leaves and animal matter have been incorporated, plough and harrow have broken it and the roots of plants can feel their way about and find something to eat.

The next layer, the subsoil, has been but slightly affected by this process, and one of the great uses of the new farming is to deepen the top soil, extending it down into the subsoil and so enlarge the resources of the plants, for the depth of the top soil is usually the depth to which the land has been ploughed.



There are four ingredients of soil: sand, clay, gravel and humus; and it is the proportion in which these are mixed that determines the kind of soil.

THE INGREDIENTS OF SOIL Humus, which is greatly valued by plants and gardeners, is animal or vegetable matter so completely decayed that it is ripe and rich for plant food. Dark, black earth is sure to have plenty of humus in it.

Sandy soil is light and crumbly, so that a handful of it slips through your fingers like granulated sugar—even when it is wet, it has no adhesiveness. Sandy soil holds water poorly, and for this reason bulbs are set on a cushion of sand to prevent their rotting: the water slips through the sand, the roots go down in search of it and the bulb itself keeps dry.

Sandy soil is the boon of the early gardener; it is warmer, ready for ploughing weeks before clayey soil, excellent for all the early vegetables, for tea-roses, mignonette, bulbs, poppies, bush fruits and strawberries, but not good for oats, wheat, rye and deep-rooted grains.

For improving sandy soil stable manure is one of the best materials; it not only adds the valuable humus but improves the texture and makes little reservoirs for water where before there was none. Leaf-mold is next best; it is possible to grow trees on a soil of pure sand and leaf-mold. The so-called green-manuring helps it, as do cover crops left on all winter and ploughed in in the spring. Because the defect of sandy soil is its leachiness (the extraordinary facility with which water will pass through it), gardeners treat it very differently from a clay soil. Instead of autumn ploughing, they plough in early spring, and give fertilizer and manure just before planting, lest the rains send this down to the subsoil before the plants can seize it.

Clayey soil is stiff and sticky, and the most difficult to manage of all the soils. In the spring it has to be ploughed at the psychological moment, or it will be lumpy and require much harrowing before it is in shape for sowing. It is stiff, cold; and the water doesn't get through it easily, but lies in puddles on the surface. In a drought it bakes and cracks. And yet a clay soil has its advantages; on it can be raised strong, heavy crops—oats, wheat,

hay, apples—and in the flower garden, dahlias, zinnias and hybrid perpetual roses.

To improve a clayey soil, sand is excellent; gravel, peat, leaf-mold and even coal ashes will improve the texture. Leaf-mold and peat add richness as well as bettering the texture. Liming will make the soil of better quality; fall ploughing and a subsequent leaving of the land to "weather" is excellent for a clayey soil. Manure may be carted out early and spread on the land to leach in slowly.

A loam is a workable and, as far as plants are concerned, a most digestible mixture of clay, sand, silt and humus. A "garden loam" is a well-worked soil, in which all the ingredients are nicely balanced and, by years of cultivation, is well broken and easily assimilated. When one or another of the ingredients predominates, it gives its name to the loam. Thus we have a sandy loam which, to be exact, is loam that has sixty to seventy per cent. of sand; if it has as much as seventy to eighty per cent., it is called a "light, sandy loam," but still contains enough of other ingredients to modify the defects of a sandy soil and keep it still a "loam." The endeavor of a gardener on sandy soil is, by manuring and cover crops, to convert it into a sandy loam.

A clayey loam by the same token has sixty to seventy per cent. of clay; a heavy clay loam seventy to eighty per cent.

Loams naturally have a wider repertoire of crops—they are "all-around" soils. They are easier for the inexperienced gardener to handle than more positive soils; they can be "all things to all plants." A loam will have sand enough for strawberries and yet clay enough for apple trees, and the best fertilizer for a loam soil depends upon which ingredient predominates and upon what you want to grow. Sometimes, as Dean Hole points out, a gardener's salvation lies at his very door, and the very remedy his soil needs is near at hand; thus a muck swamp may not be far off from clay soil which needs its ameliorating power.



Aside from the feel of it and the look of it, there are mechanical tests which are not so difficult to apply.

First, get a fair sample of your soil from several different places; say a quart. **ANALYZING THE SOIL** Weight this and put down the weight.

Next put the soil in a pan at the back of the stove and let it stand until thoroughly dry; but it must not be allowed to burn. Weigh again, and the difference between this and the first weight is the amount of water the soil holds.

Now put it in a hot oven for three or four hours; then weigh again. The humus will have been burnt, and the difference between the second and third weights gives the amount of humus.

Now in your pan is clay, sand and silt. Put this soil in a wide-mouthed glass bottle or jar—a two-quart jar will do; a larger one is better. Fill it with water, and then shake it violently. Then set it down on a table and watch.

The sand or gravel, being heaviest, will settle first; next the silt, while the clay will remain in the water for hours. After a day or so look at your jar and you will see—not sharp divisions, but yet the different elements separated definitely enough to give you a fairly good idea of the proportions. Knowing this, one can go at one's gardening intelligently, which is a great advantage to the garden!



Everyman's Poultry Plant

WHAT ANY PERSON CAN DO WITH TWENTY HENS ON A SMALL LOT, BY SPENDING FIFTY MINUTES A DAY IN CARING FOR THEM—BREEDS, HOUSING, AND THE PROPER FOOD

EVEN in these days of scientific poultry raising with reams of chicken literature on every hand, there are some people who labor under the delusion that a few hens can be made profitable if they are penned up in a neglected corner of the back yard and fed on scraps from the table.

Feed them any old thing and they ought to lay, is the idea of the beginner poultryman who fails to realize that chickens to be good egg producers must have strict attention paid to the quantity and quality of their food, as well as to the comfort of the quarters in which they live.

For the average family in the average town, a flock of twenty fowls will be found a paying investment if the proper care is taken of them. The facts and figures following are the result of several years' successful chicken raising on a small scale, and under conditions that are unfavorable rather than otherwise, for the lot on which my chicken house is situated is quite small, so that there is scarcely as much room as is usually considered necessary. All of the fowls in the flock are Plymouth Rocks, which for general use, that is for the table as well as to lay eggs, are as good as if not better than any other kind. Rhode Island Reds are considered more desirable by some people, while others prefer Wyandottes or English Orpingtons, but as an all-around utility fowl the Plymouth Rock can always be relied upon. The "egg-machine" varieties, as Leghorns and chickens of the Mediterranean class are called, are not practical, as they are too small for table use, and in the twenty-hen proposition this is one of the important points to be considered.

A small plant of this sort can be started in several ways: with a setting of eggs, with day-old chicks, or with young fowls of five or six months. In the last two cases the trouble and uncertainty attendant on hatching the chicks are done away with entirely, and while the pullets will cost about one dollar apiece and the day-old chicks only a few cents, the difference in the price is counterbalanced by the fact that the pullets will begin to bring in returns immediately, while the chicks must be fed for several

months at least before they even begin to pay for themselves.

As chicks need no food for forty-eight hours after they are hatched it is quite possible to ship them for considerable distances, so that this industry is beginning to assume large proportions, and there are many poultrymen who make a business of incubating and selling the day-old chicks in various quantities.

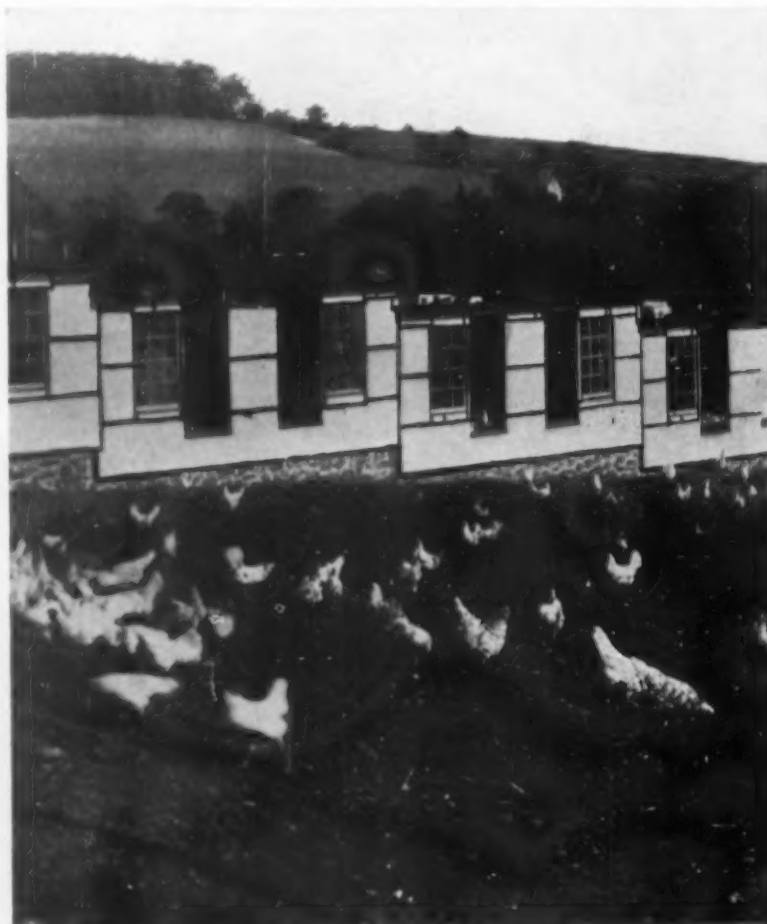
The space allotted to this twenty hen flock and enclosed by wire netting is 40 x 24 feet, which includes that occupied by the house. The latter is 8 feet long, 4 feet wide, with a height of 4½ feet front and 3½ feet in the rear. Opinions differ as to the relative merits of canvas or board fronts, the size of windows, ventilation, etc. I have found that ventilation without draft, sufficient light and all of the sunshine that it is possible to have, are the important requirements of a chicken house regardless of size or materials.

The house should by all means face south or southeast, in order to get the proper exposure, and it should be so arranged that the entire front, or most of it at least, can be left open, exposing the interior to the direct rays of the sun. The front of my house is of boards attached by hinges at the top, so that it can be kept at any angle. During the day it is turned up as far as possible, while the width of the opening at night depends on the temperature and weather. This hinged front, when closed down, comes only within eighteen inches of the ground, the remaining space being filled with a stationary board which serves as a further protection from drafts and forms a more or less effective barricade against rats and other four-footed depredators. In the back of the house is a small window with glass panes for furnishing light on dark and rainy days.

Of course for larger houses fronts of canvas instead of board are much better on account of the difference in weight and also because they

are less expensive, and except in parts of the country subject to extremely low temperature the canvas-covered openings are thoroughly satisfactory.

Absolute cleanliness in house as well as in the food is one of the important rules for the successful chicken raiser, and unless fowls are kept clean and comfortable they will not be good layers. The dropping boards of course must be cleaned regularly. If there is a cement floor the hose can be used to good advantage on the boards as well as the floor, and the entire house should be whitewashed several times a year. In addition I use kerosene on



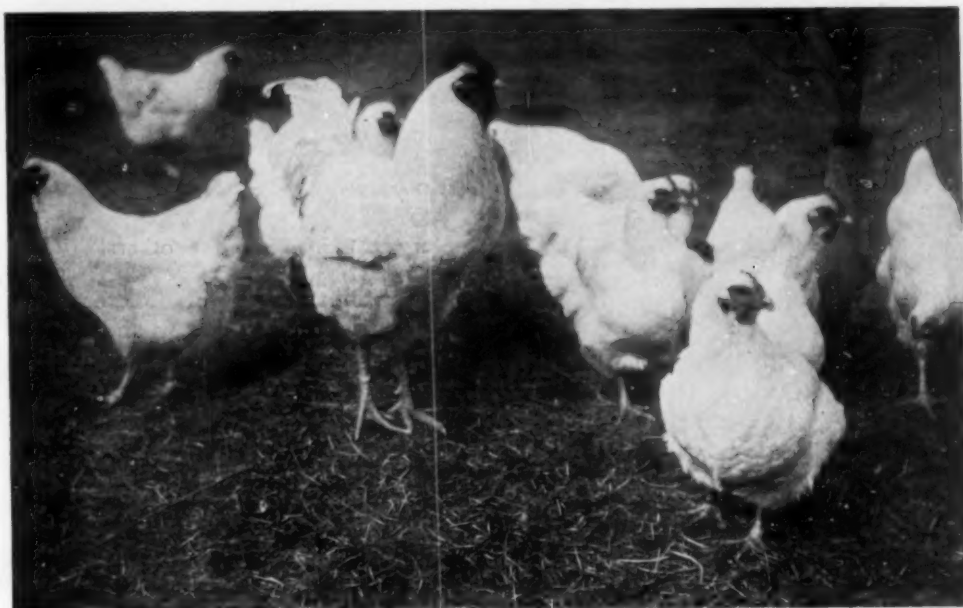
Plenty of exercise out-of-doors is essential to the welfare of chickens, and they should be given a wide range if possible

the roosts at frequent intervals, putting it on with a brush so that it will permeate all of the cracks. In using kerosene it should be put on as early in the morning as possible, thus giving it time to soak into the wood before the chickens go to roost, otherwise it is apt to make their feet sore.

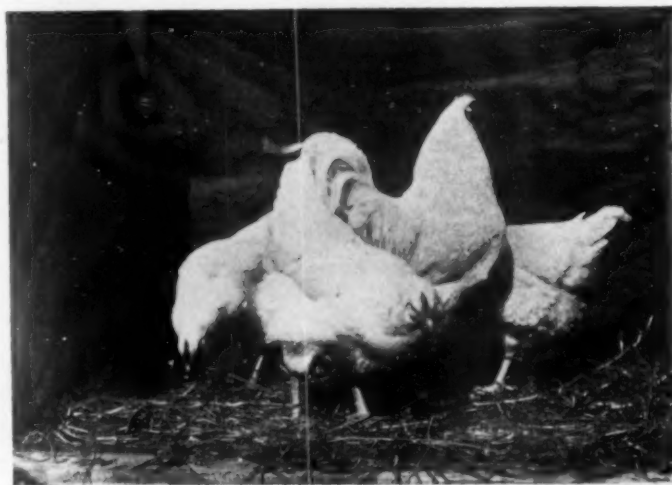
As to food, I consider cleanliness and regularity just as important for fowls as for human beings. They expect to be fed at certain times, and they should not be disappointed. If the best results are to be had in the number of eggs as well as the general condition of the chickens, the hours for their feeding must be regular and not just when anyone happens to think of it. Another point in which the amateur is often mistaken is the feeding of promiscuous scraps from the table, or to be more exact, from the garbage pail—he usually thinks anything will do, from crusts of bread to highly seasoned salads and rich desserts. To many an economical soul it seems far better that the chickens should have such scraps than that they should be thrown away and apparently wasted. I am careful to let the chickens have nothing from the table except the left-over portions of salads and green vegetables, and then only when any dressing or seasoning has been washed off. The condiments that go into most of the food prepared for the table are decidedly harmful to chickens, and they are much better if they do not eat anything that has been spiced or seasoned.

As everyone who has ever had the care of chickens knows, wheat and bran with a little charcoal mixed in, a liberal quantity of grit and shell, and some corn during the winter season are the proper foods for fowls. I find that the cost of feeding my twenty hen flock averages three dollars a month, or ten cents a day. A sack of wheat costing about \$1.90 will last almost one month, a sack of bran at \$1.30 lasts three months, while of charcoal, grit or shell I use about 50 cents' worth each month. Twice a week I buy a pound of a cheap cut of meat, have it ground fine like Hamburger steak and mix it with the mash, and in every mash that is made I put a handful of charcoal so that the fowls eat it regularly whether they like it or not. Grit and shell are kept in a small open box in the pen where the hens can get at it when they choose.

Unless chickens can take a good deal of exercise they are bound to get fat and stop laying. When they are kept in a pen and not given free range of the yard or lot this is a fact that should not be overlooked, and a scratching pen is a real necessity. I have a pen 8 x 10 feet in size, the bottom covered with several inches of



White Plymouth Rocks were found to be a very serviceable general purpose fowl, being excellent for table use as well as egg production



A small sheltered pen in which straw is scattered furnishes yarded fowls with a place to scratch

straw into which the wheat is dropped and raked over, so that they are obliged to scratch for it or go hungry. This pen is under cover, as is also the dust bath, another necessary adjunct to every chicken yard, for both would be quite useless if they were not protected from the wet. Even though the hens get considerable exercise in scratching, it is much better to give them the run of the yard for at least a short while each day, and I always let them out of the pen for fifteen or twenty minutes in the middle of the day or late in the afternoon. A certain amount of green food is almost a necessity, and for a great part of the year they can pick at the grass during their few minutes' outing. In case there is no grass available chopped alfalfa or kale or cabbage, any sort of green in fact, is good, and it is best to give them this green food if possible in the middle of the day. When such food is not to be had I feed them very sparingly at that hour, and contrary to the custom of many successful chicken raisers, I give them wheat in the morning and dry mash at night. This provides them with exercise early in the day and sends them to roost with full craws that they do not have to work for, and so far I have no reason to think that it is not the best method.

An abundant supply of fresh, clean water is still another absolute necessity in the chicken yard.

I use crocks holding one gallon each, made of white earthenware, so that it is easy to see that they are perfectly clean, and they are filled with fresh water twice a day. During the summer I occasionally put a little copperas in the water just by way of precaution.

One more item often overlooked by the novice in poultry raising is that the hens should be kept quiet, and not disturbed or frightened. They are silly things, with little sense at best, and are easily alarmed, a condition that is almost certain to interfere to some extent with their laying. If hens are kept clean and comfortable, quiet and contented—for there is such a thing as content in a chicken—and are properly fed, there is no possible reason why they should not lay regularly, if not phenomenally.

During the last year my twenty hens laid 2800 eggs, an average of 140 apiece, and this of course included the moulting period and also time wasted by a number of ambitious hens that wanted to sit and had to be broken of the desire. My family of three enjoyed the luxury of new-laid eggs the year round, and we sold

(Continued on page 68)

The Planting Month for Roses

MARCH IS THE MOST SATISFACTORY TIME TO START ROSES—THE MOST SUCCESSFUL RULES FOR CULTURE, PRUNING AND PREVENTION OF INSECT PESTS

BY H. S. ADAMS

Photographs by Nelson R. Graves, Mary H. Northend and others

VERY likely there will always be a difference of opinion as to the proper part of the year in which to plant roses. "Late autumn," says one authority, "is the best time for setting out hardy roses," while the next expert will as stoutly stand up for spring. The preponderance of opinion, however, is in the direction of spring; and this is based on such excellent premises that the general run of rose growers should dismiss from the mind all thought of setting out their plants at any other season.

March, to be more specific, is the planting month for roses in the neighborhood of New York. In central Connecticut we plant the latter part of March or early in April. The great point is to get as early a start as possible in order that the roses may be fully established before the summer sets in. The hot summer, save in a few favored sections of the country, is the trying time for roses, by comparison with the English conditions, and the only way to grapple successfully with it is to plant as soon as the ground can be worked.

This rule, of course, applies to the so-called "dormant" roses. These are field grown. When received, they have shown no sign of awakening from their long winter sleep, and the earth has all been taken from the roots. Pot-grown roses, which have come from under glass and are in full foliage, are planted later. Their roots are in active feeding trim and they do not need so much time to get established in their new quarters, nor are they in so good shape to stand the cold of early spring. For that class of roses, which many prefer, the best rule is to set them in the ground when danger from frost is over.

Generally speaking, roses will grow in very nearly any soil that is not too loose or excessively sandy. If you have soil that does even tolerably well with vegetables, grass or grain, you can cultivate "the queen of flowers." In many places the ordinary garden soil, without special preparation, will grow roses that are good enough for any one who is not striving for "points" at an exhibition. But this does not mean that soil is something to be considered too lightly. Roses like a rich, deep loam which has both clay and sand in it. Hybrid perpetual roses will do well in nothing else, though teas sometimes will thrive in soil in which there is considerable sand or gravel.

First pick out the spot for the rose border or garden; the soil can be made more easily than favorable site conditions. The hot sun of summer is one of the things climatic to be thought of. Nevertheless roses must have plenty of sun; no shade, but shelter

is their demand in brief. Therefore choose for them a place that is really warm and sunny and at the same time well protected from the bleak winds of winter and the strong winds of the other seasons. Protection from the north and west may be obtained by a hedge, not too near a wall, a windbreak or buildings; it matters little so that the winds do not have full sweep.

The question of whether to lay out a bed, a border, or a more or less formal rose garden is not so much a matter of one's desire,

or taste, as his limitations. Aside from the all-powerful reason of expense, there are the questions of adaptability to the particular space that the home grounds afford and the time that one cares to give to this branch of garden diversion. Unless one makes roses an out-and-out hobby, and has both leisure and money to ride it, the attempt to create a rose garden of any pretentiousness is not worth while. Nor is it usually best for a small place; as it takes up a great deal of room and, save for a prodigal fortnight or so in June, is anything but showy. Beds would better be avoided, unless incorporated in a general garden scheme. That leaves the border, and this is far preferable for the average home grounds. The border has one distinct advantage that few ever think of; it can be run along the sunny edge of the vegetable garden. What, relegate one's roses to the vegetable garden? Why not? They will thrive there wonderfully, can be cared for easily and you may cut all the blossoms you want with long stems and feel that you are not depriving the dooryard of color. This plan has been tried and it is all right.



In many ways the rose is still queen of the garden and should not be neglected because of cultural difficulties

When the site is selected, soil that by nature is poor must be made fit for the purpose. If hopeless as it stands, don't attempt to compromise with the situation, but resort to heroic treatment at once. Define the boundaries. Then remove all the soil to the depth of two feet and loosen the bottom of the trench with the point of a pickaxe. Next put about a foot of well rotted manure in the trench and fill up with good soil mixed with more manure. Some growers maintain that the surface of the bed, when the soil has settled, should be one inch below the surrounding level; this is in order to catch and hold water. I, however, prefer the slightly raised bed. If the soil does not need replacing, the spading should be at least two feet deep and all stones removed. Also some manure should be worked into the soil, as the rose is a rank feeder—a characteristic never to be forgotten. That the rose does not care for wet feet is likewise true. Choose,

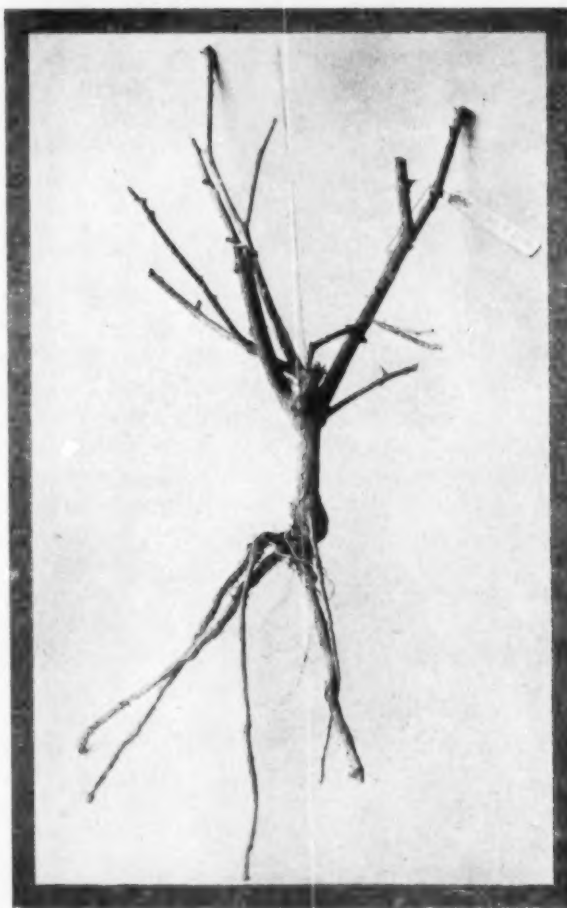
if possible, a well-drained site. If the ground is wet, dig the trench to a depth of three feet and put in a foot of cinders or broken stone or brick; if very wet, resort to tiling.

Alongside of the vegetable garden a single row of roses will answer very well, but in a border placed elsewhere a double row is better. The plants in one row, however, should be opposite the spaces in the other. This not only allows more room for spreading branches, but looks better. Make the border not less than four feet wide and set out the roses one foot from either edge of the border and two feet apart in the rows.

Roses are either on their own roots or are budded on manetti or some other wild stock. In the case of the budded roses, plant so that the graft joint will be three inches under the surface of the ground. This minimizes the trouble that is likely to arise from the stock throwing out suckers that, if allowed to grow, will sap the strength of the graft. When a sucker does appear, run the finger down under the soil to see whether it belongs to the stock; if it does, press it off. Now and then, even in the best regulated gardens, the graft will die and the stock thrive mightily. In that case do not despise the latter. It may be a double rose and it may be single, but, if transplanted to some corner of the grounds, will be a good producer of June color.

This precaution as to depth observed, fill the hole with water and let it soak in. Then, holding the plant upright with the left hand, spread the roots carefully with the right and sprinkle some fine soil over them. No manure should touch the roots, but it should be near enough for the new feeding roots that will soon be formed. Pack the soil firmly around the plants and finally remove any dead wood and cut the good canes back to three or four "eyes"—as the leaf buds are called. The best way to prune these good canes is to do so down to an outside bud, so that the top growth will be outward.

Thereafter water, if



A good example of healthy dormant stock as received from the grower showing good root development and well-shaped upper growth

necessary, by making a shallow trench around the plants. Fill with water and when the latter is absorbed, replace the soil. After the roses have leaved out and the flower buds are forming, mix one part of hellebore with three parts of wheat flour and sprinkle it on the foliage, but only when wet by rain or dew, as the powder otherwise will not stick. Sprinkle in the direction of the wind, not merely for convenience, but in order to keep the powder out of the nostrils. This will rout most of the insect enemies. For those that appear in August a tea made of tobacco stems is a good remedy. Rose beetles are most easily disposed of by knocking them off into a small can of kerosene.

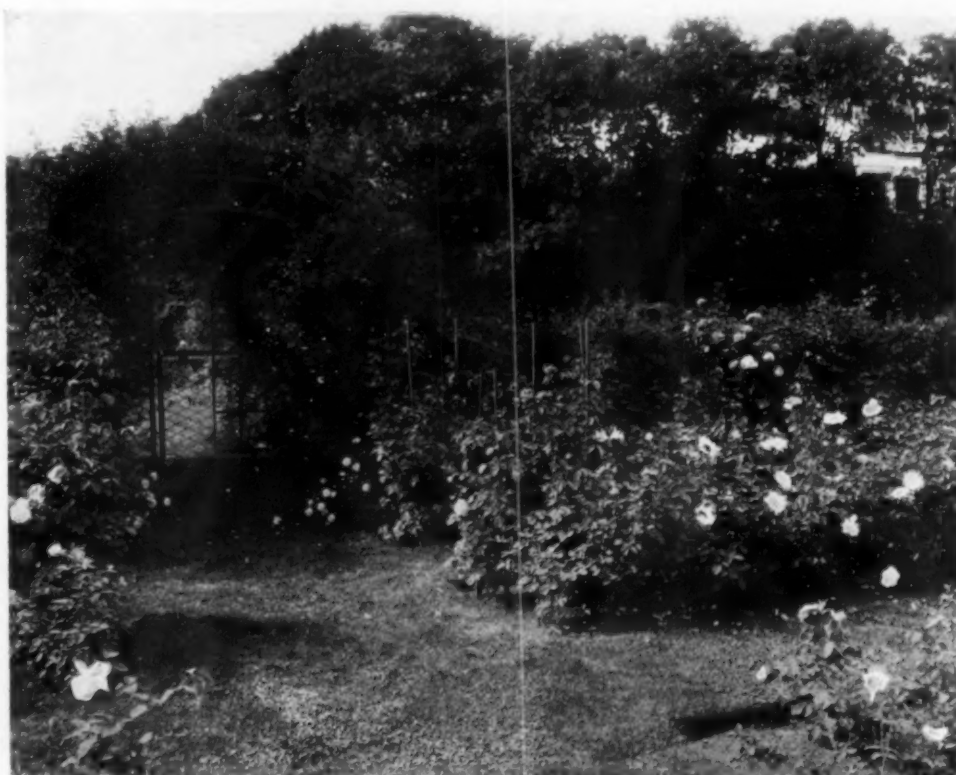
If roses are cut freely and with fairly long stems, the plants need not be pruned in the fall unless they are so long that the wind whips them. In such cases they may be cut down to two feet. This is assuming that stakes are not used; most prefer to get along without them. The pruning time is March, before the sap begins to run. At that time hybrid perpetuals may be pruned as low as six or eight inches and four or five canes. Rigid pruning produces large blossoms. If mere quantity is desired, the canes can be left as tall as three feet. Prune tea roses after the buds begin to swell, and less severely than other varieties.

Most of the hybrid perpetuals, and some of the teas, are hardy in my garden, but I give all the roses a heavy covering of leaves

after the ground has frozen. They also get some tobacco stems as well as manure. In the spring manure should be forked into the ground, but not deeper than six inches. This with the fertilizer originally mixed with the soil and occasional liquid manure during the ante-flowering period, will keep a rose bed or border in fine shape for a matter of years. The best fertilizer is well rotted cow-manure; the next best is from the pig pen. Failing either of these, ground bone or some commercial fertilizer may be employed. These should be used

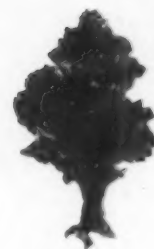
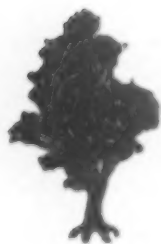
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77)



Where one has the space, there is no adequate substitute for the rose garden with its delicious fragrance and beautiful bloom

The Naturalizing of a City Man



Editor's Note:—The author of this narrative—begun in the December number—had refused to write the story of his experiences in going from business life to a farm. His objection was that the published account taken from his closely written diary would contain nothing of the joy and inspiration he felt in getting close to Nature, and would be merely a matter-of-fact list of happenings with their message lost. He finally consented to write it in his own way, allowing memory and imagination to lend color to those days of struggle which are now cherished recollections. He preferred to hide his identity under the disguise of another person, but the essential facts are true and full of practical information. This is the fourth installment and describes the early activities in the city man's country life. Subsequent issues will give further details of how their problems were met and overcome.

MARCH made the usual blustery entrance and for several days Mantell and his co-workers were practically confined to operations indoors.

During this time the greenhouse was fully appreciated, and every nook and corner of it was crammed with transplanted plants. Even so, space was lacking and ten second-hand sash, after a good deal of discussion, were purchased, at a cost of \$1.50 each, through an advertisement in the florists' paper. The treasury was getting alarmingly low, but as Raffles figured that this investment would pay back probably a hundred per cent. in ninety days, they decided to make it.

They worked in snow and a numbing north wind to get the frame ready, just south of the greenhouse, and put in a layer of spent manure so that the boxes would not rest directly on the still partly frozen ground. This string, or frame, while put together hurriedly and cheaply, was fairly tight, and greatly relieved the congestion in the greenhouse. Into it went the best of the cabbage plants selected for their own use, and several thousand to spare for spring sales. On cold nights they had to cover them over with old bags, boards, some old shutters—it was surprising how much material it took to protect a space 6 x 30 feet. Twice the plants got frozen, but by leaving the covering on to keep them shaded, and sprinkling with cold water, Raffles brought them out of it safely.

A bright, warm Sunday afternoon, early in the month, they spent in turning their regular weekly tramp into a measuring party. Raffles, with the figures obtained, made a plan of the farm, showing the approximate area of each field, so that they would not be going by guesswork in estimating the amounts of manure or fertilizer to apply, or crops harvested. This plan was also of great assistance in figuring out rotation of crops, and keeping track of the farm work.

Squire Hunderson was amused, but interested, at this new proceeding. He said he'd "farmed it for nigh onto forty years and never measured a piece of land yet." But in his generous, jovial way he conceded that it might be a good thing, if any one wanted to farm it that way. "I suppose the old ways are going," he said, somewhat ruefully, "and that they'll be weighin' and measurin', weighin' an' measurin' everythin', same as if it was a factory, an' putting in so many pounds of this and that for every crop they take off. An' they do get some pretty good results down to the State College; but I'm glad—I'm glad I won't live to see it. I've always treated the old farm pretty square—fed her pretty generous, without keeping any count of the platefuls, and she's always paid me back at harvest time—yes siree!"

The Squire was not averse, however, to rendering assistance in any way he could, and was glad to go over the place with them and give his advice as to the planting of crops. He knew which fields had yielded the most hay the preceding season, "just about worth cutting—that's all," he informed them, and these Mr. Mantell decided to leave intact for the present. The garden they planned to put in a spot which formerly had been devoted to it, but which for many years had grown nothing but wild grasses. It was an excellent situation, fully exposed to the southeast, and sheltered to the north and west by the buildings and a strip of woods. Raffles was highly delighted with it. His "department," he said, could ask for nothing better. Two fields to the north and

east of the road they settled on for corn and potatoes, about two acres of each. These fields had grown nothing but hay, and practically none of that, for a good many years. But they had quite a good sod, although it was "bunchy," and both the Squire and Raffles thought there was a possibility of fair crops. Mantell, however, felt rather downcast. He did not see how such poor, run-down soil could produce anything.

While they were looking over the chart of the place, on which the crops had been jotted down, Mr. Mantell seemed to be very much astonished at the amount of waste land it showed. Exclusive of the wood-lots and the land about the house, seven and three-fourths acres out of eighteen and a half, produced practically nothing.

"Why, it does seem quite a lot, when you figure it out," admitted the Squire, somewhat under protest. "But we've all got more or less waste land; of course, most of our pastures are in better shape than that field you've got labeled 'A,' but it does look kind of wasteful, I'll allow—seems to show up more on paper, somehow, than when you just think about it. I wonder how my place would show up."

Mantell smiled, but he resolved right there that here was a problem worthy of considerable attention. What manufacturer, he asked himself, would allow over forty per cent. of his machinery to be idle, or an equal amount of his source of raw material to remain undeveloped, even though it might be a little rusty or difficult of access?

VII.

Two acres of potatoes and two of corn for which to get seed! Mantell got out his catalogues and tried to decide upon the best selections. There were so many "best" that he finally gave it up in despair, and went to Raffles. Raffles advised him to see the Squire, saying that locality and soil determined the "best" variety, and he didn't know what sort they grew around there. The Squire mentioned several varieties, but would not commit himself as to any one of them being the best.

All this rather surprised Mantell. He was not used to dealing with such indefinite and uncertain factors in his former business, where things could be figured out with almost mathematical precision. So he went back to his catalogues again and selected three varieties which Squire Hunderson had mentioned, and one brand new novelty, lauded to the skies, illustrated on a colored plate, said to yield four hundred bushels to the acre, and selling for five dollars a bushel. At first he thought of planting half an acre of each of the four sorts, but this, at catalogue prices, allowing ten bushels to the acre, figured out to just sixty-two dollars and fifty cents. This was a good deal more than the present condition of the bank account would stand, even though there was a prospect of getting eight hundred or nine hundred bushels back. So Raffles was consulted again; with the result that after much discussion, they ordered one peck of the brand new variety at two dollars; two bushels of one of the other sorts at two dollars, and engaged eighteen bushels at eighty-five cents, from Squire Hunderson. This also made Mantell feel quite gloomy, as he was loath to draw the veil over the beautiful mental picture he had of next autumn's potato field, with its record-breaking crop nearly covering the ground, and envious neighbors, including the nonplussed Squire, standing by.

He was very sorry he did not have capital enough to run things in a business-like manner.

The matter of selecting the corn was by no means so difficult, although here again Raffles' opinion did not coincide with the advice given in the catalogues. The result was that one acre was to be planted with selected ears from the Squire's stock of flint corn and the second with a highly praised early dent, which, for the peck required, cost one dollar.

The corn they tested for germination in the greenhouse. Squire Hunderson's, from ears selected by Raffles, showed ninety-six per cent., that from the seedsman sixty-nine. Some of the kernels of the latter were small and evidently unripe, so they decided to plant this extra thick, making the amount bought for an acre cover only two-thirds, and get more of the Squire's.

Mantell was very impatient for the beginning of spring operations, and if Raffles and the Squire had not been there to teach him better, would have begun work while the soil was still wet and pasty. As it was, he was the first one in the neighborhood to break ground, and the rolling over of the first brown furrow gave him a sensation of exhilaration and victory as great as that from any business success he had ever achieved.

The Squire's pair of big grays—a little soft after the winter's easier work—were inclined to rush and fret at first, but soon steadied down as strip after strip of the long-unturned garden patch rolled up and over, and steamed in the bright spring sun. Nor was Mantell the only one to enjoy the scene—the feathered section of the poultry department came out in force, and had the feed of their young (or old, as the case might be) lives on the worms and grubs in the newly turned furrows, which they searched assiduously.

Raffles came over from the greenhouse, where he was transplanting tomatoes, and looked on critically for a few moments. Then he measured the depth of the furrow, dug down into the soil below, and told Mantell to make the man plow deeper. After some argument they got the Squire's man to turning up just a little of the subsoil with each furrow, though he did it under protest, and said "plowin' deeper'n what it had used ter be plowed warn't no way to do."

The Squire had agreed to help Mantell out all he could, but as he found it necessary to plow his own oat fields as soon as Mantell's garden was "fitted," Mantell was obliged to look for help elsewhere. Mantell was very much surprised at the difficulty he experienced in getting any one to help him. Men who for weeks past had seemed to have little or nothing to do, now could not find an hour to spare. Several times he was promised

faithfully by farmers, who did not even let him know that they would not come when the day for which they were engaged arrived. To make matters worse, they found that there was such a poor "stand" of grass on part of the land they had decided to leave for hay, that it would amount to practically nothing. So they decided to plow this and sow it to oats and grass seed, but as a result of his looking into the matter Mantell decided to try one acre out of the three with oats and vetches.

Finally they secured the services of one Jeremiah Fosdick—after a great deal of coaxing, begging and persuading. Mantell was rather suspicious that he had let some other work go to accept this job, and principally out of curiosity to see the place of the city man who was reputed to be doing so many crazy stunts.

Jeremiah was a talker. He seemed to consider his work as merely incidental. He could ask more questions and furnish more gratuitous and useless information per sixty seconds than any

two people Mantell had ever met. He was, however, one of those harmless, good natured, New England rural souls with whom it is next to impossible to get angry. He at once assumed himself so naturally to be upon Mantell's level, and took him so personally into his confidence, that such a thing as being indignant did not occur to the former city man.

Jeremiah finished the three acres of sod land with a walking plow and an odd pair of horses, one white, one black, and harrowed it twice over. The fields he left in "lands." The Squire loaned his seed drill for putting in the grass seed, which cost another pretty penny. They got the oats at the grain store at Priestly, as there

was not time to send away for special seed oats. The Squire's fields were green before Mantell's had come up, which displeased the latter greatly, but he had, of course, been helpless until he could get his ground plowed. He made a red-letter mental resolution not to get caught that way again.

VIII.

The second week in April had come on warm and balmy. The natives were still afraid to plant anything in the garden line, but Raffles was inclined to take some chances. His early peas had been in a week, and he had prepared and sowed quite a good sized bed of onions, while the wise ones shook their heads. When he set out nearly a thousand of the best cabbages, a hundred cauliflower, and a patch of lettuce, the Squire stopped on his way past and said he didn't want to interfere, but that the climate around these parts was pretty tricky, and they mustn't be misled

(Continued on page 78)



Jeremiah, a typical New England countryman, plowed the three acres of sod land



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

Bamboo Basket Lamps

THE lamp shown in an illustration is made of a bamboo basket; the shade of wistaria caning. From Japan are imported a great number of bamboo and wistaria baskets of every shape and size; the variety is infinite. They may be used in a number of ways, as jardinières, scrap baskets, etc. One of the most attractive uses is to have them made into lamps. Fonts may be made to order at a moderate cost to fit any shape or size of basket. These are suitable for gas, oil, or electricity. The low, squat lamp shown in the illustration, is of brown wistaria caning; the shade lined with a brown rajah silk of rich tone. The taller lamp is fitted in a bamboo basket. The tones of the bamboo are almost orange, and the shade is lined with a delightful tone of orange silk. These lamps were finished without fringe, but fringe may be used where it is more effective. It is best to buy white fringe of a good quality, and have it dyed the color of the lining of the shade. By doing so the fringe will be the exact tone of the lining and a more har-

monious whole will be the result. While particularly appropriate for use in the country house, cottage, or bungalow, these artistic lamps are appropriate and charming for use in the informally furnished apartment, so steadily gaining in popularity; for the studio, or for the den of an otherwise formally furnished house.

The price is moderate, a lamp with the equipment for oil, gas, or electricity, made up to harmonize with the color scheme of any room, may be had for \$15, and upward, according to the size of the baskets and shades, and the quality of the silk and fringe used. The lamps shown in the illustration stand about fifteen inches high, without the chimney, which is only necessary where the lamp is made for oil. These lamps cost \$16.50 each.

To Refinish Painted Reed Chairs

COVER the chair if enameled or varnished with a liquid soap prepared as follows: chip one-half bar of common laundry soap, add one tablespoonful concentrated lye, and two quarts of water. Boil till the soap is dissolved. Remove from the fire and stir in one tablespoonful of kerosene. Apply this mixture to the chair with an ordinary scrubbing brush and let stand an hour or two. Wash thoroughly with warm water and let dry.

This will cut the glaze and allow the following paint to adhere: To ordinary cream colored paint add enough burnt sienna to make it the shade of the lightest part of the mahogany you wish to match, or a little lighter. Carefully apply this to cover every reed in the chair. Reach the difficult places with a camel's hair brush. Let dry forty-eight hours.

For the staining mixture, take burnt sienna and reduce it with common table vinegar till it flows freely. If this is too red, add a little burnt umber. Apply with a paint brush. With the camel's hair brush reach every crevice. Let dry. If you wish to emphasize the grain dip the brush in clear vinegar and wipe out some of the color, always following the grain of the reed. When dry, varnish. For a dull finish apply a small quantity of floor wax, and rub well.

Any willow, reed, or rattan furniture may be treated in this way and compare favorably with those originally stained. Only have patience in applying the stain to every part of the reed.

A Radiator Hint

CUT pieces of wire screen the size of the openings in hot-air pipes under the registers and place one over each opening. This will save the loss of many small articles which can drop through the gratings. It also keeps a good deal of dust and lint from collecting in the pipes.

Turpentine in the Home

WHEN once a housekeeper fully realizes the value of turpentine in a household she is never willing to be without a supply of it.

Turpentine is a sure preventive against moths; by dropping a trifle in the drawers, trunks and cupboards it will render the garments secure from injury during the summer months.

It will also keep ants from the closets



A lamp base made of a woven bamboo basket lends itself well to bungalow furnishing



The wistaria baskets imported from Japan are especially adaptable to lamps.

and storerooms if a few drops are put in the corners and upon the shelves. It is sure destruction to vermin and will effectually drive them away from their haunts if thoroughly applied to all the joints of the various articles of furniture. It injures neither clothing nor furniture.

One tablespoonful added to a bucket of warm water is excellent for cleaning painted woodwork.

Turpentine is also useful in laundry work in conjunction with ammonia to remove paint stains from colored clothes. The two liquids are mixed and the stain dipped in and rubbed until it disappears.

An Interesting Living Room

I ONCE saw a pleasing combination of just the right things in the living-room of a collector of old Colonial furniture, which contained chairs, sofas and tables of different woods and styles, but the artistic taste of the owner has enabled him to evolve a living-room which embodies all of the restfulness and charm, which one expects to find in a room of this nature. After the dining-room, bedrooms and a small reception-room had claimed their share of the antique hunter's spoils, the collector found himself with only a few mahogany chairs, which did not match, an old sofa and a small mahogany tea-table, with which to furnish his good-sized living-room. Other furniture had to be purchased to fill in until such time as more old mahogany could be lured from some garret or cellar to be added to the other captives. So it was decided to buy some modern copies of the old reliable Windsor chair, stained a dark brown, an oblong table built on straight Mission lines, and some plain wicker chairs, as they could all be used later on to furnish the outdoor living-porch, when they had been crowded out of the living-room by their more worthy successors. So as to remove the whiteness of the willow and give it a softer tone, the wicker chairs were treated to a coat of brown stain, which was partly rubbed off with a cloth, but enough allowed to remain to give the chairs a pleasing amount of light and shade.

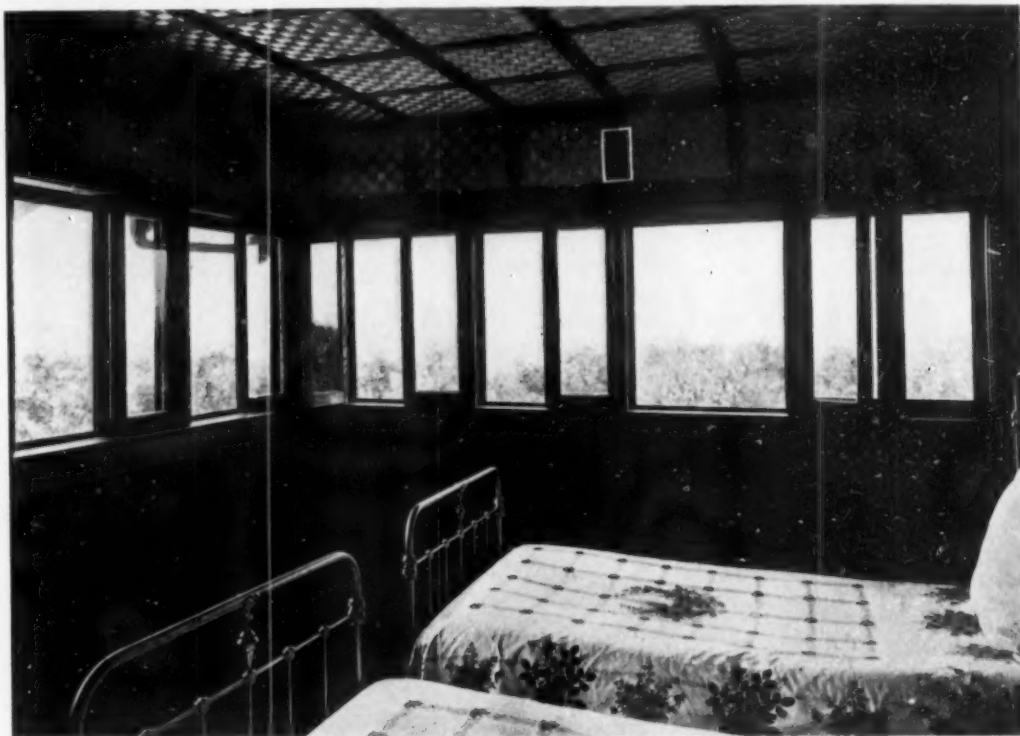
The long Mission table was placed almost in the center of the room, directly in front of the fireplace. The arrangement of this table and the furniture was ideal, both for convenience and comfort, and could be followed to advantage in almost every living-room. The sofa was placed with its back against the long side of the table, so that the occupants faced the open fire, and one of the old mahogany chairs was placed at each end of the table, while one of the Windsor chairs stood on the other side. A brass student's lamp stood in the middle of the table toward the sofa. A blotting-pad, paper-rack and other paraphernalia for correspondence, were placed at both ends of the table, while the magazines were piled near the lamp. In this way a number of people could be grouped around the table at one time, engaged in

reading and writing, and at the same time they could all have the benefit of the shaded light and be near the open fire.

So as to bring this heterogeneous collection of furniture into closer relationship, a tawny-yellow color scheme was adopted as a background, and this same color was carried through the over-curtains, rugs, lampshades and cushions for the wicker chairs, as the varying shapes and styles of the furniture would lend quite enough variety to the room. This color scheme was also carried out through the pictures, which consisted of brown prints framed in flat moldings of the same color, and on the mantel rested some old

so arranged that as much or as little air as may be desired can be admitted into the room. It can be merely well ventilated, or both sides can be thrown open, making it practically a piazza room.

The walls are paneled in wood up to the height of the window sills, but the unusual feature of the room is in the treatment of the ceiling and the frieze over the windows. From a factory where ordinary split baskets such as are in everyday use are made, large pieces of the woven or plaited material were obtained. These were put over the ceiling and extended down the walls to the top of the windows, then strips of wood were placed on at reg-



There is an air of fitness in the furnishing of this sleeping porch. The ceiling and frieze are covered with woven basketing held on by battens

brass candlesticks whose polished surface was reflected in the brass trimmings of the old Franklin stove.

It is always commendable to use a one-tone color scheme in any room where it is necessary to combine a number of dissimilar objects, for in this way you can tie the whole room together, so to speak, and the various outlines will blend into the background and not stand out so prominently as when two or more colors are combined.

A Porch Sleeping Room

A SLEEPING apartment, designed by A. S. Barnes, of Los Angeles, Cal., that combines the advantages of the sleeping porch with the comforts of the indoor bedroom, is one of the attractive features of a recently completed house in Southern California.

It is really a built-in porch, with windows that occupy all of two sides. The windows open on hinges, in the same way as the familiar French windows, and are

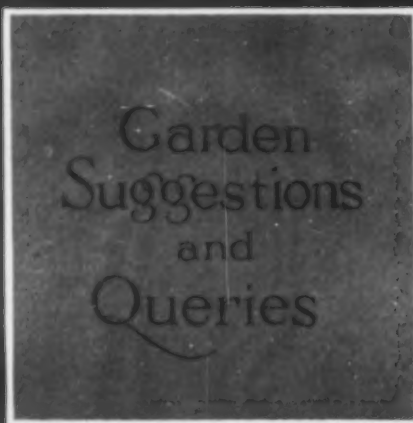
ular intervals, giving a charming effect of panels.

The plaited splits were neither expensive nor difficult to get, and being left in the natural color they contrasted in the most satisfactory way with the darker tone of the woodwork. Such a room is much too attractive to serve as a sleeping apartment only, and wide awnings that shade the open sides from the light and sun convert it into an equally attractive room for daytime use.

A Kitchen Economy

PROTECTION for a white enameled sink can be obtained by purchasing a wooden mat, which is placed in the sink. These come made of hardwood in various sizes, one for a twenty-four-inch sink costs \$1.50 retail; other sizes in proportion.

If you have an enameled metal drain board, it is well to purchase a rubber mat for it. This costs but a small amount and will soon save its cost in preventing broken glass and china.



Conducted by
F. F. ROCKWELL.

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

March

ON Candlemas Day, according to the good old naturalists, the ground-hog crawls out of his hole, takes a look around, and if he can see his shadow, ducks back again.

This reputed performance always reminds me of certain gardeners among those I know. They are too timid to believe that spring will ever come back again until a good part of it is gone, taking with it a large number of opportunities. They forget how the spring work piled up on them last year, and the year before that, and finally utterly crushed some of their fondest plans. The April rush is as sure to hit us all again this year, as that the swallows and the nursery agents will come back.

What can be done now? Well, we use what we call the "work sheet"—new edition the first of every month. On it go all the things that can be thought of to do that month, and all there are left un-

done from the month before, unless they are discarded as impossible for the present. It's a matter of about ten minutes to make out such a list, and then you know how you stand for four weeks to come. When you find yourself with an hour or two to spare, you won't putter around wondering what to do next, but go straight to the job and begin to get results.

Suppose you get a piece of paper and answer these questions right now:

What is there about the place to be fixed up?

What trees or shrubs need pruning or going over?

Where would a new shrub or two add to the individuality and beauty of the place? Remember, they cost only from fifteen to fifty cents apiece. There are any number of fine things for twenty-five cents apiece.

What new plants are needed for the perennial border? Wonderful, orchid-like irises; new phlox, in brilliant colors; a vine or a lily for some bare corner.

Can't we afford a rose garden?

Have I made that confounded garden plan yet? I know it will save me a lot of time and trouble later on.

Is the manure all spread and ready for the plowman? And is he ready to come the first day the ground is dry enough?

Are cabbage, lettuce, cauliflower and beet plants ready for the first warm days?

Is everything ready to get onions, beets, carrots, chard, smooth peas, turnips and sweet peas planted at the first opportunity?

Are the late things—tomatoes, egg-plants, peppers, corn, melons, etc.—all coming along under glass, and the hardier things getting plenty of air every day?

You see, even with a very small place, there are plenty of things to keep in mind if you expect to get anywhere near the maximum results from it.

Don't think that you can do your work just as well without attempting to keep track of it. You can't. Garden work can never become just routine work. For what you do a certain way this season, weather, soil, some plant enemy, or even varieties, will prevent your duplicating next year. Gardening is a kaleidoscopic art, ever changing, ever turning up new

combinations to confound one. Therein lies its never flagging appeal. That is why it is the most entrancing game you can play.

Free Evergreens

THERE are many places near the fringes of big cities, to say nothing of the countless places in small towns, whose owners are within easy reach of the generous nurseries of nature, and yet never think of availing themselves of the advantages offered. Many of our native trees—pine, fir, hemlock, cedar, beech, birch and others—make very handsome, ornamental specimens which are to be had for the gathering. You haven't the time? Well, why not take a Sunday afternoon off—you might spend it in many less commendable ways—and bring home a few. Now is the time—the earlier the better. Don't try to get the biggest tree in the woods. Pick out a small, straight, shapely little tree. Take up the roots with as little damage as possible, and where they do



Small evergreens and other trees can often be had for the trouble of digging them



Take the young tree up carefully, to avoid breaking the roots more than is necessary

get broken, cut them off clean. Loosen the soil up thoroughly in the hole in which you are to plant it, and set it deeper, by several inches, than it was in the woods, where the roots probably have spread out shallow near the leaf covered surface. Plant it securely, using your feet to pack the earth firmly about the roots, and put a mulch of old leaves, grass or litter about, to help keep the soil moist when the dry times come.

There are also plenty of ferns, and other plants, such as the wild rose—and in crystalline beauty it has never been surpassed by the hybridizer's products—the wild woodbine, wood violets and many of the other wild things that your fancy may select, which stand transplanting well. Always try to give them a place as nearly like that they are accustomed to as you can—the ferns, for instance, on the north side of the veranda, or wild roses in partial shade where the soil is somewhat heavy.

It is not yet too late to make a coldframe. Don't say you can't get the material—look at the photograph herewith: the material came from a couple of old packing boxes! And a couple of big storm windows, or any old windows for that matter, will keep out cold and let sunshine in, as well as will any "boughten" sash. Such a frame can be made right on top of the ground, and if you use flats, will not even necessitate taking the sod off. Although it is too late to start cabbage, lettuce, cauliflower, etc., for the earliest outside crop, there are plenty of uses for the coldframe. You can plant melons, cucumbers, corn, potatoes (in flats of sand) weeks sooner than you can out of doors, and thus beat your neighbors on these important things.

And there are your annuals and first-season-blooming perennials to be thought of. One of the most beautiful annuals we have, cosmos, is killed by the first fall frosts nine times out of ten before attaining anywhere near the growth of its glory, simply because it has not time to mature. The moonflower is another too little seen plant, for the reason that whenever out-of-doors the season is just too short for it in our northern States. The new "ever-blooming annual," hollyhocks, you should also try. They grow easily from seed, and sown in March will bloom in July. To lovers of these old-fashioned plants, which in many sections the hollyhock "rust" disease has practically destroyed, they are a find indeed. Then there are many perennials from which, if sown early, you will get flowers this year: gaillardias, Iceland poppies, larkspur (Chinese), Shasta daisy, etc.

Most flower seed is very small—some of it as fine as pepper—and to attain success you must make a fine loose soil, by sifting leaf mold or chip dirt and fine sand to mix with your garden loam—about equal parts of the mold and loam, and sand enough to make it friable, so that it cannot be pressed into a ball in the hand. Wet the soil thoroughly several hours before sow-

ing the seed—taking care that the seed-pan, flat, or pot is well drained—and then dust it over the surface evenly and barely cover, except for the larger seeds such as hardy pinks, gaillardias, etc. Even these should be covered only about an eighth of an inch. Keep panes of glass, slightly tilted on one side, over the boxes until the seeds are up.

For the best results with the wonderful new sweet peas, they should be started early in pots, and set out, planting deep in thoroughly enriched soil. The development of the sweet pea during the last few years has been very wonderful, the flowers being so immense as to be almost beyond belief to the person, used only to the old, smaller flowered sorts, who sees them for the first time. If you try some of these

to blossom, that is what you want. The big forced plants go by very quickly after you have set them out.

In the Vegetable Garden

IF March goes out like a lamb you may get some planting done this month, though in my locality (northern Connecticut) we very seldom get anything out, with now and then the exception of onions and early peas, before April. But be ready to get the ground turned over just the minute it is dry enough—as much for the importance of getting the early work done and out of the way as that of planting the hardy seeds early. Even before the ground thaws, if it was not cleaned up last fall, you should see that all rubbish is gathered and burned or composted.



A coldframe does not need to be expensive in order to serve its purpose. The sides of this one were made from old packing boxes

splendid new kinds—and get the named varieties for best results—put them, if possible, where they can be thoroughly watered during the summer dry spells.

Another little plant you should not overlook is kochia—the summer cypress or burning bush. It grows as easily as a weed, and with a dozen or two nicely started by May, you can decorate any unsightly corner, or make a temporary hedge by the garden or along the path. They are an attractive green during the summer, and turn to a bright burning red with the advent of cold weather.

Another very popular flower for spring planting is the pansy—also greatly improved during recent years. Go to a florist's for your supply if you can, no matter how tempting the street baskets of gorgeous blooms may look. Their plants are raised to sell, while you want plants to grow, and if you can find some one-fourth the size of these—four or five of which will fill a basket—that are just beginning

Have all such little accessories as garden line, plant stakes, labels, sharp tools, seeds, etc., ready in advance, for in uncertain spring weather, a little delay that may make you late in getting a certain sort of seed planted one day, may easily mean that they don't get planted for a week—and it's not a pleasant experience to look over the fence and see your neighbor's beans sending out their second pairs of leaves, while yours are not yet out of the ground.

To those who plant their own potatoes—and it is surprising how many you can get out of a few short rows in a rich garden—numerous State Experiment Station trials have shown repeatedly that sprouting them in full light, twenty to thirty days before planting has not only made maturity earlier, but has increased the total yield in many instances over a fifth, and in some much more than that. When you are planting by hand, these short, stubby sprouts do not interfere at all.



EDITORIAL



WITH March here, comes the first stirring of life outdoors. Perhaps it is but a suggestion—a pussywillow struggling out of its hard, shiny shell or a weak, timorous bird note out of the chill, but nevertheless there is the awakening of anticipation in the glory of growing things. In this betweenwhiles, while we pause half anxiously scanning the sky, fussing with the renovated garden tools or turning fretfully over past garden records, let us have just a few moments of reflection. We urge this half ashamed of betraying sentiment—for to-day the exhibition of feeling is mawkish, effeminate, and reflection is supposed to belong to the bookish or the temperamental and not to be a part with decision. Yet we will out with it; we want just a little time for consideration and then on with the work. Do you grant it? Away with impatience then, we will take up the prospect of our garden year from another aspect.

The Service of the Garden

IF one asked a member of the mob that attacked the Palais de Versailles what his grievance was, he would probably have replied "the cost of living"—if you pinned him to the fact. It was not that he was jealous of the luxury of others, but that he had so little himself. He reasoned that the plenty of the wealthy left little for him.

In those ante-Revolutionary days most of Europe was in the mad rush for a new novelty to kill the deadly boredom that comes from the surfeit of pleasures. People craved gilded litters, and silks and laces; even the conversation went to excesses and was dressed up in affectation and ornateness. So when the latest fad of courting Nature came in vogue and gorgeously arrayed shepherds and shepherdesses masqueraded in a tricked up country side, the jaded amusement seekers wrote of country life in heavy Alexandrine metre and thought that they were leading the simple life.

There is something similar in present-day conditions. We are not oppressed by tyrants, but we are in need of emancipation from the slavery of rush and desire for gain. Every man is prodigal of energy, of time and of money. Dress and luxury love induce even the poorest to live a butterfly existence with no thought for the future, all for the moment of pleasure. The gods of to-day are Size and Quantity. Extravagance runs riot in everything. The fact is that America is amusement crazy, as was Europe before the Revolutionary era.

We too rail against the cost of living, though a few analytic ones claim that to be the effect of a cause, the cost of high living. Analyze it as you will, even with the issues of trust and tariff ideally arranged, with currency reform or intensive cultivation, with all the panaceas for ills of government swallowed and digested, the old fever will come on again until the chase after pleasure becomes the pursuit of happiness.

There was a little known poet, Cowper his name, and he wrote when England was thinking as we are thinking to-day. It was when other writers were addressing Corydon and Thyrsis and apostrophizing hillside and stream with Greek proper names. Cowper sounded a new note that rang true of the outdoors and contained the breath of real fields. He is really our first Nature poet. In the "Garden" written shortly before the French Revolution, he leaves much for us to take to heart. And maybe there is a pertinent suggestion for our troubles, as he too saw the mistake of "The wish to shine, the thirst to be amused." One would hardly expect to find material for poetry in the manure pile, but Cowper put it into metre (and incidentally gives as accurate an account of the care and making of a hotbed as one would wish).

In the "Garden" there is contained the brief for the sober, restrained, rational life. It is full of the inspiration that the country contains, and even the humblest duties are coupled with something great and lasting, as he sees it. His book acts as a stimulus, especially at this period, for it makes clear that there is a big value in living among growing things. If we realize that in the making of a home and its attributes there is a permanent satisfaction, something really worth while, the trowel digs deeper, the labor is more earnestly undertaken and the fresh happiness of working with hands and heart in unison comes and stays.

"The tide of life, swift always in its course,
May run in cities with a brisker force,
But nowhere with a current so serene,
Or half so clear as in the rural scene."

A True Recreation

WITH the same hesitancy that we have of showing sentiment, many of us would be reticent of saying that we had taken up making a garden as an avocation. Many men would half expect the retort: "Oh, and your indoor sport for winter is crocheting, I suppose." The manliness of gardening needs no defense. Example, arguments and authorities are too numerous. We need only mention the bachelor who wrote last month of how it beats the club "all hollow." But there's something to say about gardening as a recreation.

Your golf is a good thing; so is tennis or riding or any of our favorite exercises. They do not preclude everything else, however, and they have their limitations. One does get exhilaration, and exercise, a quicker eye and better muscular control. But how long does a particular good remain with us? There is the joy of winning, of course, and one recollects with pleasure certain matches or tournaments. For the most part, aside from physical benefit, the experience ends when the game is finished.

The garden pleasure merely begins with the planting. It is one long sequence of delights with no throwing aside of implements and a "there, that ends it." The conscious plan goes on with room for improvement each year. As skill increases, and knowledge grows, there is more specialized work to do. We but approach our ideal results.

Then, too, we are little gods. The life we assist in bringing forth comes back to us with each spring. That vine is now a sturdy tenant that we once coaxed anxiously to wind its weakling tendrils to a thread. The puny slip we cared for is now a strong bodied, leafy bush. All the plants that stay with us season after season are embodied memories of our work. Some plants we watch growing and strengthening from year to year; the descendants of the others that die with winter we make more beautiful in color, or in form than were their ancestors. Carefully watching the richest blossoms, we improve by selection, saving the fittest, ruthlessly destroying the rest. Perhaps grown more cunning we breed and train as does the stockman, until a finer kind is produced. And the whole garden scheme, like a tapestry growing with each thread, we aim to make more complete and perfect. For the whole world story may lie within a garden gate, and when we begin to get the realization that there is the same life in the growing garden as in us, we have advanced.

That is the recreation of gardening. Some, as said Wordsworth, believe that there is recreation in its broader sense from the mere companionship with Nature. Perhaps there is; but how much more is there in the active association with growing things, in shaping their development and in creating a thing of beauty.

No-Rim-Cut Tires

Proved Average Oversize, 16.7%

Goodyear No-Rim-Cut Tires are advertised as "10% oversize." And we claim that this oversize adds 25% to the tire mileage.

The actual oversize, over five leading makes, was lately found to average 16.7%. Note the table below.

Comparison of Sizes
Between Six Leading Makes of Tires

Rated Size	Make	Cubic Cap'ty	No-Rim-Cut O'ersize	Rated Size	Make	Cubic Cap'ty	No-Rim-Cut O'ersize
30x3	1—No-Rim-Cut	489 in.		34x4	1—No-Rim-Cut	856 in.	
"	2	402 "	21.5%	"	2	762 "	12.5%
"	3	381 "	29.4%	"	3	760 "	12.7%
"	4	371 "	31.8%	"	4	733 "	17.0%
"	5	383 "	27.5%	"	5	822 "	4.3%
"	6	365 "	34.0%	"	6	794 "	8.0%
32x3½	1—No-Rim-Cut	637 "		36x4½	1—No-Rim-Cut	1190 "	
"	2	603 "	5.5%	"	2	966 "	23.0%
"	3	577 "	10.4%	"	3	1064 "	11.8%
"	4	536 "	18.6%	"	4	1025 "	16.0%
"	5	577 "	10.4%	"	5	1055 "	12.6%
"	6	546 "	16.5%	"	6	1080 "	10.3%
Average No-Rim-Cut Oversize, 16.7%							

Oversize is not measured by calipers. It is measured by air capacity. Air carries the load.

The figures here show the cubic capacities.

Only three tires in these twenty comparisons came within 10% of our size.

That's because No-Rim-Cut tires have the hookless base. Your removable rim flanges, with these tires, turn outward instead of inward. Thus the tire has an extra flare.

Oversize means over-tired. It means extra carrying capacity without overloading.

It means to save blow-outs—to increase tire mileage—to cut down tire expense.

Yet these oversize tires, which can't rim-cut, cost no more than other standard tires.

That's why they outsell all others.

Adopted This Year by 127 Leading Makers

For the year 1910, 44 leading motor car makers contracted for Goodyear tires.

For the year 1911, 64 makers came to them.

For this year we have contracts from the makers of 127 leading cars.

Last year we sold more automobile tires than in the previous 12 years put together.

The sales in late years have doubled over and over, as users have found the tires out.

Goodyear No-Rim-Cut tires now far out-sell any other tires in existence. Our present capacity is 3,800 tires daily.

Done by Users

This overwhelming demand has been quickly created by the men who have used these tires.

Tens of thousands of users told tens of thousands of others how their tire bills were cut in two.

And last year we sold enough of these tires to completely equip 102,000 cars.

Average Saving, \$20 Per Tire

We don't intend to make over-claims regarding these patented tires. The facts alone are sufficient.

With these, as with all tires, the service rendered depends on proper use.

But these tires can't be rim-cut. And statistics show that 23 per cent of all ruined clincher tires have been rim-cut.

That saving is sure.

It is also a known fact that 10 per cent

oversize, under average conditions, adds 25 per cent to the tire mileage.

And No-Rim-Cut tires, as shown above, average more than 10 per cent oversize.

It is safe to say that these two features together, under average conditions, save \$20 per tire.

What We Control

We control by patent the only practical way to get rid of the hooked-base tire.

No-Rim-Cut tires are not hooked to the rims. So you simply reverse your removable rim flanges and let them curve outward.

That gives a resting edge which cannot cut the tire, even when run flat.

It gives an extra flare which permits the oversize.

And it doubles the ease of removing the tire when you need to.

But back of these features lies a tire perfected by 13 years of tests.

Year after year, on a tire testing machine, we have compared formulas and fabrics, methods and processes, until the Goodyear tire has been brought close to perfection.

By actually wearing out tires under every road condition, we have learned how to make the most durable tires.

Double-Thick Treads

Now these tires, if wanted, come with double-thick Non-Skid treads.

That means an extra tread of very tough rubber, vulcanized onto the regular.

This extra tread consists of deep-cut, sharp-cut blocks. They present to the road surface countless edges and angles, causing a bulldog grip.

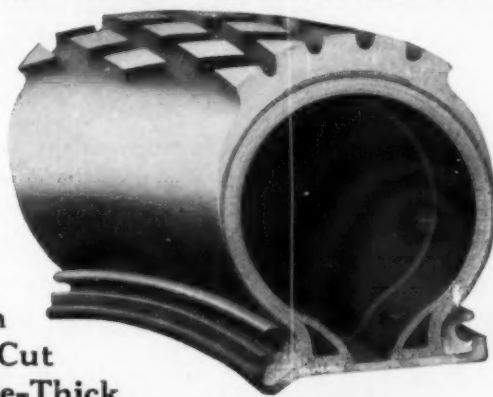
A moment's comparison with other non-skids will show the Goodyear's enormous advantage.

All of these features—each the best of its kind—are found in Goodyear No-Rim-Cut tires.

That's why these tires now dominate the field. Every motor car owner who makes a comparison is simply bound to insist on them.

Our new Tire Book is ready. It is filled with facts, based on 13 years of tire making, which every tire user should know. Ask us to mail it to you.

THE NEW GOODYEAR NON-SKID TREAD



Tough
Deep-Cut
Double-Thick

GOODYEAR
No-Rim-Cut Tires
With or Without Non-Skid Treads

THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO

Branches and Agencies in 103 Principal Cities. We Make All Kinds of Rubber Tires, Tire Accessories and Repair Outfits

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Canadian Factory, Bowmanville, Ont.

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Brightwaters

Bayshore, L. I.

comprises over 1,200 acres, including five spring-fed lakes, Venetian Yacht Harbor, one mile long and 175 feet wide, extending from the Great South Bay to the Merrick Road, winding drives and shady walks. Grand old oaks, pines and other ornamental and shade trees, floral plaza, white sandy beaches and bathing pavilion, two piers extending 900 feet into the Great South Bay and all facilities for the fullest enjoyment of



Head of Venetian Yacht Harbor and Plaza at Merrick Road

EVERY RECREATION OF LAND AND SEA

Brightwaters is surrounded on all sides by large private country estates which, with the beneficial yet liberal restrictions affecting the property, insure the permanency of the high-class character of its development.

SERIES OF 1912 ACKERSON BUNGALOWS NESTLED AMONG THE PINES

are pretty, convenient and substantial, contain 6 rooms and bath, cellar, electric light, range, hot and cold water, tastefully decorated, complete in every respect, on plot 50 x 150 from \$2525 upward.

ALBUM No. C. OF "BRIGHTWATERS" SNAPSHOTS MAILED UPON REQUEST

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"Developers of Choice
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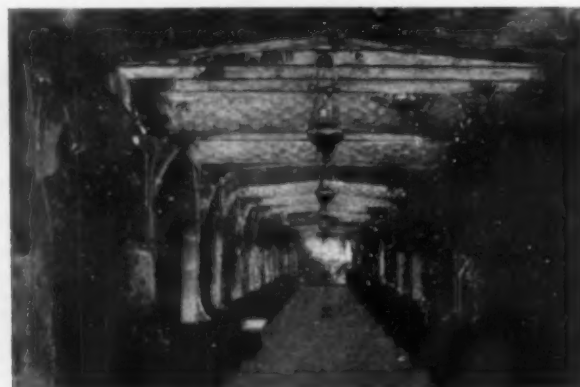
That Ideal Country Home of Yours

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The house is situated on seven acres of beautifully developed land, planted with fine, full grown shade trees and artistically landscaped. It affords a variety of garden facilities, including a beautiful Italian garden from which one may have an entrancing view of the Sound.

The main house is of the attractive half-timber style in its best type and is finely built with all the conveniences that modern plumbing and fitting can supply. Within are ten spacious master's bedrooms, six bathrooms, ample servants' quarters and a bowling alley. Adjoining is a large stable and garage with accommodations for the coachman and his family. In addition there are two other dwellings.

This attractive estate is for sale at a price so reasonable that it will astonish you. Apply to
LAWRENCE TIMMONS Greenwich, Connecticut





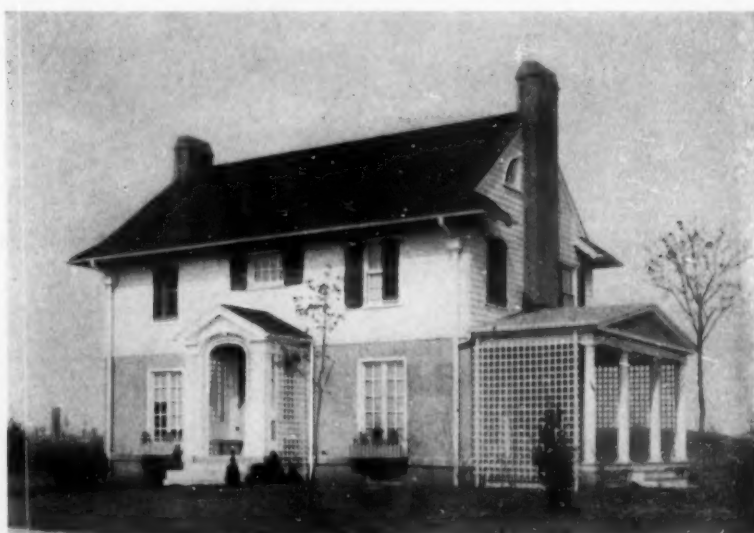
Mr. Raynor's house at Mirror Lake, Brightwaters, L. I., is well designed for its surroundings of level grounds and low pines



Within the last few years so much that is architecturally beautiful has been constructed on the developments of real estate companies that it is worthy of note here. The following pages show suburban homes of character on Long Island, New Jersey, New York and Connecticut.



The Bloodgood house at Hewlett, L. I., is a true Colonial type, uniting present comforts with long ago charm. J. Acker Hays, architect



An interesting effect is obtained in this simple house on the Garden City Estates by uniting stucco and concrete in the wall treatment



Another Garden City house that provides ample shade for its occupants in a location where there are as yet no large trees



An example of the American farmhouse type at Garden City Estates. Long Island has revived the building of this old style house



An interesting type of gambrel-roofed house at Woodmere, L. I., patterned after the old Dutch Colonial of the vicinity



A small house at Great Neck Villa, L. I., with half-timber treatment suggestive of a German cottage. Edward King, architect



The home of Mr. S. Heller at Woodmere, L. I., where its architect, Charles Barton Keen, has constructed many interesting small houses



A house at Great Neck Villa, L. I., that obtains a maximum of space by the use of two dormers. Miss Chapman, architect



This house of Mr. Minton at Brightwaters, L. I., shows the pleasing effect of the jerken-head roof so much used abroad



Shingle thatch is often used successfully, as in the house of George C. Holten at Great Neck Villa. E. W. Hazzard, architect



In the pine section at Brightwaters many small bungalows have been constructed that approximate the ideal type



This house at Plandome, L. I., was modeled after the now famous Chauncey Olcott house at Saratoga, N. Y.



The Rush residence at Oyster Bay is an exceedingly fine example of a house well planned for its location. The long roof line takes off the apparent height, and the porch arrangement makes cool the rooms on the first floor. Clinton MacKenzie, architect



The faithful reproduction of the southern Colonial is seen in the Charles E. Finlay home at Kensington. Little & Brown, architects



Aymar Embury, architect, shows another example of his interesting designing of small houses in this one at Kensington, Great Neck, L. I.



Shingles as a wall treatment are not so commonly used as formerly, but a successful treatment is shown in this house at Shoreham, L. I.



Plaster seems to be the most successful material for the exposed position on salt water. The residence of William T. Ashley, Shoreham



The variety of the topography of New Jersey has developed a diversity of architecture among its recently constructed houses. A good example of a house well planned for sloping ground is the home of Mr. Albert S. Cox, Brantwood, Short Hills, N. J.



Mr. Charles D. Freeman's home at Colonia, N. J., is well calculated to take advantage of an extended view and an open situation



An interesting house for a timbered location is that of C. R. Tyng, Brantwood, Short Hills, N. J. James L. Burley, architect



The home of S. C. Blair at Gladstone is one of the few that appear well close to the road. The planting outside the fence is interesting



The residence of G. B. Schley at Far Hills is a very successful example of a house fitted well to a hillside location



Mr. Edward Lowry has been pleased to accept the simple, straightforward lines of the style variously described in this magazine as The Northern Tradition or the American Farmhouse type. This style offers various opportunities for different treatments and different localities



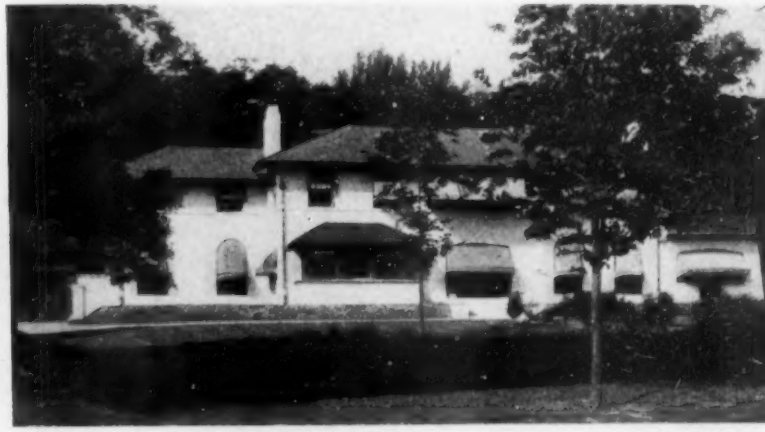
The residence of G. R. Holly, Short Hills, H. B. Copeland, architect, is proof that the small house can be good architecturally



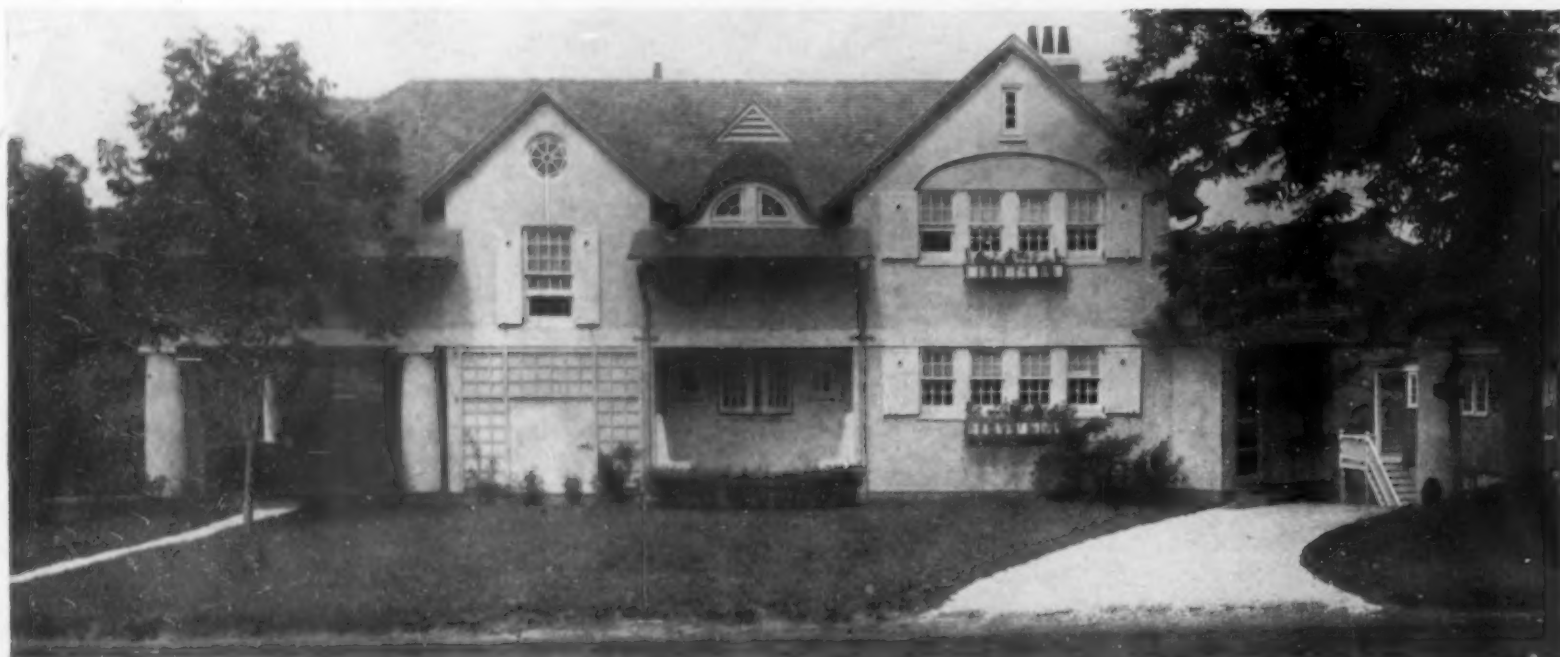
The home of Hutchinson Hinkle in Short Hills, N. J., is an interesting variation of the gambrel roofed house in that it has no front dormers



Mr. F. B. Duncan has placed his home at Englewood in a situation shaded with trees and banked by growing evergreen shrubbery



Mr. Jewett's house at Englewood is a noteworthy example of simplicity in the wall treatment of plaster houses



The home of Dr. R. R. Ryan, at Scarsdale, N. Y., is a pleasing American type of the plaster house that had its origin in England and has been developed by such architects as Parker & Unwin. The use of solid shutters beside small paned windows is particularly effective here



The hillside cottage of Mr. S. M. Underhill at Grand View, N. Y., designed by Mr. Freeman



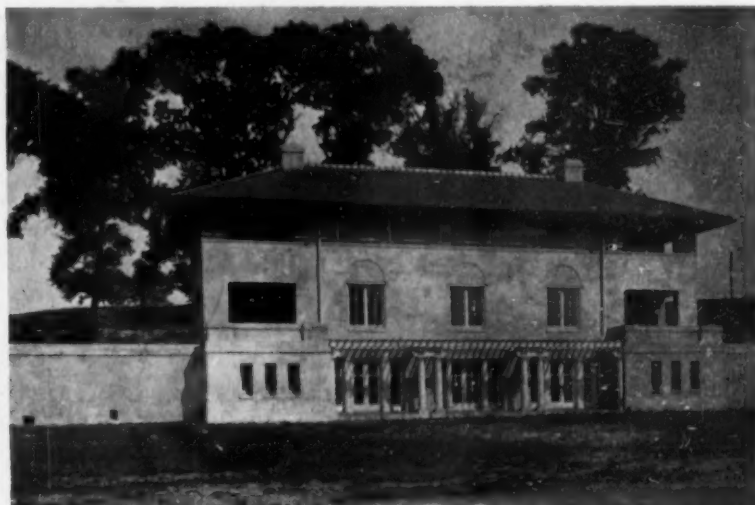
Mr. Doyle's bungalow at Harmon-on-Hudson proves the value of building with native stone found close at hand



The long stretch of river front at Phillipse Manor requires a house with many windows to catch the view and a type of veranda that will enable one to have an opportunity of looking at the river in all directions



The house of Dean Brewster of Barnard College at Scarsdale Estates, N. Y., shows a variety of surface without being disagreeably variant



An interesting contrast to the irregularity of the opposite house is the perfectly symmetrical building here. Reed & Stem, architects



The residence of S. M. Caldwell at Scarsdale Estates is a generous house on Colonial lines but of stucco and stone construction



The home of Thomas F. Martin is a somewhat different treatment that is successfully used for a location similar to that opposite



That half-timber work may well be combined with a local stone foundation is shown here in the home of Mr. A. C. Ayer at Scarsdale



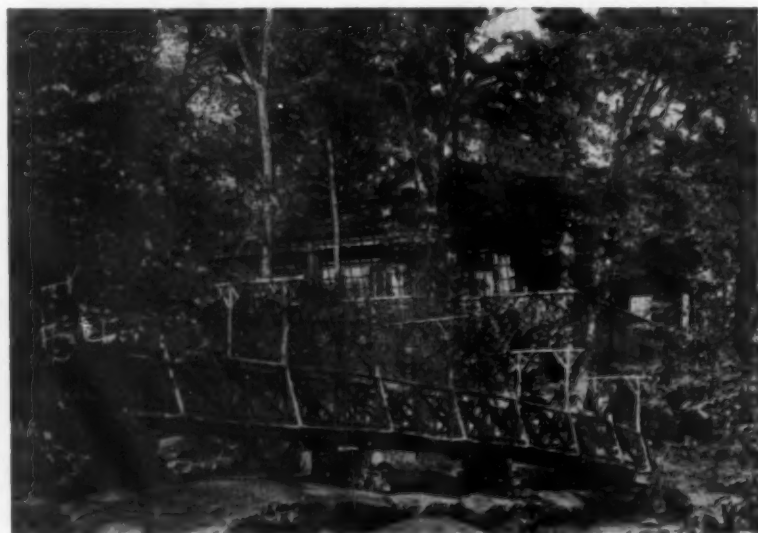
The effect of trimmed stone used to good advantage is shown in the home of Mr. H. M. Olcott at Broadview, New Rochelle, N. Y.



In Connecticut there is many an opportunity to find a home about which the charm of age still clings. An attractive little house near Stamford that was built over a hundred years ago yet is still in good condition and suitable for remodeling



A half-timbered house of good style at Felston, Riverdale-on-Hudson, N. Y., that shows a happy combination of field-stone and timber work



Larchmont Garden has the aspect of the Adirondacks. The small bungalow like this clubhouse is very suitable to such a location



For the shady streets of the vicinity of Stamford there is no more suitable type than the Colonial which is found so frequently there



An attractive concrete house in among the trees at Spuyten Duyvil-on-Hudson. Its lines are simple and straightforward

CONNECTICUT LONG ISLAND WESTCHESTER COUNTY NEW JERSEY

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Merrick, 8 acres, house, barn.....	30,000
Sound Beach, house, all improvements.....	5,750
Flushing, house, 7 rooms.....	7,000
Stamford, Shippin Point, modern house.....	12,000
Ridgewood, house and stable.....	7,000
South Norwalk, factory.....	15,000
Scarsdale, country seat.....	50,000
Lyndhurst, 3 acres, house.....	9,500
Pelham Heights, brick and shingle house.....	14,500
Richmond Hill, house.....	16,000
Greenwich, house.....	6,000
Rowayton, 1 acre, house.....	1,750
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Litchfield Co., Ct., 80-acre farm.....	1,500
Lakeville, 30 acres, on lake.....	11,000
New Canaan, 2 acres, house.....	3,500
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Danbury, 75 acres, brick house.....	14,000
Greenwich, 140 acres.....	87,500
Darien, 45 acres, farm.....	24,000
Darien, 5 acres, village house.....	15,000
Briarcliff, 35 acres.....	30,000
Yorktown Heights, 100-acre farm.....	27,500
Port Chester, fine view, house and stable.....	28,000
Mt. Kisco, 45 acres, farm.....	17,500
Peekskill, 250 acres, farm.....	25,000
Westchester Co., 500 acres, lake.....	90,000
Poundridge, 50 acres.....	6,000
Norwalk, 6 acres, house.....	5,500
Ridgefield, 50 acres, farm.....	12,000
Greens Farms, 30 acres, house, barn.....	20,000
Sharon, 150 acres, farm.....	8,500
New Canaan, 15 acres, buildings.....	15,000
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Greenwich, 5 acres, buildings.....	7,000
Greenwich, 2 acres, house and stable.....	35,000
Belle Haven, 1 acre, house.....	17,500
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If this is not what you want I have many others to offer. Prices from \$2,500 to \$100,000. Rentals for season, \$300 to \$5,000. Write for artistically illustrated Brochure.

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Also, neat and compact, with efficient lawn sprinkler combined.

Price - \$4.00 each net

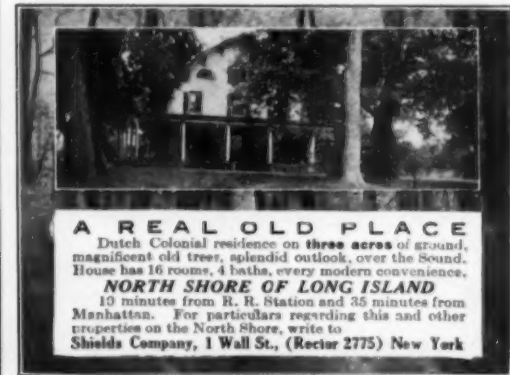
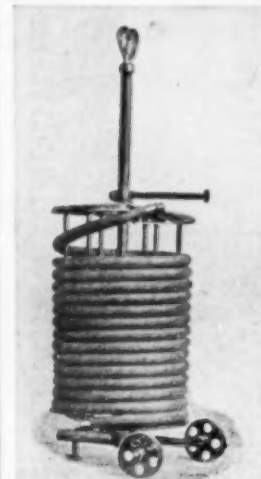
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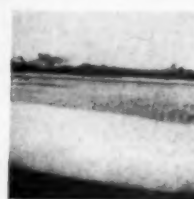
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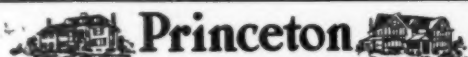
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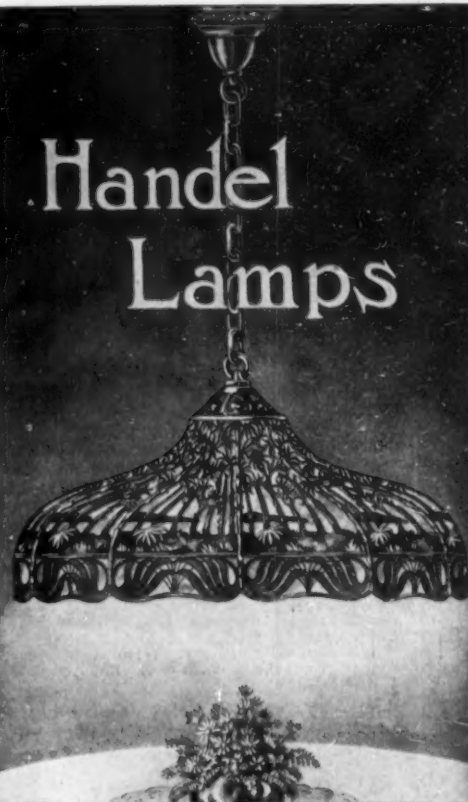
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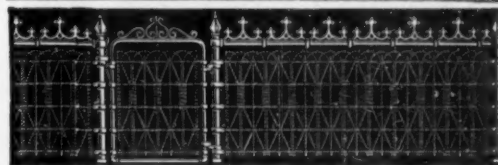
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(Continued from page 5)

I lay in a good supply of orange boxes beforehand. These seldom cost me anything, as the dealers are glad to get them out of the way. Each orange box makes two nice nests. I sometimes fill them with shavings and sometimes with second-crop clover. A little dry sulphur or wood ashes on the floor of the nest, below the litter, is a good preventive of nest lice, but these vermin will seldom make trouble before the first of June, and all my chickens are hatched before then.

Three or four nest eggs are placed in each nest, and a board is neatly fitted to the front, so as quite to cover the opening and leave the sitters in darkness, except for the cracks along the edges of the box. Even these are curtained by sacking flung over the boxes, which rest upon the floor.

Having made all these preparations, I lift the sitters from their chosen places as gently as possible and transfer them to the new places and the cold china eggs. My hens are Wyandottes and Rhode Island Reds, very tame and gentle, and they seldom make the slightest resistance. They are shut in the new locations and left for twenty-four hours in the dark and quiet.

Taking the eggs to be set, I go to the coop with corn and fresh water. There is grit on the floor and also litter in which the hens can scratch. I take down the board, push back the sacking and pull all the hens off their nests, placing them near the food and drink. While they are exercising I remove the china eggs and substitute the real ones chosen. As the hens are not large, I set only thirteen eggs under each one during the month of March. After the first of April I set fifteen. By the time these eggs are in the nests some of the hens will begin to want to go back. Even this first morning most of them will find their nests without assistance. If one of them is contrary, I catch her and put her on; but I wait to see whether she settles down on the eggs. This is almost always the case, and I can then shut them in for another twenty-four hours.

Every morning when the hens in the main coop have been fed and watered, I go into the sitting room and pull off the hens for food, water and exercise. They go back of themselves, and are shut in before the eggs can chill. I find corn a model food for sitting hens, and feed it exclusively.

As the floor space is small, I do not let more than six hens out at a time; so in the thickest of sitting-time, when I have a dozen hens on, I release them in two relays. As my hens average rather more than twelve chicks to a sitting, it is not necessary to set more than sixteen hens in order to obtain the two hundred chickens which I fix as my limit.

Since I always plan to have at least three hens come off at the same time, I can divide up the three broods between two hens, giving the two that seem gentlest eighteen chickens apiece, and breaking up the extra sitter.

(Continued on page 62)

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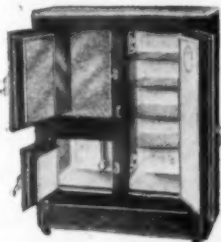
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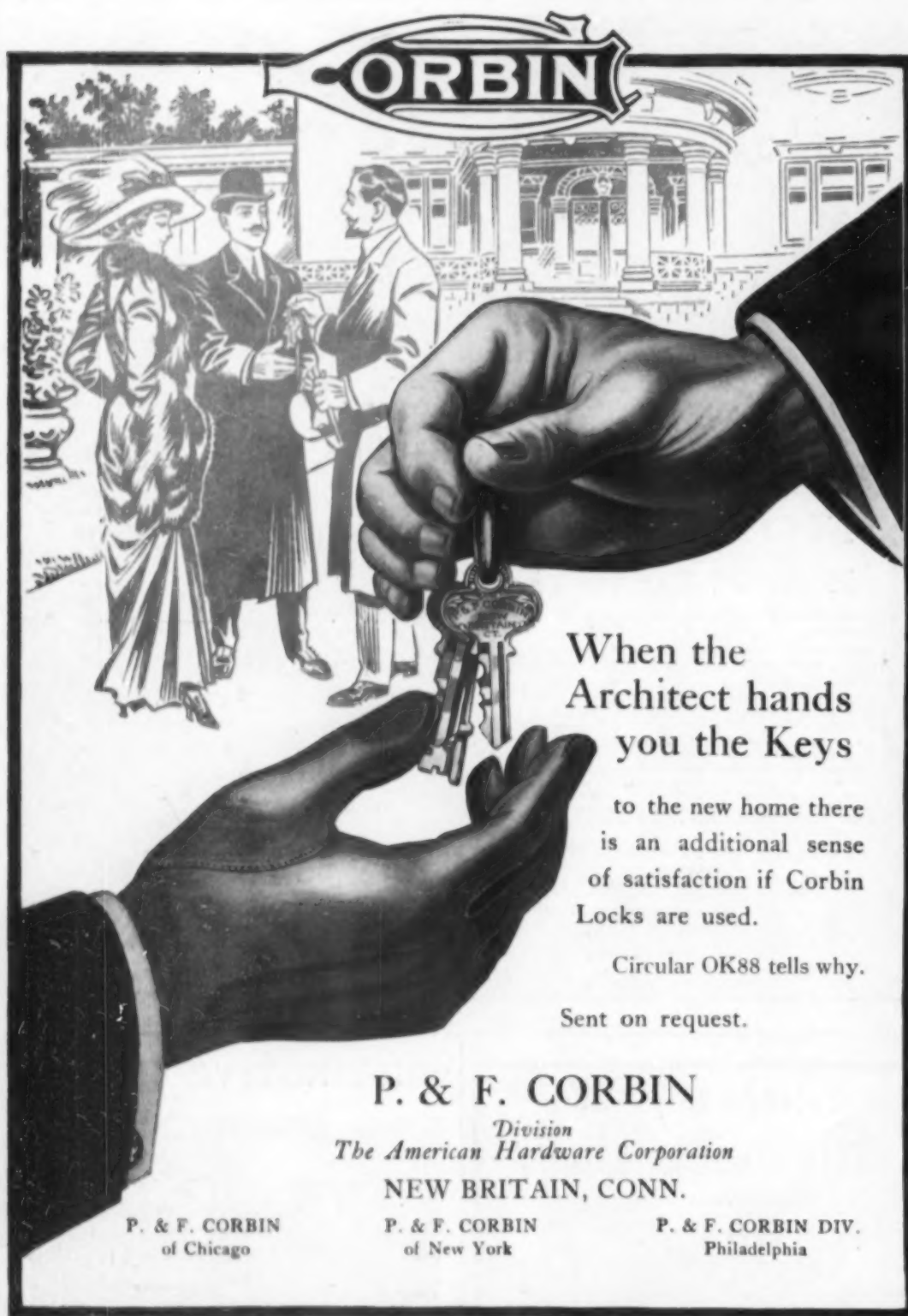
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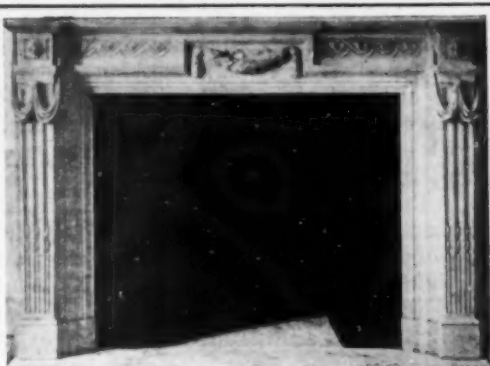
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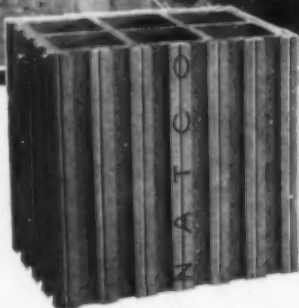


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Flemington, N. J.

(Continued from page 58)

For just about four weeks, in late March and early April, I do not dare to put young chickens out of doors in the latitude of Massachusetts, and I have no room in my coop, with its one compartment for layers and one for sitters.

In this emergency I have recourse to an unused wagon shed, quite near the house. It is open at the south side, and has an earthen floor; but it can be made warm with litter, and the sun shines into it beautifully, while a tight roof keeps off rain or snow.

As soon after the middle of April as the weather turns warm, I dare to put even the smallest chickens into their shelter-pens in the open field. By this time rats are active in sheds, having young families of their own for which to provide, and they esteem downy chickens a toothsome morsel to take home for the family dinner. The open field is therefore safer from rats than a position near a barn or shed, and it is also safer from vermin of smaller size than a position next the hen coop.

In the open, then, I have built shelter pens of plank, walled and roofed with tin, forty feet long by four feet wide, and open on the south side. Board partitions divide this strongly-built shelter into four parts, each ten feet long. The open south side of each adjoins a pen ten feet square, enclosed upon three sides by a twelve-inch board set into the ground and surmounted by two feet of fine wire net. Each pen holds fifty chickens, and keeps them safe from cats, dogs, rats and hawks.

At first I allow two hens to each pen, and they squabble more or less, steal each other's chickens and keep up a constant grumbling and complaining. Still, they do no actual harm, kill no chickens, and are really necessary to hover the brood at night. When the nights grow mild, one hen to each pen will answer, and by the middle of June they are better off without any.

The chickens stay in these pens until they are big enough to fly out, about the first of August. I find it is much better for young chicks not to have a wide range. The death rate is much higher where they are permitted to run at large.

They have fresh water in shallow trays, two or three times a day. They eat a dry mash of several grains, so that their food never sours, and there is always plenty for them to eat. They have shade, sunshine, shelter from wind and rain, fresh earth for scratching, green grass and weeds and space enough for exercise.

After the first of August the netting is taken down and they run where they will and live upon whole corn and fresh water. In the autumn I select the fifty best-looking pullets to keep, sell off the others with the old hens and all the cockerels, buy two well-bred cockerels of different strain but the same breed, and move my feathered family into winter quarters on November 1st.

KATHARINE KEIFE

THORBURN'S SEEDS have been renowned for their purity and fertility ever since the days of Washington and Jefferson, over 100 years ago. Year after year, by critical selection and scientific culture, we have improved the strains until today, without question, we list the largest assortment of flower seeds in America, and their quality is unapproached. Get our 1912 catalog. It contains a wealth of information and advice, yet it is free. Users of Thorburn's Seeds are also entitled to the series of helpful booklets issued by us (one each month) giving timely hints about the Garden.

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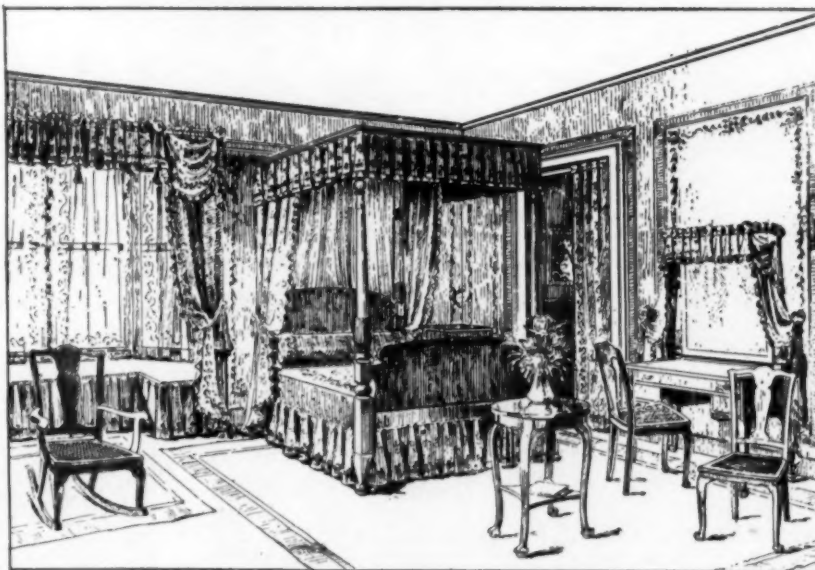
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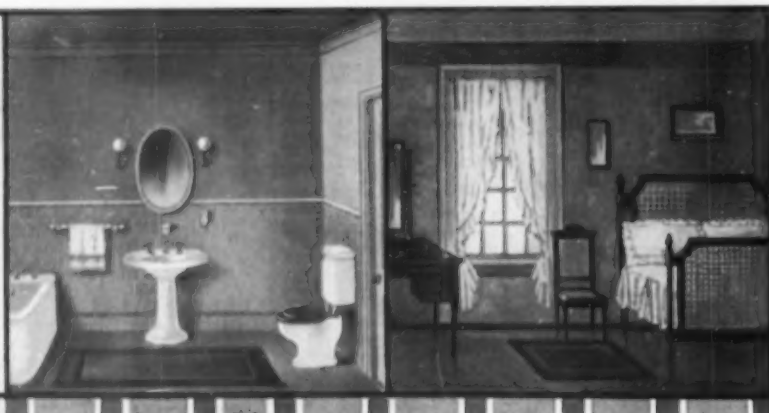
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You, no doubt, have often been embarrassed before visitors by hearing the noisy flushing of the old-style closet. You need no longer put up with this annoyance if you will have your plumber install a Siwelclo. Outside of the bathroom, it can not be heard at all. No other closet has this advantage.

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A grape of rare superiority—for the garden arbor or for the market grower. A heavy and early annual yielder. Vine of extreme vigor, free from rot or mildew.

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Six Months of Flowers from Six Plants

(Continued from page 23)

develop. Planted in the fall they will bloom the next summer.

Clematis is seldom thought of excepting as a vine, but there are beautiful bush forms which ought to be used everywhere. Of these *clematis Davidiana* is perhaps the most striking and generally satisfactory. It grows about three feet high and has large clusters of blue flowers that are deliciously fragrant. Ordinary light garden soil suits it, enriched with annual applications of manure. *Clematis recta* is a white flowered variety that blossoms earlier. Single specimens of either of these are effective, having almost the appearance of a small shrub—or they may be massed along a border with delightful results. This blossoms so late that spring planting is possible, without loss of its summer blossoms, but fall planting always seems easier and better to me, even when it is not preferable for cultural reasons.

The hardy pompon chrysanthemums finish the summer with a grand flourish of white and as many yellows, bronzes, pinks and crimsons as there are shades of these colors. Hardest of flowers, they continue blossoming away into November, and even severe frosts do not dim the beauty of the flowers. Give them a well-drained place in any ordinary soil. A single plant will cover a space two feet square, so they need never stand nearer together than twenty inches, if a mass is desired. These alone must be planted in spring if the year's bloom is not to be sacrificed, for they blossom at just the fall planting season.

All hardy perennials should be cut off at the ground when the ground freezes, and a mulch of leaves or straw should be put over them. This is to prevent the ground from thawing again after it has frozen—it is not the freezing that kills or injures vegetation, but the alternate freezing and thawing and consequent heaving—so it should not be done until the frost has taken a deep hold. Then it should be done immediately.



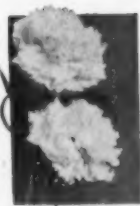
Homes That Architects Have Built for Themselves

(Continued from page 21)

reached directly from the hall, and that three have their own supply of running water or direct connection with a bathroom, and one its own private bath. On the third floor there is a maid's room and bath, a storeroom and a spacious playroom.

The structural features of the house having been thus arranged, the decorative side was undertaken. In this part of the work the principle of avoiding useless ornamental things was adopted and rigidly adhered to. There are no unnecessary

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furbelows either inside or out, or at any rate if there are any there, they have not yet been discovered, nor have they been pointed out to him. His aim was the development of the simplest elements of structure handled as effectively as possible, without the addition of anything for decorative effect only. There is nothing about the house that has no use or a purpose. The wood trim, for instance, is of the simplest possible order and it has even been eliminated inside and out as much as possible. On the ground floor, all the woodwork of the hall, living-room and den is in a gray tan, which gives the effect of extreme age, and the boarding runs from floor to ceiling in the hall and den. All the ceilings are beamed in the simplest possible manner in these rooms, the real beams being encased in chestnut like that of the ceiling, and ash is used on the walls stained to match the chestnut. The dining-room is the exception to this decorative plan and it might be termed the white room. The dado, cornice and woodwork around windows and doors are painted café au lait and the wall covering between dado and cornice is grass cloth in a straw color, while that of the living-room is a mercerized damask in dull gold and tan, running clear to the baseboard.

There is a most original planning of the window fixtures throughout the house. There is not a roller shade to be found anywhere, but all the curtains are case-ment cloth on rods, with separate hangings for the main windows and the smaller transom windows above, as shown in several of the photographs. The floors and staircases throughout are plain oak.

The conspicuous feature of the living-room is the handsome Indiana limestone fireplace of English design with no shelf. It is merely a plain stone opening set into the wall, and at either side of it is a built-in bookcase.

The simplicity pervading throughout the house is shown in still one other detail, and that is in the fixtures. In the dining-room there is as a center light, a gold metal burst quite appropriate to the general scheme of the room, while in the other rooms there are very simple little wall fixtures or ceiling lights with delicately beaded globes.

The sun-parlor has a treatment all its own, as sun-parlors should. Its walls are of plain cement finished like the exterior of the house, and the floor is also of cement, with a brick border around the sides and a panel of red brick inserted in the center. This room, while used as a sun-room during the colder months of the year, and then shut in with glass, is in the summer an open screened porch, and the flower boxes which adorn its roof in the summer are moved inside for the winter, thus doing double duty. The placing of this room where it is and the arrangement for its use throughout the year is one of the strongest elements in the planning of the entire house.

The stucco of the exterior is laid on galvanized metal lath and the walls are so constructed as to give a double air space.

For the roof, Mr. Davis selected green variegated burnt clay tile with a mat glaze and the wood trim is chestnut stained in a dark greenish tone to match the coloring of the roof, so that aside from the neutral of the stucco, there is but one color in the structural elements of the entire exterior. The elimination of woodwork, already noticed inside the house, is also carried out as much as possible on the exterior, and an interesting illustration of this is in the turning of the tile along the edges of the roof and in the use of stucco for the eaves. The trellis work is stained like the wood trim and the metal work is green copper. A little iron balcony off the main stairway is also in a modest shade of green to correspond with all the rest. The placing of the trellis-work is admirably accomplished to fill in the larger blank surfaces of the walls and provides for the running vines which were one of the things that Mr. Davis and his family most desired to have about their house.

Leading from the main approach to the main entrance and then beyond to the sun parlor is a path of brick laid on edge with cement. Along this path is a hardy garden with hollyhocks, shasta daisies, phlox and golden glow, with a bayberry hedge running along its side. On either side of the main entrance is an Italian jar with pyramids of boxwood. Honeysuckle and clematis are on the trellis-work and the window boxes over the sun parlor are filled with vines and geraniums.

There are no shutters on the house, all the windows open outward and all are provided with transom sashes for top ventilation. One of the features of the house which provides the greatest comfort and satisfaction to the family is this extremely simple but effective solution of the window problem both inside and out.

Hot water is the heating agent of the house and in the kitchen is a gas range, but no coal stove. The kitchen has a composition floor with a sanitary base, plain plastered walls, and, like the rest of the house, a minimum of wood trim. The garage in the rear is of stucco and is entirely covered with trellis-work and has pergola ends projecting from the roof. In the course of time it will be covered with a luxurious growth of grape vines.



Modern Bathroom Accessories

(Continued from page 25)

object. The one here considered has the advantages of flexibility, portability and lightness. It folds together after the fashion of a camp stool. Once emptied it can be carried away and stowed under the bed, if necessary.

The shower bath, on the other hand, may be classed rather as an accessory than a fundamental. Of these also there are two kinds, fixtures and portables. The new fixture shower baths are in the form

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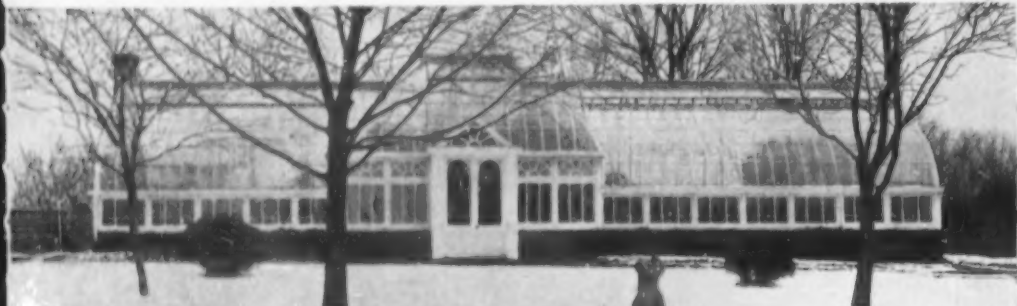
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of what may be described as a porcelain closet with a glass door. The effect is rather imposing and its installation in some cases reaches the level of interior architecture. That is, where it is actually set into the wall. Once within, it is as if one were hermetically sealed; the flying water does not escape. Among portable shower baths there are new forms, at once ingenious and satisfactory. In the latest examples, the spray is upheld by a standard of sufficient height to be overhead. Out from the circular spray there hangs a round shield of prepared canvas reaching the floor and surrounding the bather. The jets emanate both from the center and arms of the spray. They are of the "pin-point" variety, considered an aid to circulation. The attachment for water connection presents no difficulty. The shower bath resembling the refreshing rain, is, perhaps, the most natural of all; and in primeval days some of our ancestors may have delighted to regale themselves in the drenching downpours.

Of Englishmen it has been said that wherever they might go, you would find them accompanied by a Bible, a copy of Macaulay and a bath. It is not surprising, therefore, to find that from England comes one of the most luxurious ideas in the new accessories. What should one do after a bath? Hurry to dress and away, or linger a while in enjoyment of the glow produced. Physicians tell us to be deliberate about our meals. Might there not be something in being deliberate about our baths? The English idea consists of a combination of a commodious and inviting bath chair of white enameled wicker, the whole being covered by a colossal towel, in the grateful and embracing folds of which one can sit and think—and dry. The Englishman uses this time to peruse his paper and when he jumps up at last, he can throw the news into the white enameled wicker waste paper basket, which is flattened at the wall side, that it may stand close, and curved in front. All that remains is for the bather to weigh himself on the new white scales. They are compact, but sufficient to form a pedestal for the living statues surmounting them. The record is reflected in a mirror set at the proper angle, so it can be read with a mere inclination of the head. All of which is surely convenience raised to the *Nippon* power!



Everyman's Poultry Plant

(Continued from page 31)

116 dozen to the neighbors at an average price of forty cents a dozen, making \$46.40 in egg money. From four settings of eggs I raised thirty-five chickens, keeping fifteen pullets for layers next year, and using the others, mostly roosters, for the table. At an average price of one dollar each for choice fowls in the best of condi-

tion, we saved \$20.00 on our own table supplies.

Remembering that the only outlay for the chickens during the year was the \$36 for their food, it is easy to see that my twenty hen proposition, while not exactly a money-making scheme, is at least a profitable and satisfactory undertaking. Of my own time I figure that I spend fifteen minutes in the morning, five minutes at noon and half an hour in the evening. In this fifty minutes a day I can attend fully to the needs of the chickens and at the same time have outdoor work and exercise. Divided up as it is I find that I scarcely miss the time that it takes to keep the family supplied with new laid eggs and the best of fowls for the table, not to mention the egg-money box which never fails to jingle.



Adventures with an Apple Orchard

(Continued from page 28)

well-developed, than two lop-sided ones on the same ground. Generally speaking, this is true; but when I had two trees bearing big crops of apples, each developed toward one side, I left them both, for I need the income.

Read all you can, ask questions of everyone within reach that knows anything, and examine every orchard that you can find. Thus prepared, beg, borrow and steal every atom of common sense that you can lay hands on, and go ahead and trim your orchard. It is curious how soon you learn to recognize the "business" tree.

Mr. West complimented me on my work. Although at complete variance with his own method, which had been to trim up, ever up, he instantly recognized the value of the ideas which I was translating from print to practice. Again I felt that I had scored on him, and my peace of mind needed every bit of advantage that I could secure over Mr. West, for he had forty-five years of successful experience against my three weeks of untried practice. The odds were still disturbing.

When work slacked up on the orchard I began bothering Mr. West with questions about his dairy. I tried to learn to milk. Success with one cow didn't seem to assure it with another. I asked him about the dairy accounts and learned that he didn't keep any, but was sure that the cows paid him well because there was a monthly check from the creamery. Once he had had the milk tested for its percentage of butter fat, and was elated at the high figure. But he had not seen the necessity for measuring the amount of milk given, and when I saw the small pails yielded, I kept my thoughts to myself. The dairy then ceased to interest me because, ignorant as I was about the practice, I knew that he was losing money every day that he kept those cows. Score three for the city man.

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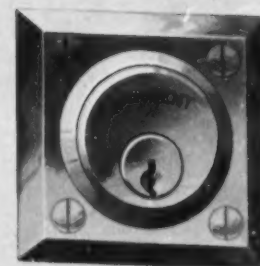
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What a reasonable thing it is, then, to send for one of our inspectors to examine your trees and find out just what their condition really is. You are under no obligations to us to have any work done—but you will at least know their actual conditions. It's worth knowing. Send for the booklet, whether you send for us or not.



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Dairying didn't pay, but the apple-laden tree looked good to me. I had found holes in the management of the orchard in every branch of the work which I had yet seen. Mr. West knew the practice, but I knew the theory.

I bought the farm. My dreams were realized and *I was a farmer*. I was fairly dizzy with elation, and looked out over "my" fields. The trees were laden with fruit, the meadows rolled up over the hills and the pastures stretched away to the eastward. Of a sudden the full realization of what it all meant came over me and the dizziness was of another kind. I had found certain weak spots in Mr. West's system, but I didn't know enough to feed a horse, to harness him, or to drive him. I scarcely knew a harrow from a sulky plow. The job was put squarely up to me to learn to farm.

Hope Agricultural College has a four weeks' summer school, whenever the Governor isn't too busy building automobile roads to sign the appropriation for its maintenance, and I was enrolled as a student. It was the event of my life. I filled my note books with practical points, but my spirit was uplifted for me. I was shown a new world, and its treasures were unfolded to my gaze. Farming didn't consist of a backache and a small yield of potatoes. It consisted of deep study into the processes of life. It took one into the sciences and carried one deep into the doctrine of evolution. It needed foresight and instant adaptation of methods to meet changing conditions. It compelled grappling with the business methods of the day, to evolve ways to overcome the extortion of vampires. I was not going to rusticate, and I was already wondering where the hours were to come from to permit all this.

When I went back to my farm I plunged right into the busiest season of the year. My note books were stowed away, but nothing could stow the enthusiasm which I carried back from Hope College. I was like the shaving that carries the flame from the match to the kindling. The Faculty of Hope College had lighted the match, and I conveyed the fire to that farm in the hills.



Laying Out and Improving Tennis Courts

(Continued from page 17)

stone gutters, such as are used on tiled roofs. They are laid parallel with the net and filled with loose stones. The drains are tilted sufficiently to carry the water off at the sides or to a receptacle in the center. Sometimes a barrel is sunk in the middle and filled with stones, and the drain pipes empty into it.

Another method common on some courts is to drain them at the ends. In this case the court at the net is two inches

higher than at the ends, and on porous soil this will be sufficient to carry off the water. When the drain pipe is placed near the net the tilt from the ends toward the center should be from one to two inches.

We have more difficult drainage problems in very thick loam and clay soils. Artificial drainage of a more elaborate nature is required here or else the courts will be muddy and sticky for days after rainstorms. Drain pipes must be laid under the courts at various places, and tilted toward one particular point. The open drain pipes are laid down before the trap rock is placed and filled with broken stones so they will not fill up with dirt. Two or three of these lines of open pipe should be placed on either side of the net. They should run from the ends of the courts toward the net and drain into the stone gutter that has been placed under the net. The number of these drain pipes depends upon the sticky nature of the soil. Four parallel rows of them on either side of the net should be sufficient for the poorest kind of soil.

When the drain pipes are laid, and the courts properly leveled with the trap rock foundation, a three-inch layer of coarse gravel or fine broken stone should be spread over the surface. This must be pounded and hammered down and watered. The water will tend to show any weak places where settling is liable to occur, and the depressions thus formed must be filled up with fresh material. When this layer of coarse gravel has been leveled, pounded and settled, the top layer, of sandy loam and clay mixed, should be applied. This finishing layer should be at least three inches thick, and four or five is better. Sandy clay and loam must be mixed for the top dressing, but the proportion of each depends upon the nature of the clay. If the clay is very sticky it will require more sand. It needs to be sufficiently porous to permit the water to pass through easily, and yet not so porous that the surface is too soft. If there is not sufficient sand the surface will be sticky after a rainstorm. For ordinary purposes one part of fine sand to four parts of clay make an ideal finishing surface, but sometimes one and a half parts of sand have to be used.

When the finishing surface is laid it should be leveled off and rolled repeatedly. Watering is also essential, but a good rain will do wonders to settle the surface. Faults and depressions will then develop, and they can be corrected by filling in with new material. Also if the surface is found to be too sticky add a little more sand to the top and work and roll it down. It may take several weeks to perfect the top surface of the court so that it is rainproof.

The construction of a grass court is simpler, for no attempt is made to drain it. The first thing to do is to lift the grass sod as carefully as possible and lay it aside for later use. The sod should be cut down as nearly to six inches depth as possible, and should be lifted in squares of fifteen to eighteen inches. Pile the sod carefully



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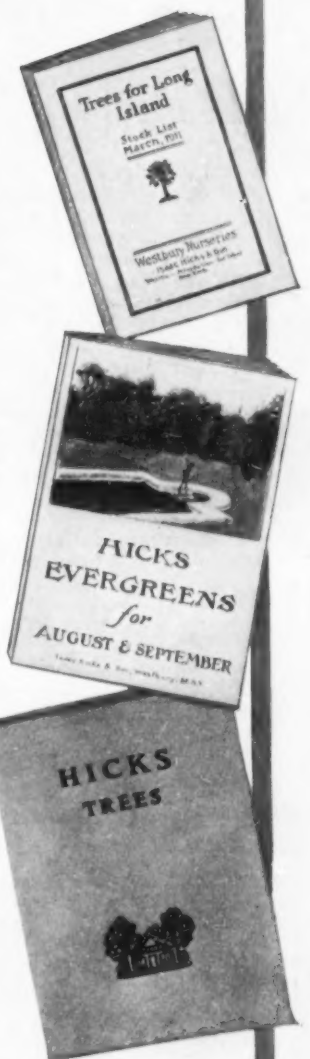
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on one side and keep moist and partly protected from the hot sun. When the sod has all been removed spade up the soil to a depth of eighteen inches, removing all stones, roots and obstructions. Rake over carefully and roll down to a level, watering frequently and filling in all depressions. When a perfect level has been obtained replace the grass sods.

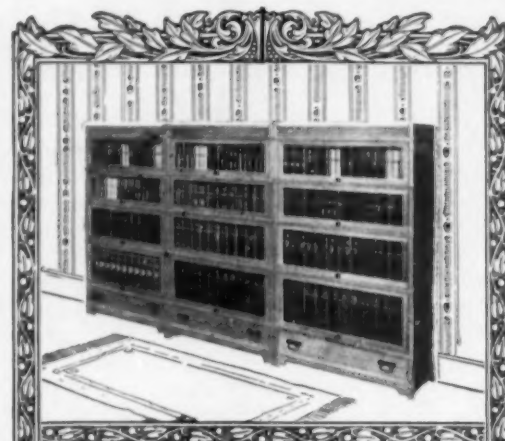
These must be put down carefully so that the edges meet snugly. Open cracks and seams must be filled in with smaller pieces of sod. Roll, water and level the surface until all is satisfactory. Fresh sods may have to be cut and placed wherever thin places appear during the first season. In the spring of the year fresh grass seed may be sown.

If the turf or grass is poor it will be better to omit sodding entirely and sow the surface with perfectly new seed. It is better in such a case to make the grass court in the fall of the year. The winter storms will settle it thoroughly and reveal weak spots. In the middle of March rake up the surface, level, sow the seed and roll carefully. It should be sowed twice from different directions, so that an even catch is obtained. Sowing can be made in the fall or spring. About five bushels of grass seed will be needed for the full-size court. Do not use clover seeds in the sowing, nor guano for fertilizers. When the grass is high enough to cut use the scythe or sickle first, and keep the mowing machine for later cutting. Remove weeds as fast as they appear, uprooting them, or if the roots persist rub salt on them. When the grass is tall enough for regular cutting use the mower at least once a week, and oftener in wet weather.

In many localities worms are very numerous and destructive to tennis courts. By working up to the surface they form little mounds and holes which permit water to trickle through and cause depressions. In regions where the worms are a great nuisance a layer of finely sifted cinders is placed on the stone foundation of the dirt court or at the bottom of the excavation of a grass court. These cinders will keep the worms from working up, but if placed on the grass court the cinder layer must be at a depth of a foot or more below the surface, so as not to interfere with the grass roots.

One should remember that grass courts wear out more rapidly and require more care than those of dirt, especially when they are subjected to constant usage.

The cost of making tennis courts will vary considerably, as one may readily see. As much as \$200 and \$300 is sometimes paid for making tennis courts, but others are made at no greater cost than \$25 where conditions are favorable and one is willing to do some of the work. The hardest courts to make are dirt ones laid on rocky foundations where blasting is necessary. Grass courts that are nearly level can sometimes be made by removing only a part of the sod and replacing it after digging out some of the under soil. This may cost only a few dollars.



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The man who builds a house without asking about the sash-cord to be used is laying up trouble for himself. Insist that the specifications mention SILVER LAKE A. Its smooth surface offers nothing on which the pulley can catch. Guaranteed for Twenty years.

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SILVER LAKE COMPANY
87 Chauncy St.,
Boston, Mass.
Makers of SILVER
LAKE solid braided
clothes
lines.

The Practical Workman is
Sure to know the Reason Why

All sorts of devices have been adopted for marking out the court, such as white paint, whitewash, and white tape, but on a grass court none of these are equal to grass itself. At the time the seed is sown on the court plant freely in some part of the garden the seed of the crested dogtail grass. This grass is yellow-green to white, and if sown very thickly it will serve to mark the courts. When the grass on the court is high enough for cutting transplant the crested dogtail grass to the lines marked out.

Mark out the courts exactly with tape or string, and then cut out on either side of it a strip of sod two and a half inches wide. This strip is then filled with the sods of the dogtail grass raised in the garden for this purpose. The sod should be patted down firmly in place, and a few seeds of the dogtail grass sown in with it. In this way you have the courts marked out permanently by grass, and the contrast in color is sufficient for all playing purposes. The effect, of course, is very striking, and far ahead of the courts that have to be whitewashed after every rainstorm.

The dogtailed grass is a hardy grower, and it will if not controlled spread out into the court itself. This, however, can be prevented by an occasional weeding. It must be kept in its narrow strip even if roots have to be pulled up at times. If the spreading roots crowd out the green grass, the latter can be renewed by planting a little sod from some other part of the garden.

A fact not always appreciated by amateurs in laying out tennis courts is that by laying the courts due north and south, the disadvantage of playing with the sun in the eyes is avoided. When laid east and west one player must always face the sun, which, of course, is a handicap. If the court is laid north and south the sun is never in the way either morning or afternoon.

A grass tennis court of this kind, with back nets to keep the balls from going too far, covered with climbing vines or flowers, adds so much to the appearance of a garden that other improvements are sure to follow. A series of rustic benches for spectators should be arranged on the west side, so that they can watch the afternoon game without having the sun in their eyes. If the land is rolling and hilly, the benches should be placed on a terrace at one side.

A tea house made of rustic work is a great addition to a tennis court. This may be nothing more than a rustic covering to protect the heads of the spectators, with seats and a rustic table for serving the tea. If it is built on a terrace on the west side of the court visitors can watch the game under the most comfortable circumstances, and the game can continue while refreshments are being served.

Tennis parties are very popular among the young, and invariably a match game or a series of games is followed by the serving of refreshments. The tea house then becomes the center of attraction and well pays for itself.

ATTRACTIVE SEED OFFER

FOR 50 CENTS

we will send prepaid the following seeds which, if sold separately, at our retail prices of 10 cents a packet, would cost \$1.90.

One Packet each of the following
Giant Orchid-flowering

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New White Spencer. Best White.

Countess Spencer. Pink.

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Aurora Spencer. Best Striped.

Primrose Spencer. Pale Yellow.

One Packet each of New Giant-flowering

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Dwarf Beauty. Light Scarlet.

Dwarf King Theodore. Scarlet Maroon; dark foliage

Dwarf Luteum. Light Yellow.

Tall Schulzi. Scarlet.

Tall Pearl. Cream White.

Tall King Theodore. Scarlet Maroon; dark foliage.

One Packet each of the following

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Violet King. Beautiful Deep Violet.

Early Snowdrift. Earliest White.

Improved Crego Pink. Giant Pure Shell Pink.

Hohenzollern Rose. Ostrich Plume Rose.

Cardinal. Beautiful Bedding Scarlet.

Royal Purple. A gem in color and size.

To induce you to take advantage of this very attractive seed offer without delay, we will include one packet of the New and very Popular African Golden Orange Daisy, a charming annual that is easily grown.

We are headquarters for the latest Novelties in seeds and everything in the line of Bulbs.

Remember that for only 50 Cents we will send you all the seeds mentioned in this advertisement value \$1.90.

All the above varieties are described in our 1912 catalogue; 120 pages, telling all about seeds, which is sent free.

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NEW YORK

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Dunham rollers are made with regulation automobile axle and roller bearing construction—44% easier to use than others. Counter balancing weights hold handle off the ground when not in use. Indestructible and indispensable.

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Aymar Embury II, Architect, Englewood,
N. J.*

You are Sure of Cabot's Shingle Stains

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

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Manufacturing Chemists

11 Oliver Street

Boston, Mass.



WATER-LILIES

Victorias, Egyptian Lotus, Sub-Aquatic Plants
and everything for the

WATER GARDEN

These are the orchids of the outdoor garden, gorgeous and rich in color beyond comparison, embracing white, reds in all shades to deep crimson, yellow to orange, blue from the palest to royal purple. Exquisite in fragrance and varied in size; adapted to culture in tubs (half-barrels), pools, fountain basins, natural or artificial ponds and lakes; requiring the minimum amount of labor, care or attention. Can be grown by amateurs and professional gardeners in the smallest garden or public park. Send for Catalogue and any desired information.

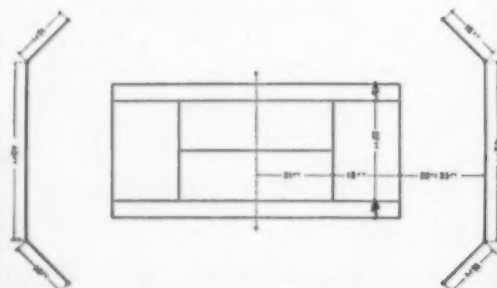
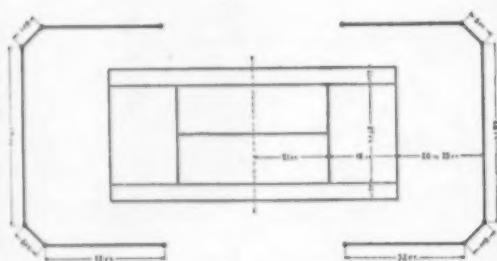
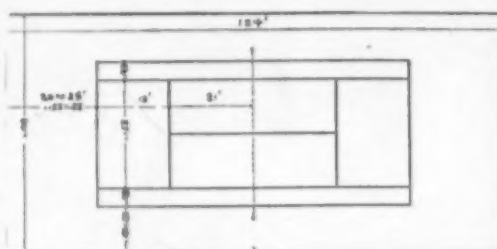
WILLIAM TRICKER

Water-lily Specialist

ARLINGTON : : NEW JERSEY

The tennis court should not be inclosed by trees on all sides. That is a mistake commonly made. The trees should be planted only on the west side of the courts, and not on the north and south sides. The foliage of the trees hampers the players in seeing their balls, especially toward night. The balls stand out more clearly against a background of blue sky than a background of green foliage. The trees on the west furnish shade without thus interfering with the players.

If trees crowd too closely to the court they make the surface damp, and in wet weather it may be impossible to play for days at a time. If the court is free from shade on the east side, the morning sun



The above plans show three different shapes of backstops. Court dimensions are also indicated

will dry up the courts after a rain, so that playing can be resumed in the afternoon.

All of these points in laying out a tennis court may seem simple and plain to any one when consideration is given to them, but failure to observe them often causes an endless amount of annoyance. For instance, one of the best tennis clubs in the country had its courts laid out running east and west, and the difficulty of playing with the sun in the eyes caused so much trouble that they had to be rebuilt. Expert players refused to enter matches on the courts. There was no reason, except oversight, why they were laid out wrong in the first place.

TILES



Make the fireplace the focus of the room

Above all things the fireplace must be attractive, because it is the spot around which the family gathers.

In most cases the first reason for using tile is a sanitary one, but in the case of the fireplace it is an aesthetic one. You put tile around the fireplace for beauty. Incidentally it is a good protection against fire. You use tile because it is burnt clay, and both in color and texture suggests an association with fire.

We have prepared four booklets: "Tiles for Fireplaces," "Tile for the Bathroom," "Tiles for the Kitchen and Laundry," "Tiles on the Porch Floor," which we send free to home builders. You would do well to read them before perfecting your plans.

**THE ASSOCIATED TILE
MANUFACTURERS**

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Ellwanger & Barry

**WORLD-famous
Ornamental and
Fruit Trees, Shrubs,
Roses, Evergreens and
Hardy Plants.**

Perfect specimens in splendid condition, true to species, first choice from the Most Complete Nursery Stock in America. Endless standard varieties and tested novelties, suitable for all purposes. Guaranteed by a 72-year reputation for honest, accurate dealing. Write for our 72nd Annual Guide Book. Indispensable in planning lawn, garden and park decoration. A copy will be mailed you free on request.

ELLWANGER & BARRY

Mount Hope Nurseries, Box 20, Rochester, N. Y.

Another club which had its grass courts laid out with a dense growth of trees a few yards back from the courts on the east side finally came to the conclusion that they either had to rearrange the courts or chop down some of the trees. The morning shade of the trees kept the courts from drying up quickly so often that the players got disgusted. Beautiful mornings after a rainstorm would dawn, and the players would anticipate fine afternoons of tennis. But the courts were too wet until very late in the day.

Like everything else, there is a right and wrong way of laying out courts, and if one is doing it as a permanent fixture of the garden a little care and attention to these details will add a hundred per cent. to their value and increase the comfort of players and spectators.



The Mathematical Spider

(Continued from page 19)

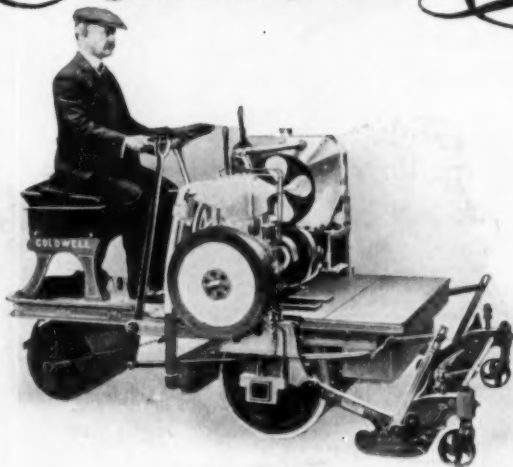
Edwards took time enough from his gloomy philosophical writings to notice how spiders did this to get from place to place. It is not an unusual thing, especially on October evenings, to see spiders relying upon the air to carry them from place to place. They climb up to the top of a fence post and uptilting the abdomen exude the thread liquid from their spinnerets usually in one or two fine threads. As the breeze pulls these out to greater length they have the buoyant effect of a balloon and soon the spider, gauging this carrying power, lets go of the post, reaches up and grasps the filaments in his claws and goes sailing off in the air as some experienced aeronaut.

With his web constructed, the spider sets about getting his prey, and it is not simply a matter of waiting until an insect becomes entangled. In the vertical web one commonly sees the animal head downward, seated at the hub of the web and grasping a radiating line in the claws of each of his eight legs. In this position the slightest touch is telegraphed him, and he can immediately tell from the vibration where the insect is struggling. When anything does touch the net the spider is seen to twitch with a great muscular exertion, and appears to be jerking the lines and making the web vibrate. Superficially it would appear that the purpose of this was to involve the victim still more in the meshes of the web. Later investigation, however, has gone toward proving that the spider tells the nature of the disturbance by these motions. If a stick or twig fall in the net, the spider will notice at once that there is no answering activity to his jerk, and will proceed according to his perception that the disturbance is caused by something that is not prey. When, however, the jerks on his line advise him that a quarry is snared, he leaves his position at the hub, often carrying a drag line from its central point, and proceeds, some-



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Coldwell



Motor Lawn Mower

THESE MACHINES ARE USED ON MANY OF THE LEADING GOLF COURSES and PUBLIC PARKS THROUGHOUT THE UNITED STATES. THEY IMPROVE and BEAUTIFY THE LAWN AS NO OTHER MACHINE CAN and AT MUCH LESS COST.

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**FINE WILLOW CHAIR \$7.50
WITH CUSHION COMPLETE**

IN order that you may see for yourself just how attractive and useful Willow Furniture is in the home, we will sell for a limited time one of our Low Back Palisade Willow Chairs. Price, with cushion, \$9.00, for \$7.50 complete. This chair will be sent upon receipt of Money Order or New York Draft.

Sketch Sheets showing a great diversity of styles with price list mailed free on request.

Walter J. Brennan Company

Odd pieces of furniture, artistic draperies
and gift articles not found in other shops

436 Lexington Avenue, Opposite Grand Central Station, New York



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GLASSWARE

A generous display of crystal-clear glass on the table is always inviting and does much to promote good cheer and good fellowship.

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ON EVERY PIECE




LAGER & HURRELL

Orchid Growers and Importers

SUMMIT, N. J.

ORCHIDS

We are specialists in Orchids; we collect, import, export, grow and sell them exclusively. If you need orchids for your greenhouse or conservatory, write us. Visitors always welcome.

times cautiously, sometimes with a swoop, upon his prey. This he pierces with his fangs, and then revolving the insect, he swathes it in a broad band of silk from the spinnerets. This is done in an incredibly short time, the jaws and forelegs turning the captured creature in the floss until it is entirely covered. The drag line is then of use to climb up, carrying the food to the web-center, as it saves the net from being injured to any greater extent. The spider merely sucks the juices from its captive and throws the dry shell away. After the meal there is the work of repairing the web, which is almost certain to be torn from the struggles of the insect.

Trapping is the spider's sole means of livelihood. He is not apt to move his snare when he finds the food scarce, but waits on and on, often for a long time without reward. The rain twists and tangles his web, animals plod through it and man wilfully destroys it, still he rebuilds it and waits, working indefatigably for the future. This is the strange thing about the spider that makes him different from all the other animals but man. He must fabricate a means to catch his food. Whether it is instinct or cunning that tells him how to weave and where to place his web, one must stop to wonder, for he seems to have almost human judgment. He will sometimes weave fenders of twisted lines to protect his snare from larger creatures than he can capture, turning them away before they strike the web. He will sometimes spin out guy lines to brace it against the wind. There is one variety of spider that spins a web in triangular shape. It corresponds to three or four segments of an orb web, converging to a point and there drawn out as a single thread. This the spider drags upon and holds, allowing the slack to drop beneath him. When an insect strikes the web the spider releases his hold, and the elasticity of the threads causes them to snap back quickly and entangle the insect. It is just like lying in wait and springing a snare, and seems to require more than cunning.

So one might go on enumerating the wonderful things about the spider—not the great hairy ones of tropical jungles, but your own little garden neighbor. And surely your garden should have educated you to be beyond fear, loathing and prejudice. A garden will do just that, and just as it has brightened your eye and cleared your vision, it should have swept away the prejudice against the spider as a "horrible, nasty, poisonous varmint—ugh, take it away!" There is much more in your garden, you must admit, than the plants; the birds are part and the spiders are part. You'll believe it when it is warm again and the morning sun reveals to you the great glistening diamond sunburst hanging between the hollyhock stalks or the pickets in the fence. If you wish, the spider may become a very interesting companion indeed.



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YOU'LL be mightily pleased with my Japanese Barberry—it's the good kind. I transplant every one three times. That gives them masses of fibrous roots that will make them fairly shoot ahead. You don't have to nurse them along; they'll grow as much this year as the common sort would in two or three years. The branches are good, too. I cut them back twice a year, making stocky, bushy shrubs—every one a specimen.

Let Me Send You Plants for a Barberry Hedge "on Approval"

Pay for them if you like them; if you don't, send them back, at my expense. The best size to buy is 1½- to 2-foot stock (plant 18 inches apart) at \$20 a hundred, fifty for \$10, ten for \$3. These are fine, showy plants.

Escape the rush and be sure of getting your hedge when you want it by booking your order now—shipment when you desire.

FREE.—My brochure on hardy shrubs, a helpful handbook, beautifully illustrated, describing and pricing "every shrub worth growing." Write for it TODAY.

FRED HAXTON, Nurseryman
4719 Winthrop Ave., Edgewater, Chicago

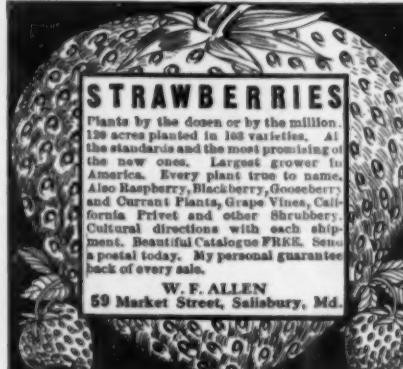
This is the kind of hedge my Japanese Barberry will make—it will save you three years of waiting.

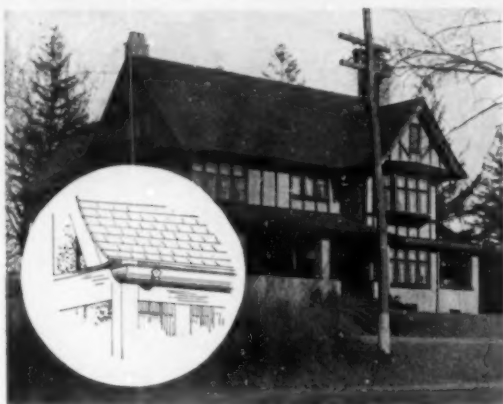


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Plants by the dozen or by the million. 120 acres planted in 165 varieties. All the standard and the most promising of the new ones. Largest grower in America. Every plant true to name. Also Raspberry, Blackberry, Gooseberry, and Currant Plants, Grape Vines, California Privet and other Shrubbery. Cultural directions with each shipment. Beautiful Catalogue FREE. Send a postal today. My personal guarantee back of every sale.

W. F. ALLEN
59 Market Street, Salisbury, Md.





Although cast iron, these indestructible gutters do not look any heavier than those of tin or copper. They are made in two styles. This is the hanging one. The moulded face is more ornamental.

PUT THIS GUTTER ON YOUR HOUSE

IT IS INDESTRUCTIBLE

THE gutters on your house being up out of reach and out of sight, you can't tell whether the paint is on or off, and first thing you know they are leaking and the side of your house is all streaked.

You endeavor to get every other part of your house as lasting as possible, so why make an exception to your gutters—one of the most important of items?

England has experimented with the same kind of gutters we make for two centuries or more. So you are not endangering your house by trying out some new fangle thing.

They are made of cast iron. A high grade iron cast smooth, straight and of uniform thickness. They will outlast the best copper gutter you can buy, and won't begin to cost as much.

They form an ornamental feature of the eave—are easy to erect—need no repairs.

Let us send you short lengths of each kind of gutter at our expense. We want you to see the gutter itself, and we will leave the rest to your sense of the practical.

Send for circular and along will come the gutter lengths.



Half Round Hanging Gutters are made in 6 foot lengths and in two different sizes.

HITCHINGS & COMPANY
Meadow Street Elizabeth, N. J.

STRAWBERRY PLANTS

I care not how many berries you are getting per acre, if you use my plants, you can get more. I have devoted 21 years to up-breeding and improving the strawberry. Each year I have produced new and more productive strains.

THOMAS PURE BRED PLANTS

are prolific bearers, guaranteed true to label. Cost no more than "average quality" plants. This one thing I do—I breed strawberry plants, have 200 acres. I will select varieties best suited to your soil and climate. Send for my 48 page Strawberry Book. Contains 65 superb engravings. Tells how to plant, cultivate, market. Write to-day. It's free.

W. W. THOMAS, The Strawberry Plant Man
270 MAIN ST., ANNA, ILLINOIS.



The Planting Month for Roses

(Continued from page 33)

with great care, as an overdose will work injury. Wood ashes may be used as a top dressing after the first spring cultivation—which should be only one of numerous cultivations, as the loose top soil is an admirable mulch.

Roses should be ordered early. If they happen to arrive before the ground is prepared for them, they can always be "heeled in" somewhere in the vegetable garden. If this is not possible, place the plants, upright, in the cellar and put a little earth over the roots. Let them have air circulation and enough water to keep from drying. Before planting it will do the roots good to soak them in lukewarm water or thin mud for about an hour.

As for the best varieties of roses to order, that opens up a vast subject on many points of which rose growers will never agree. It is safe to say, however, that the best all-around type of rose for the garden is the hybrid perpetual, sometimes called hybrid remontant. It stands the northern winter most surely and can be depended on for a wealth of blossoms in season and a few out of season. This forms the largest and most important group of hardy roses. Its hardiness, combined with the blossoming capacity of the tea, is chiefly responsible for the growing class of everblooming hybrid tea-roses. Among the most satisfactory of the roses of these two types are:

Hybrid Perpetuals

Baroness Rothschild.....pale pink
Alfred Colomb.....cherry red
Louis van Houtte.....crimson
Anne de Diesbach.....carmine
General Jacqueminot.....red
Gloire de Margottin.....red
Mabel Morrison.....white
Mrs. John Laing.....pink
Paul Neyron.....bright pink
Marshall P. Wilder.....crimson
Ulrich Brunner.....crimson
Prince Camille de Rohan.....maroon
Giant of Battles.....crimson
Perle des Blanches.....white
Captain Christy.....pale pink
Frau Karl Druschki.....white
Magna Charta.....red

Hybrid Teas

Gruss an Teplitz.....red
Killarney.....pink
La France.....silvery pink
Liberty.....crimson scarlet
Kaiserin Auguste Victoria.....white
Caroline Testout.....rose
Richmond.....crimson scarlet
Königin Carola.....rose
Souvenir du President Carnot.....notsoft rose
Mrs. Aaron Ward.....yellow
Mt. Maryland.....pine
Souvenir de Wootton.....deep rose

The ordinary tea roses are hardy in parts of the North if banked with earth or covered thickly with leaves held in place by chicken wire or a box. In my own gar-

Sweet Peas

With our five farms in Pennsylvania, New Jersey and California, we have the largest, most complete trial grounds,—“to prove all things.” We were the first in America to grow “SPENCERS” and have to-day the choicest strains of these magnificent, gigantic, waved Sweet Peas. Unlike seeds generally sold, Burpee's Re-Selected Stocks come absolutely true both to color and to superb SPENCER type.

Six Superb Spencers

For 25 Cts. we will mail one regular packet each of FLORENCE NIGHTINGALE, the largest and best lavender; CONSTANCE OLIVER, rich rose pink on cream; MARIE CORELLI, beautiful, brilliant crimson; PRIMROSE SPENCER, the best primrose; SENATOR SPENCER, claret flaked on heliotrope; and W. T. HUTCHINS, apricot overlaid with bluish-pink. These Six Superb Spencers are shown painted from nature on pages 109 and 110 of Burpee's Annual for 1912. Purchased separately they would cost 65 cts., but all six packets, with leaflet on culture, will be mailed for **only 25 cts.; five collections for \$1.00.**

Six Superfine Spencers

For 25 Cts. we will mail one regular ten cent packet each of AURORA SPENCER, orange-salmon flaked; HELEN LEWIS, rich crimson-orange; KING EDWARD SPENCER, glossy carmine-scarlet; Mrs. C. W. BREADMORE, picotee edged pink; Mrs. HUGH DICKSON, lovely pinkish apricot, and a large packet (80 to 90 seeds) of Burpee's Best Blend for 1912 of SUPERB SPENCER SEEDLINGS. Leaflet on culture sent with each collection.

Six Standard Spencers

For 25 Cts. we will mail one regular ten cent packet each of APPLE BLOSSOM SPENCER, rose and pink; COUNTESS SPENCER, the best pink; GEORGE HERBERT, rosy carmine; Mrs. RUTZAHN, buff suffused with rose; QUEEN VICTORIA SPENCER, primrose flushed pink, and TENNANT SPENCER, rich rosy purple.

25 Cts. buys any one of the above three collections, any five collections for \$1.00 and mailed to different addresses if so ordered.

For 50 Cts. we will mail any two of the above collections together with a 15-cent packet of the most gorgeous, new THOMAS STEVENSON, making in all thirteen packets of SUPERB SPENCERS for **only 50 cts.**

For \$1.00 we will mail all three collections, neatly boxed, and also one regular packet of THOMAS STEVENSON, the charming new GLADYS BURT, the dainty ETHEL ROOSEVELT and BURPEE'S WHITE SPENCER, making in all twenty-two true Spencers for \$1.00, together with our leaflet on culture and paper on the Spencer Type of Sweet Peas.

BURPEE'S ANNUAL FOR 1912

This “SILENT SALESMAN” of the World's Largest Mail-Order Seed Trade is a Bright Book of 178 Pages. It tells the plain truth about the Best Seeds that can be grown,—as proved at our famous FORDHOOK FARMS—the largest, most complete Trial Grounds in America. Handsomely bound in lithographed covers, it shows, with the colored plates, Six Specialties in unequaled Vegetables, and Nine Beautiful New Flowers, including the most superb “Spencer” Sweet Peas. It is a Safe Guide to success in the garden and should be consulted by every one who plants seeds, whether for pleasure or profit. It is Mailed Free upon application. Shall we send YOU a copy? If so, kindly write to-day, naming HOUSE & GARDEN, and address

W. Atlee Burpee & Co.
Philadelphia

Madam, you need not fear to let the sun shine through these draperies.

Constant exposure to the strongest sunlight cannot dim the beautiful colorings in Orinoka-Sunfast Drapery Fabrics, nor will washing fade them. A "money-back" guarantee of this accompanies every yard you purchase.

ORINOKA
GUARANTEED
SUNFAST
Fabrics

for Draperies and Coverings

are the only drapery fabrics that can be so guaranteed. With this very pronounced advantage they combine beauty and variety of weaves, colorings and designs in unsurpassed degree.

For curtains and hangings, window seats or upholsteries, there are fabrics in this complete line to meet every requirement and gratify the nicest taste. Sold by leading stores everywhere, and distinguished by the Orinoka-Sunfast guarantee tag on every bolt.

The Orinoka Mills

PHILADELPHIA
NEW YORK CHICAGO
SAN FRANCISCO

Modern Gladiolus 5 Bulbs, 30 Cents

For only 30 cents I will send you 5 assorted flowering size bulbs of Gladiolus. My flowers took first premium at State Fair in 1911. My specialty is Groff's Hybrids and Silver Trophy, the most beautiful, vigorous and prolific strain in the world, but I am constantly adding the best to be had from all sources. I also sell mixed and named sorts of all leading strains and at lowest prices. List of named sorts and mixtures with full directions for growing, on application.

GEORGE S. WOODRUFF
Box G Independence, Iowa

den they have wintered with virtually no covering. Good varieties are:

Maman Cochet.....pink
Perle des Jardins.....yellow
Safranosaffron
Bonsilenerose
Papa Gontier.....red

In the ever-blooming Bourbon and China class, Hermosa, an old-time pink variety, is especially good. This and the polyantha roses are fine for giving the edge of a rose border bloom throughout the summer.



Naturalizing of a City Man

(Continued from page 35)

by appearances of good weather.

Three days later, it suddenly turned cloudy and cold, with a rising north wind, and that night at the store the knockers held funeral services over Mantell's early "gardenin'." But the proverbial luck of the beginner had been with Mantell. The little plants had had time to get hold, and the morning after the freeze was cloudy, so that they thawed out gradually, and while a number of the lettuce dropped out, the cabbage and cauliflower, which had come safely through two or three light frosts before being set out, were not injured at all.

With the following week, the spring work was on them with a rush. The team had to go to Priestly almost every day with plants, which two of the hardware and seed stores sold for Mantell on commission. There seemed to be no end to the garden work, and several things, which Mantell now saw clearly should have been attended to before, took time which could ill be spared. There was pea-brush to be cut and hauled and put in; and bean poles to be obtained for use a little later, and a most aggravating job of fixing fences which had fallen through neglect into an almost useless state.

And then there was the perpetual interruption of customers coming for plants. Those who wanted several hundred came and took them away without much ado, for they had work to be attended to, but the person who wanted a dozen or two for the family garden usually insisted on looking over the whole place, and picking and choosing and re-choosing, until it was with great difficulty that Mantell kept an even temper. He was pleasantly surprised to see how many plants were required to make up the number of small orders they got, and astonished to think that no one in the vicinity had grown them before, as the nearest greenhouse was several miles the other side of Priestly. Of course without Raffles he would have been entirely at sea, but there were plenty of men in the neighborhood who could undoubtedly have succeeded at it with one or two



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seasons' practice added to their general knowledge of gardening. Why had none of them attempted it? Possibly because the most energetic portion of the population of that locality—as indeed of most sections of New England—had followed the tides that set toward the cities, or swept westward to new lands and greater opportunities. But now the ebb tide was bringing back to these same sections many a Mantell, and carrying with it new ideas and new ambitions to many a native's son who saw good opportunities and a happier, healthier life among the erstwhile abandoned farms than he could see in the overcrowded centers of population.

In making his mental notes for another year, Mantell also took cognizance of the fact that it would pay to get everything done ahead during the early spring months that could possibly be done then. For instance, in the midst of their busiest season outdoors, and when they had several thousand small tomato plants once transplanted indoors, they had to spend hours making small boxes that would hold one or two dozen, for the stores to handle.

With the fertilizer, too, several half days' work were broken into. Much to the excitement of the native tillers of the soil, Mantell, upon Raffles' emphatic advice and explanations, had decided to mix his own, instead of buying a ready mixed brand. In order to do so he had had to buy his chemicals by mail from a firm in New York, and pay not only freight on the shipment, but cash for the stuff as well; whereas any one of the several smooth-talking agents would have been glad to take his order for mixed goods, delivered "freight allowed," and to be paid for in the fall, after the crops were harvested. Figures showed, however, that by mixing his own he could save over eleven dollars a ton on the high-priced brand which the Squire had found to give best results on their soil; and a telephone conversation with the State Experiment Station (costing a quarter, which not one of the thrifty natives would have dreamed of wasting in that way) convinced him that he could get exactly as good results from his home mixed product. The treasury was so low that he accepted the Squire's offer of seventy-five dollars at six per cent., for which he gave his note. For the same amount of actual plant food—nitrogen, available phosphoric acid and potash—that he got in his nitrate of soda, tankage, acid phosphate and muriate of potash for seventy-five dollars, including the freight, he would have paid one hundred dollars in high grade mixed fertilizers at forty dollars a ton.

The Squire had ordered his fertilizer the previous fall, but tried half a ton of the "new-fangled business—just to see what it would do." But he didn't have much faith in it, and the other neighbors had none at all. Said one, "I don't know about the other things, but this here nitrate of sodee, I know that'll make your ground poor in no time. Jim Crows, he used it on his meaders two years runnin'



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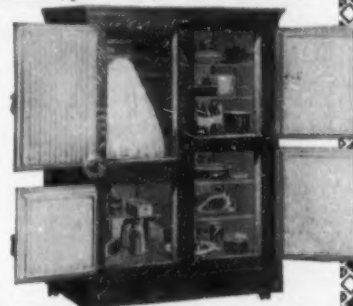
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will give the charm of nature to your yard. These include not only hardy wild ferns, but native orchids, and flowers for wet and swampy spots, rocky hillsides and dry woods. We also grow such hardy flowers as primroses, campanulas, digitalis, violets, hepaticas, trilliums, and wild flowers which require open sunlight as well as shade. If you want a bit of an old-time wildwood garden, with flowers just as Nature grows them—send for our new catalogue and let us advise you what to select and how to succeed with them.

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and got big crops, but after that it didn't do nothin' at all."

"Well," interposed Raffles, "why should it? What would Crows think of a man who fed his cows nothing but cottonseed meal for two years?" But his friend could not see the connection.

They worked early and late, and worked hard, but the days seemed to slip away from under their feet, always leaving more to do than they could quite attend to. And yet every member of the household enjoyed the life tremendously. Robert and Helen had gained over ten pounds each, and ate like starved savages. Unlike most of the farmers' sons and daughters, they were intensely interested in the work at home, and looked forward every day at school to closing time, when they could rush home and help with the work in the lengthening afternoons. Their energy bubbled over for as many hours a day as they could stay awake, and then they slept like logs.

Not all the life was work, however. There were many socials and parties of various sorts, at which they enjoyed themselves much more thoroughly than they had at the social functions held in the city—which is, after all, no place for young, healthy growing animals of any sort. In the winter there had been straw rides, usually with the Squire's big gray team and largest sled, and with that well-wrapped and red-checked gentleman himself upon the driver's seat, enjoying the affair to the utmost. It really seemed as if he got more fun out of it than all the crowd of youngsters, and it would keep him in the very best of humor—though he never departed very far from that happy state—for days at a time. The Squire was a great favorite, beloved far and near by old and young; and in their esteem he found his life's wages, and treasured it, happier than any miser or millionaire.

Nor had the master and mistress of the household ever been happier. That happiness which has not as a foundation abounding health is apt to be a house built on the sands. They were both stronger, younger in feeling than they had been in years. And although the privations were many, and they had fewer modern comforts than at any time since their marriage, never had life been sweeter to them, never had the future seemed to hold so much in store; never for a day did they regret having made their break from the old life that lay behind them.



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FOUNTAINS which burst out in imitation of geysers, flowing a minute or two at intervals of a few minutes, may be installed on any lawn or front yard. The outlet may be made in any way desired to conform to some type of fountain discharge, and the flow regulated as to time



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PLAN and plant (on paper) your garden now. It doubles gardening joys and makes surer gardening results. Send promptly for Boddington's Garden Guide and browse through it, and make your plans and order your seeds. You will find this guide so much more than a mere seed catalog that you will put it in a safe place for ready reference all through the season. In other words, it's a *real* garden guide. Order your seeds early so you can plant them early. Here are three special offers—some one of which you will surely want.

Three Unusual Offers \$5,000 Prize Sweet Pea Quartet.

Paradise Carmine—clear, lovely carmine, waved.
Constance Oliver—delicate pink, suffused with cream, waved.
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Tom Bolton—dark maroon, waved.
1 packet of the above four prize winners postpaid for \$1.35.
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This quarter of a pound of Sweet Peas (mailed free), contains the finest mixture of the Spencer varieties ever sent out by a seed house. The range of color is from pure white to darkest crimson, and all intermediate shades. Our sales last year were nearly 5,000 packages.

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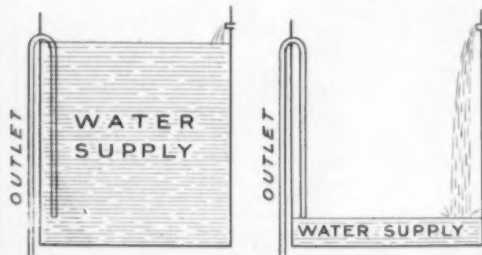


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or quantity. The essentials are a barrel or something similar at a height sufficient to give the desired pressure; a small supply pipe entering near the top, and a discharge pipe of larger volume running from near the bottom in a syphon curve, the top of which is a fraction below the level of the intake pipe. The barrel or tank may be in the attic or on an elevation in the rear of the house, and the supply may be from the usual source and constant though small, not more than a half inch stream. The discharge pipe leading to the geyser must be able to discharge at least twice as much water in a given time as the supply furnishes. The discharge pipe running as it does from near the bottom up in a loop to a higher point, then descending, it is evident that it will empty the barrel when once filled. Acting on this principle, when the supply pipe which runs a small stream has filled the barrel to a point as high as the upper bend in the discharge pipe, the water begins to flow out, and will continue to do so till the water is out of the barrel down to the end of the pipe. Then air will enter and the syphon will not act again until the water has again reached the level of the highest point in the outlet.



The geyser apparatus consists of supply and discharge pipes and a reservoir

Since the outlet is larger than the supply, water will run out faster than it runs in, and the desired frequency of spouts may be obtained by increasing or decreasing the supply. The duration of the discharge is regulated by the size of the barrel, or rather by the depth of water. H. F. G.



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MR. REED and his family are great mushroom lovers; but finding them very expensive buying, concluded to try the experiment of cultivating a bed in the cellar this winter.

Others had done it successfully, why not he? So he studied up methods, inquired of others, and went about it.

He lives in a house with a large, airy cellar underneath it, with a furnace that he can regulate to give quite a uniform atmosphere, which is one of the requirements of mushroom propagation. He has a bed in a remote corner of the cellar about six by nine feet enclosed by boards twelve inches wide. This is built with only one end against the wall, for he needs to reach into the center from both sides to prop-



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erly arrange the bed, plant the spawn and gather the growing mushrooms.

He first put in a deep layer of fresh barn manure and then a layer about half as deep of well-rotted manure on top.

He planted the spawn, which comes by the pound, in bricks or flakes, in little broken bits all through this manure bed when its temperature was reduced to about ninety degrees Fahrenheit. He then covered the surface with straw to keep the surface moist.

After about ten days he removed the straw and covered the bed with two inches of good loam and again covered the bed with the straw mulch.

He is now, at this writing, waiting and watching for the young plants to appear, when he will remove the straw.

Like sweet peas, mushrooms must be gathered daily to thrive well, and be at their best, so he confidently anticipates not only a sufficiency for themselves, but also enough for his neighbors, for he thinks he can maintain the right conditions for successful culture.

M. A. N.



New Vegetable Varieties that Have Made Good

(Continued from page 15)

field corn. Earliest Catawba is an early strain of the old popular Black Mexican, but all my customers seemed to prefer Golden Bantam. Howling Mob is a good new early white, but the old sorts still hold their own. Burbank's Rainbow corn, with variegated leaves, is interesting as a curiosity and for ornamental purposes.

For the earliest corn, plant Golden Bantam or a similar sort a week or so earlier than you have been putting in the old sorts. If the soil is fairly dry, and you want to take a chance on frost, soak for twelve hours before planting, as this will insure immediate germination, and seeds usually rot before sprouting, if at all. For still earlier results, the seed must be started under glass on sods turned upside down—about four weeks before it will be safe to set it out. Give it a warm place. Set two or three inches under the soil when transferring the sod to the open. Late plantings out-of-doors, from the last of June on, should be deep; five inches is not too much to enable the corn better to withstand summer droughts. Frequent shallow cultivation is the greatest secret of success.

Cabbage.—Some of the newer varieties of corn are especially valuable to the home gardener because they can be planted closer than the old sorts, and the quality also has been improved. Glory of Enshuizen, a round-headed sort ready practically as early as Wakefield, has become a general favorite. Copenhagen Market, but recently introduced, should become the favorite family garden earliest. Mainstay Early, new this year, is emphasized for its ability to resist "bolting" or splitting after ripening, a quality which, if true, will make

it very valuable for the small garden where such sorts as Jersey Wakefield usually begin splitting before half of them are used, and the chickens get the greater part of them. Danish Round Head is a splendid late and winter sort. In quality, however, the Savoy is away ahead of all other cabbages. Perfection Drumhead is easily grown and will send cabbages up several degrees in your estimation.

The cabbages are gross feeders and will stand almost any amount of fertilizer. For the best results, put about a handful of cottonseed meal and fine bone dust in each hill when setting out. This will give the young plants a surprisingly quick and healthy start. Hoe frequently to keep them growing fast, and protect from the green cabbage worm.

Carrot.—Chantenay is not a new carrot, but is still unfamiliar to many who grow for main crop one of the old long varieties, while they might get as big a yield, and much better quality, with this splendid sort. At all stages of growth it is very fine grained and free from stringiness. It is quite sure to become the garden favorite where tried, and all roots left in the fall are easily harvested and keep well.

For an early sort the new Coreless is very good. It is a "half-long" variety holding its size well down to the point, with small foliage. Sutton's Red Intermediate will take well for good deep soils, and is reported as becoming very popular in England on account of its good color and fine quality. There is a new French carrot, Luc, very highly recommended, which in shape seems to be nearer the ideal than any yet developed, but I have not tried it.

For earliest carrots, watch your chance to get a few square feet of spare soil in a frame, and sow them in rows ten or twelve inches apart (with radishes between, as these will be out of the way by the time the carrots need the room). Sow out-of-doors early—just a row or two the first time, so that if they are lost you will be out little. Keep ahead of the weeds carefully until the carrots get a start, as the seedlings are very small.

Cauliflower.—This delicious vegetable should have a place in every home garden. There seems to be a sort of superstition that it can't be grown unless one has a professional gardener on hand. For early cauliflowers nothing has yet been found better than some good strain of Early Snowball. For later, the Danish or Dry-weather has proved the best with me. It matured good heads last summer, without irrigation, and that was a pretty severe test.

To get good cauliflower good seed is the first essential, and rich soil the second, as a cauliflower is even more greedy than a cabbage is. Enrich the soil as for cabbage (see above) if possible, give thorough irrigation when heads are forming if the weather is dry. To get quality, tie up the heads as in the illustration as soon as they form. They will not bleach out after once being sunburned. Cut while



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Our catalogue tells all about these Irises, and hundreds of other hardy plants, Peonies, Phloxes, Lilies, Roses, Trees and Shrubs, and is sent free upon request.

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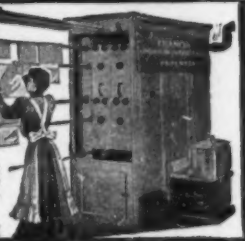
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the head is still solid, as the quality is almost entirely lost if they are allowed to "sprangle" preparatory to sending up the flower stalks.

Celery.—Golden Self Blanching still marches in the front rank, along with the stuffed turkey and the cranberry sauce, on November's last Thursday. Winter Queen, however, is a most excellent newer variety, and becomes more popular every year. The essential quality to get in celery is that crisp, rich nutty flavor that makes its deliciousness unique, and which this Winter Queen has to an unsurpassed degree. Silver Self Blanching is a new sort claimed to be an improvement over the Golden. I have not yet tried it, but the argument made for it is logical.

Celery, for best results, must have moisture, especially if grown by the "new method." Care in blanching, too, is necessary to develop its latent quality. It well repays the effort required, however, as good home-grown celery is usually immeasurably better than what you are likely to get in the markets.

Cucumbers.—The one cucumber of recent introduction that has made a country-wide hit is the Davis Perfect. It was developed as a forcing strain, but does equally well out-of-doors, the fruits when well grown often being taken for greenhouse cucumbers. Another merit is that its dark-green color is retained when fully developed—though for the best quality any cucumber should be picked as soon as full size has been reached, as after that the tissues begin to toughen. Vickery's Forcing has become very popular for greenhouse use or starting in frames, and gives good results out-of-doors. The new Twentieth Century is the result of a cross between the Vickery's and one of the long English sorts, taking the desirable quality of greater length from the latter parent. I have not yet seen how it acts out-of-doors, but it certainly is a handsome cucumber, and will, I think, prove a valuable acquisition.

To beat your cucumber record by several weeks, make room in the center of a hotbed or coldframe sash of tomatoes or other hot plants, for a hill well made by digging in rotted manure and ashes or bone flour. As soon as you can move other plants to a cooler place, give the growing cucumbers plenty of heat—up to eighty degrees in the day will not be too much—leaving not more than two vines. For earliest garden results, start in inverted sod, that can be lifted plant and all, and transferred outdoors after danger of frost is passed. The pieces should be four or five inches square and as thick as convenient, and the seed covered with loose sandy soil. Pack the sods close together, so that the surface after being covered will be without cracks to cause washing.

Where only a few plants are grown care should be taken to keep the matured fruits picked off clean; even if they can't all be

(Continued on page 86)



TAFT ROSE

WILLIAM SHEAN

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From "The Best Roses for America"

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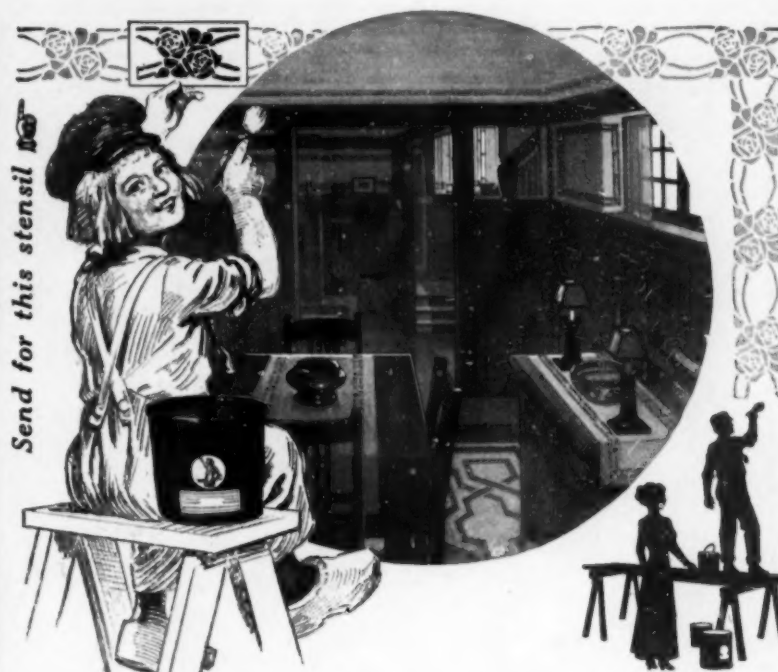
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Secretary of Agriculture Wilson recently made a statement to the effect that practically all the advanced prices which make up the increased cost of living go to the many handlers between the producer and the consumer.

In the present acute agitation of the high cost of living, there has not been a sufficient realization of the fact that every man holds a partial solution of this great question in his own hands. During the summer, half of your living expense is for things that should come out of your own garden. Improved methods and higher quality of seeds have made it possible to cultivate the small tract, so that a plot 25 x 50 ft. with a reasonable amount of cultivation and planted with seeds of a tested quality such as Henderson's should supply all the vegetables required by a family of six or seven. To get the best results, it is necessary to have the best seeds. The sixty-four years of successful seed growing and selling that is behind every packet of Henderson's seeds should and does make them the best that it is possible to buy. Henderson's are tested seeds.



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(Continued from page 84)

used. Remember, however, that a ripe cucumber is not a waste product. Sliced and fried in a rich batter—as eggplant is often prepared—they are surprisingly good. Don't forget to try some this season.

Eggplant.—No rival has yet appeared to contest first place with Early Black Beauty. Not only is it earlier and with a better habit of growth than the older sorts, but the fruits, which are freely set, grow large enough for any purpose. The best quality, however, is to be had by taking them before the seeds are fully developed.

For best and quickest results, the little plants, started with tomatoes, should be put in pots after the second transplanting, and have a good ball of roots developed by setting-out time. Eggplants are very greedy feeders, and will assimilate all the food that can be given them. Liquid manure, while the fruits are forming, is excellent.

Leek.—Prize-taker is a new leek that is being used extensively for exhibition purposes in England, where this vegetable is much more popular than it is here.

Lettuce.—The varieties of this ever-popular salad plant still continue to increase. I shall mention but one of each of the four types: Loose-head, Early Heading, Summer Heading, and Cos. Grand Rapids is without any doubt the grandest loose-head sort so far. Wayahead, I believe, is now entitled to first place among the newer early sorts. Brittle Ice is a fine big long-standing summer sort. Trianon Cos is an exceptionally fine strain of this type, and the Cos lettuces have a quality all their own. Although they are not new, I want to mention in passing that sweet, tender little bronze-tinged lettuce Mignonette, and the thick dark-green hard-headed New York. They should be tried along with the others. The six varieties mentioned above, all quite distinct, make a collection that should give the most fastidious gardener satisfaction.

Quality in lettuce is secured by rapid growth, which depends largely upon frequent cultivation. Midsummer plantings should be shaded, if possible, until sprouted. Also be careful to thin out adequately while the plants are still in the seedling stage—say to two or three inches apart, and when these touch take out every other one, as they will then be large enough to use. The Cos lettuces must be tied up, to bleach the hearts.

Muskmelons.—There are so many delicious muskmelons, both old and new, that I hesitate to make selections. There is one to be introduced this year, however, which if the description of the introducers is not stretched, is something entirely new, and that is Henderson's Bush muskmelon—not that it is supposed to grow on a small tree, but the vines are represented as having much the habit of the bush squashes. I shall await the outcome of my own trial of this new melon with much interest, for

(Continued on page 88)

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best in anything—



In Carpet
Sweepers it's
BISSELL'S
"Cyclo" BALL BEARING

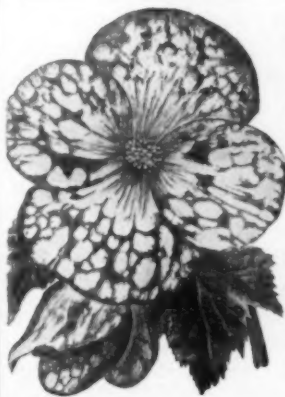
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FULL directions "How to Succeed Growing Begonias" will be sent with every purchase of bulbs. If there is a DARK place in your garden that you wish to have "BLOSSOM LIKE THE ROSE," be sure to get some BEGONIAS.

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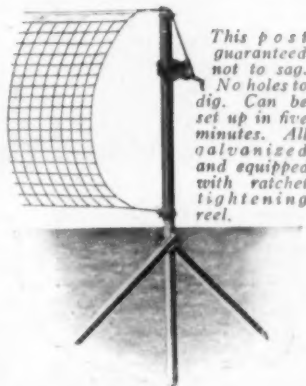


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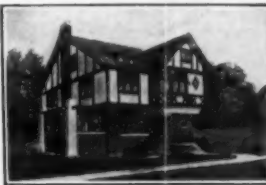
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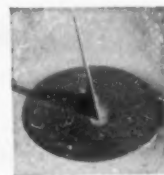
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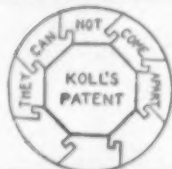
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Send us your name and address and we shall mail you our free catalog and net price list. We shall make immediate shipment on receipt of order. On receipt of \$4 we will mail you in addition, Prof. Massey's book on cold frames and hot beds, an authority on the subject. Write for these books today.



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RUGS BY APPOINTMENT TO THOSE INTERESTED.

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(Continued from page 86)

a good bush type would mean melons in every home garden. Fordhook, a new salmon-fleshed sort, has attained great popularity, and is one of the finest quality melons I have ever raised, and a very strong grower. It usually sets several melons so close to the hill that they touch each other. The Spicy Cantaloupe is described as having "the nearest approach in appearance and flavor to the greenhouse-grown foreign melons." I think this is a fair description. I prefer the taste to that of any other melon I have eaten, but it did not withstand the drought so well as Fordhook. Hoodoo, Davis White Seeded and Melting Sugar are others which have won wide favoritism.

Watermelon.—In many small gardens there is no room for these far-spreading heat-lovers. Halbert Honey and Yellow Ice Cream are two excellent sorts for use north of New Jersey. Give the lightest, warmest soil available, and start early, protecting carefully from bugs until well vined.

Onions.—Prizetaker is now almost as well known as any of the old varieties, and for the home garden I consider it unequalled. With me for main crop, two or more acres, it has replaced all others. Ailsa Craig is a new English sort which attains a huge size when started under glass and transplanted. Its quality is unsurpassed.

To get the largest specimens of any variety, seeds should be sown during February in a low temperature. The little seedlings stand transplanting readily, and are easily grown, the tops being cut back two or three times to keep them stocky.

Peas.—Gradus is still by all means the most popular early wrinkled pea, making up in size and quality for its somewhat shy bearing. Early Morn, I think, is an improvement in being more prolific. Blue Bantam, being sent out this year, will probably be another claimant for honors in this class. Boston Unrivalled—an improved Telephone—is another excellent and free-growing main crop. Carter's Quiet Content, recently brought from England, produces the most enormous pods I have ever seen, and the quality is superb. Royal Salute is another fine sort. Giant Sugar Sword is a good new "edible-podded" pea. As with beans, plant shallow for first plantings. Get your supports in before the vines begin to run.

Pepper.—Neapolitan is a new extra early of value; Chinese Giant is a new sort of truly gigantic size, and sweet as an apple. For home use it is the best yet.

Radish.—Rapid-Red and Crimson Giant (or Globe) are two new round red sorts. Of the numerous other types there is not room for a description here.

Spinach.—Victoria, a savoy-leaved or crinkled type, is the best for the home garden, and has the merit of standing long before bolting to seed. For my own use, Swiss chard has almost entirely supplanted the spinaches, as it can be cut

(Continued on page 90)

Trinidad Lake asphalt

Asphalt-saturated wool felt

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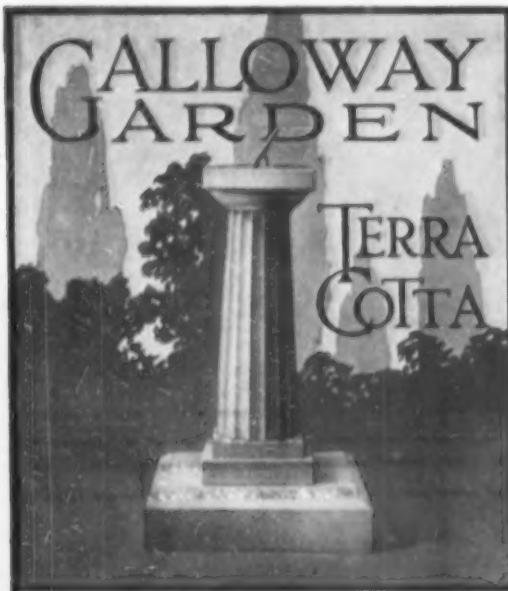
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We carry all kinds of Ornamental, Forest and Evergreen Trees, Shrubbery, Hedge Plants, etc. A full line of the finest apple, pear, peach, plum and cherry trees to be found in this country as well as all small fruits, berry plants, asparagus, etc.

We can furnish all Herbaceous and Perennial plants for your flower gardens. Let us make you a planting plan for your place. Now is the time to arrange for spring work. Don't delay making your plans until it is time to do your planting. Write for descriptive catalogue D today.

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Strength and Durability are essential qualities of garden furniture. Galloway productions combine these qualities with beauty of design. Send for catalogue of Sun Dials, Flower Pots, Boxes, Vases and other Garden Furniture.

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Your health and that of your family depends also on pure water. Install a

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will grow in glorious abundance around your home next summer if you start with Livingston's "True Blue" Seeds. They grow very easily in any soil, and the thrifty plants bear elegant, long-stemmed, fragrant flowers in great masses. Fine for vases, bouquets,—charming everywhere.



Superb Top-Notch Mixture 10 Cents

Our mixture is the finest in the world. Produces flowers of enormous size, and the plants bloom all season until killed by frost. You couldn't plant anything better, and nothing is easier to grow.

Large packet, 10 cents; ounce, 15 cents; 2 ounces for 25 cents post-paid. One ounce will plant 50 feet of row.

Beautiful Catalog FREE

Tells how to raise the prettiest flowers and best vegetables. Truthful descriptions and nearly 300 "True to Nature" illustrations will help you to form a correct idea of the things we sell. Write for a free copy of this fine 150-page book today.

The Livingston Seed Co.
716 N. High St., Columbus, O.

(Continued from page 88)

again and again all summer long. Luculus is the best variety. One short row will keep a family supplied with "greens" all summer long.

Squash.—The Delicious is the best new squash of recent years. Not so large as the Hubbard but of even finer flavor—the best in quality of all. Symmes Blue Hubbard is, I think, a real improvement over that standard variety. For the small home garden, where space is limited, the little Delicata or the Bush Fordhook is best. Start as early as safe and keep the bugs off. If the vines are caused to wilt by borers, look for them near the ground in the stem, and splitting a section carefully lengthwise with a sharp thin blade, get the intruder out.

Tomato.—Dwarf Giant has proved a great acquisition. A cross between Ponderosa and Dwarf Champion, it has an ideal habit of growth, an ideal fruit, and is beyond doubt the best tomato for the home garden so far developed. Dwarf Stone is another good sort. Livingston's Coreless and New Globe are both fine sorts, from the garden of this veteran tomato hybridizer.

The last two seasons' droughts have proved to me more than ever the benefit of having plants like tomato, pepper and egg, started in pots. One of my customers last year, who had about 300 potted plants and the rest from boxes, told me in September that while many had been practically burned up, all the potted plants had lived. Also, they get so large in the pots that the cut-worms can't get them after planting out. Keep the plants well trained up, and most of the suckers should be rubbed off before they get large.



The Spanish Mission Style of House

(Continued from page 13)

side face of the walls is covered with cement or stucco, forming window and door jams, and, with the roofs of tile, the use of wood is reduced to a minimum. It is not necessary that the walls be built of concrete for this style of building, as brick or stone will answer the purpose in place of the concrete. Tiled roofs are generally used. Where the floors are exposed to the rain and moisture, as in porches and cloisters, flat tiles are used. This flooring is good, and economical, as it requires practically no attention.

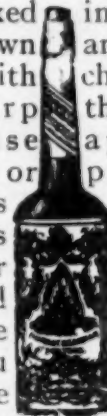
More and more the desire is growing for baths and plunges. The "Roman bath" seems to be returning to popular use. Where land can be used freely the bath can be connected with the main house very conveniently in this type of building, surrounding it with rooms or with a blank wall as desired.

(Continued on page 92)

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"THE UNIVERSAL PERFUME"

Has a marked individuality quite its own and should not be classed with cheaper perfumes which usurp the name but can nowise approach it in quality or permanence. These facts stand after a century's test. For the bath, after shaving, and for general toilet purposes it is the one thing to use, if you are seeking the genuine and the best.



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Tells how to fertilize the soil so that productive crops may be raised. Special matter for lawn and market gardeners, Florists, Nurserymen and Farmers. Sent FREE if you mention this Almanac.

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lies not only in the colorful arrangement of its flowers and the freshness of its tender vegetables, but in the ease and pleasure with which they may be grown.

No matter how much of a novice you may be, you will find it pleasurable and an easy task to grow either flowers or vegetables, guided by the explicit instructions in

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A COMPREHENSIVE work of 288 pages, with photo-reproductions on each page; illustrated with 4 color pages and 6 duotone plates.

EASY INSTRUCTIONS for AMATEURS. Everything that can interest the flower enthusiast—the home gardener—the farmer, the trucker—is treated in this book.

Improved strains of flowers that will make your garden gay from spring until frost—high-bred vegetables that will linger in your memory long after they are eaten. The World's Best Roses—strong 2-year-old plants, that will give a full crop this season.

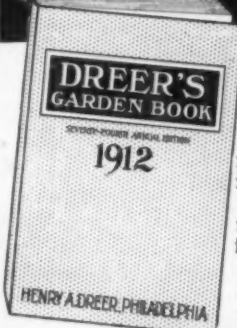
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but he does hate the drudgery of it. Don't keep on with that idea of garden work, but find out, at once, all you can about the tools shown in the engravings.

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Don't risk your handsome table when you can give it this sure protection for one quarter the cost of refinishing and polishing it after it has become scarred and stained by hot dishes and spilled liquids. Ask your dealer to show you the Peerless Asbestos Table Mat—you can tell the genuine by this trade mark. If your dealer cannot supply you write to us for nearest dealer's address and our booklet "To the Woman Who Cares."



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Clean, odorless and
Permanent. Will not
attract rats, dogs, flies
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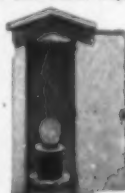
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Less weight. No Un-
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A rolling bottom.Spiral Truss Ribs
Double the life.

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no floor space.Refuse out of sight.
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produce plants that are sure to
bloom. Florists and private gar-
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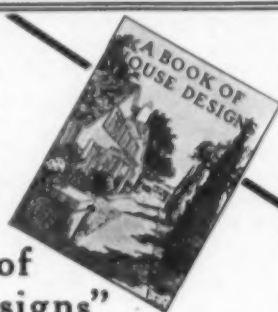
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ciently interested
in house building
we commend the
very practical
little publication:

"A Book of
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Contains Prize Winning Drawings of the
best types of residence architecture, with
full floor plans, all especially adapted to
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yours and what is not with the appropriate
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AMERICAN IRON
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Whether your property be large or small—
whether you desire to enclose it in whole
or part (for instance, a lawn tennis court,
poultry yard or boundary line), you will
find many suggestions in our loose leaf cata-
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Send for it now.

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pleasure out of your porch this
summer if you equip it with
Komi Green Painted Porch
Curtains. They'll make it a
delightful outdoor living room.

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are made of specially selected
bamboo painted with green
paint. They won't fade, are
tough enough to stand all kinds
of rough usage and rough
weather. Sizes to fit almost any
space always in stock. Ask
your dealer to show you them—
or write us for particulars and
samples.

R. H. COMEY CO., Camden, N. J.
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(Continued from page 90)

In similar manner can be constructed the
stable or garage.

The old mission and Mexican buildings
were almost hidden by trees, and for those
who appreciate landscape gardening this
type of building affords a splendid oppor-
tunity for artistic effect.

This Mission style of architecture is not
applicable to congested city uses, where
land is so valuable and height of building
is the ambition, but when applied to coun-
try or suburban uses, what is more appro-
priate? What can be more refreshing than
after the labors of the day to leave the city
with its confusion and jumbled collection
of all kinds and styles of architecture, as
seen in the average business streets of all
our cities, to come to the country home
with its quiet and rest?

The modern houses of red brick, the fan-
ciful reproduction and imitations of cas-
tles and chateaux, often perched in the
most inappropriate positions, become irk-
some. Instead of this we come to the
quiet and restful Mission with its setting
of trees, flowers, vines and gardens.



Spring Plant Overhauling

EVERY year about February or March
I give my house plants an overhauling.
After the long winter in the house they
need a freshening up, both as to soil and
a general pruning, and while at that par-
ticular time they may evidence no particu-
lar signs of debility it is just this treatment
at this particular time that will carry them
through the summer and have them look-
ing well when again taken into the house
in the fall. The best of house plants,
palms, ferns and rubbers cannot be kept
looking in the best conditions without this
spring toning up. It is the secret of keep-
ing these plants in condition, as I have
proved to my satisfaction.

In February or March, as I have said, I
do the work. First I examine the roots
of every palm and fern that I have, by re-
moving it carefully from the pot. If it is
wormy-looking and lifeless and pot-bound
I put it into a larger pot, a pot only one
size larger. A pot too large will defeat the
object of the potting. I disturb as little
of the ball as possible and careful put it in
the new pot. Then I fill up the spaces with
the best loam I can get at a greenhouse,
and I ram it into the pot very hard, using a
stick to do it. This hard ramming is very
necessary. When on examination I find
a plant that shows poor roots I put it into
a pot one size smaller than the one it was
in, removing as little loam as possible to
accomplish this. This is what the green-
house man would call "potting back,"
something the average amateur knows
nothing about, as they sin most grievously
on the "over-potting" side, which is a
great mistake.

(Continued on page 94)

SOME NEW BOOKS WITH CHARACTER

WINDMILLS AND WOODEN SHOES

BY BLAIR JAEKEL, F.R.G.S.



Copiously illustrated from photographs.
Price \$1.10 net, postage 10 cents.

Holland—graphically depicted, with realism, forcefulness, and humor. To read this latest addition to *The Blue Books of Travel* is to know the country as well as to know about it. The author pictures the land and the people—they are motion pictures, full of color. The creak of the long-armed windmills and the clatter of the wooden shoes over block pavements sound through its pages. The little country below the sea has never before been so adequately and so interestingly presented.

THE HALF-TIMBER HOUSE

BY ALLEN W. JACKSON



Illustrated with photographs, plans, and diagrams.

Price \$2.00 net, postage 20 cents.

Those to whom the English half-timber style appeals as the ideal of a home want to know all the details regarding that style—a guide to prevent their making any mistakes of style or construction. Here is the book written just for those people, illustrated with magnificent photographs showing old half-timber work and some of the most successful American adaptations. But the book is not for them alone. For anyone about to build it will give invaluable suggestions regarding planning. Incidentally, it is a book with real charm.

LET'S MAKE A FLOWER GARDEN

BY HANNA RION



Illustrated from photographs, with decorations by Frank Ver Beck.

Price \$1.35 net, postage 14 cents.

If in springtime it is a satisfaction to put on your old clothes, get out a spade, and turn over damp clods of reawakening soil, you will find this book necessary to the proper enjoyment of life and, incidentally, the correct cultivation of your garden. It stands alone in being a wonderfully devised combination of the most vigorous inspiration with a wealth of sound gardening information that one assimilates unconsciously while being delightfully entertained. It is a book full of a rare charm, especially in that it is so human.

MAKING A ROSE GARDEN

BY HENRY H. SAYLOR

Illustrated. Price 50 cents net, postage 5 cents.

Interest in rose culture grows keener each year. Now is the time to make preparations for the rose garden that is to be a satisfaction and a source of delight both to yourself and all who see it this summer. You will find Mr. Saylor's book indispensable for its practical instructions in the preparation of the soil, choice of varieties, and care of the bushes. It covers the subject very thoroughly.

INEXPENSIVE HOMES OF INDIVIDUALITY

REVISED EDITION

Illustrated. Price 75 cents net, postage 8 cents.

The prospective builder can find no more adequate or inspiring assistant in determining the style, construction, and decoration of his home than this book. The first edition of 10,000 copies was exhausted within a short time after its publication. There are over 125 illustrations and plans of houses that have actually been built. It is brimful of suggestions for the new house.

MAKING A LAWN

BY LUKE J. DOOGUE

Illustrated. Price 50 cents net, postage 5 cents.

A green, velvety lawn is the heartfelt wish of every house-owner. This book tells just how to make the kind of a lawn you have always wanted. Besides the mechanical preparations, it gives directions for planting, and tells what kind of seed to use for spaces beneath shade trees. The care of a lawn after it has come into being is also carefully discussed. This is the most practical book on the subject ever published.

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MAKING A GARDEN BLOOM THIS YEAR. Price 50 cents, postage 5 cents. Ready March 14.

MAKING A TENNIS COURT. Price 50 cents, postage 5 cents. Ready March 14.

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We produce CYPRESS but do not retail it. INSIST ON IT NEAR HOME. Wide Awake Local dealers sell CYPRESS; if yours does not, WRITE US, and we will tell you where you CAN get it.



The Architects of this Charming Little House Were Good to the Owner

They made *all* the window casements opening *out* and equipped them with our Holdfast adjusters and Holdfast fasteners.

The windows *look* well and *work* well, being operated from inside without disturbing the screens or storm sash: he *says* so and we *know* so.

Our free booklet tells why. It's illustrated and worth five dollars to any one planning to build. Get it *now*.

CASEMENT HARDWARE COMPANY
175 N. State St., Chicago

In writing to advertisers please mention HOUSE AND GARDEN.

(Continued from page 92)

To the other plants I give a top dressing of loam mixed with bone meal. I do this by digging away the top earth down as far as the roots and putting the new loam in its place. In doing this work I am careful not to injure the roots of the plant. The treatments described, while seemingly simple, are of absolute necessity to plants that have been kept in the house for a long time, and are the secret of success.

This spring work goes still further. I go over every plant, covering leaves, stems and deep into the crown of the plant with a stiff brush saturated with a strong suds of whale-oil soap. Whale-oil soap is the best that can be used, but as the odor is offensive, other soap may be substituted, but for the best results the whale-oil should be used. After using this soap the plants should be syringed with clean water, as the soap is apt to be caustic if allowed to remain too long. One application of this soap will keep the plants free from pests for a long period. Next, scrub the outside of every pot with sand and soap. I use a common strong soap and coarse mason's sand and as stiff a brush as I can find. After the scrubbing I wash the pots in clean water. This washing not only makes the pots more pleasing to the eye, but the cleanliness has a direct and beneficial effect on the plants themselves. Filthy pots and impoverished soil and sooty stems and branches are the things that work havoc with plants that are kept in the house. Just to test this out to see how true it is, run your fingers along the branch of a palm and then look at them. Examine a palm, going deep into the crown where all the branches shoot from and see what you find. You will have begrimed fingers, and you will also find in the crown of the plant a soggy, uncleanly and perhaps an insect-infested condition.

These conditions are always the worst in the spring, and it is this suggested spring work that will overcome these conditions before they begin to make inroads on the health of the plant, as they most surely will if not looked after.

No matter how well your plants are looking just try the experiment of treating them as suggested above, and you will be pleased with later results.



Ripen Persimmons at Home

"NOT good until after frost" is the first thing everybody says to you when you mention persimmons. Through greediness I learned better.

Last season, to get ahead of the "little niggers," I brought home a basketful which *looked* ripe, but were decidedly *not*. Instead of throwing them away I determined to spread them out on a shelf in the pantry and see if they would not ripen.

Six weeks later they were simply delicious, not soft, but sugary. And they had never known either frost or chill.

WORDS TO THE WISE

ABOUT THE MARCH ISSUE OF

AMERICAN HOMES AND GARDENS

Read the following reproduction of an Editorial from the February issue of **AMERICAN HOMES AND GARDENS**, a magazine conceded by every reader to be the most beautifully illustrated periodical of its class which treats of the Arts of Building, Home Decoration, Garden Planting, and Landscape Architecture.

—MARCH—

THE ANNUAL HORTICULTURAL NUMBER

WHEN one sits in his easy chair, drawn up before the cheery blazing fire of the Winter months, he may be dreaming of the delights of Summer and of all that Nature's loveliest season now holds in store for him to be disclosed when the months to come shall clothe the earth in gay raiment of emerald verdure, patterned with countless gorgeous flowers. But if he would assist in making the days to come more joyful in all the happiness the possession of a beautiful garden (even though it may be a tiny one) brings to everyone, he must begin early in the year to busy himself with all the things that concern planting. That is one of the reasons why the March number of **AMERICAN HOMES AND GARDENS**, this magazine's annual horticultural number, will devote much of its space to gardening articles. Indeed, no amateur gardener can afford to be without it; for it will serve as a veritable garden primer of the subjects of which it will treat. The opening article will tell the reader all that it is probably necessary for him to know about the flower garden, while the original and very helpful planting table for flowers, as well as the exquisite illustrations that accompany the text, will make this March gardening guide invaluable not only to the amateur, but to the professional gardener as well. Moreover, the article will be of interest to every reader whether or not he is or has been interested in the subject, for it is approached from an unhackneyed point of view in a manner that should make a wide appeal. The Editor of **AMERICAN HOMES AND GARDENS** believes that many of the gardening articles appearing from time to time in various publications that assume the task of helping the home-builder are, after all, little more than "dry bones" of compilation dug out of encyclopædias of horticulture, culled

from agricultural bulletins, or government reports, with little reference to their constructive value outside of specialization. Of course, a magazine devoted solely to the subject of gardening may be expected, in the course of its run throughout several years, to have covered its field pretty thoroughly, and for novelty to be depending somewhat upon specialized subjects with a limited interest. However, knowing that there exists a perennial interest in the planning, planting and care of a garden, the Editor of **AMERICAN HOMES AND GARDENS** seeks writers on horticultural subjects who are also alive in their interest to the fact that our readers should have, and are having horticultural articles placed before them in the pages of this magazine, designed to have a definite constructive bearing upon the relationship of the garden to the home and home life. **AMERICAN HOMES AND GARDENS** does not seek to present mere horticultural novelties, compilations or specialized agricultural experiment notes, but instead gives every one of its readers horticultural information that will prove of value to all, and presents it clothed in readable text that is more than mere pen-task. Mr. F. F. Rockwell, an American agriculturist and horticulturist of recognized authority, will contribute an unusually valuable article to the March number on "Planning and Planting the Vegetable Garden," which will be copiously illustrated with reproductions of the finest photographs procurable, and further enhanced in both utility and interest by the accompaniment of one of the best and most practical planting tables ever devised. There will be other gardening articles in the March number, and two architectural articles on two attractive Western houses, together with a description of "A Chalet on the Maine Coast."

March Issue on the Newsstands, February 20th

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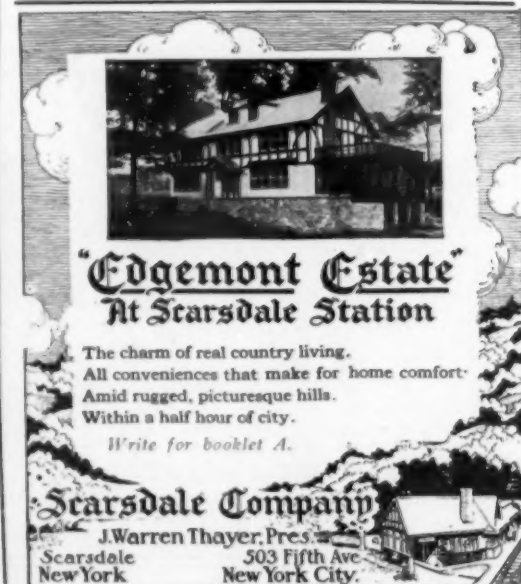
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Then, too, I am not in favor of feeding the mash at night. I think the principal objection to feeding the mash at this time of the day is that it digests too quickly, thus not furnishing as much warmth to the fowls as the whole grain. Another objection is that beginners are apt to think that a hen may be fed all the mash she can eat in the evening with safety. This is wrong, as the hens do not exercise in eating soft feed, and, therefore, on going to roost with a full crop they have gotten the greatest part of their daily ration without working for it.

In my experience I have found the best time to feed the mash is at noon. If the mash is fed at this time of the day a very little should be given; also the morning feed should be rather light, with a full feed of whole grain at night. The following manner of feeding has proven very satisfactory with me for winter: After the hens have gone to roost I scatter grain in their litter and rake it in with an iron rake. I use wheat, oats, buckwheat, etc., for this ration, and give a good big handful for every three hens. At noon I give them a mash of equal parts of ground grain with cooked vegetables occasionally added. This should be mixed to a crumbly mass. At night I give whole and cracked corn, all they will eat up clean.

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KENNEL DEPARTMENT

The purpose of this department is to give advice to those interested in dogs. The manager will gladly answer any troublesome questions. Address "Kennel Department" and enclose a self-addressed envelope.



The Collie

(This is the second of a series of articles pointing out the chief characteristics of the different breeds of dogs which are suitable for the country place. The first appeared in the February number, and had the Airedale for its subject.)

OF all the dogs that find their most congenial surroundings on the farm or about the country home, few indeed can surpass the rough-coated Scotch collie in beauty, grace and striking appearance. As he stands at attention, with head raised, ears up and eyes shining, he is a perfect picture of refined, intelligent alertness, and when, his curiosity or interest satisfied, he trots away with smooth, springy gait, his is truly "the poetry of motion."

To derive the greatest pleasure and satisfaction from the possession of a collie, it is absolutely essential that he be trained to implicit obedience, whether it is intended to use him as a sheep dog or not. This of course is true of every breed of dog, but with the collie particularly failure to heed the advice is followed in most cases by trouble and inconvenience not only to the owner but also to other people. Remember that you are dealing with a dog which for generations has had his brain stimulated by the most exacting and exciting kind of work, in which the natural inclination to hunt other creatures has been curbed and directed to man's uses. Let such a dog grow up without training and discipline, and what is the result? His naturally active mind and body, lacking proper guidance and control, seek some outlet for their abundant energies; he "runs wild" and acquires more or less lawless habits, which make him anything but a desirable member of the canine community. Collies should always be perfectly amenable to human control, and any tendency to bark or snap at horses or people must be promptly and effectually discouraged.

It is an excellent plan to give your collie a definite object in life. If there are sheep or cattle on the place, teach him to herd them in the pastures and on the way to and from the fold or stable. Lacking this occupation, guide and cultivate his natural tendencies as a guardian, and make of him a valuable watch-dog, or in some other way give him to understand that he is not to be merely a privileged character whose time can be spent in any way he sees fit.

The general appearance of the breed is too well known to need description here, but there are a few points that often escape the notice of the intending purchaser and which are important as indicating the good breeding or lack of it of the individual dog. The ears should be small but not pricked; that is, they must never stand absolutely stiff and erect, but their tips should bend forward and downward when the dog is on the alert. When at rest, the ears are folded lengthwise and thrown back into the frill of long, thick hair about the neck.

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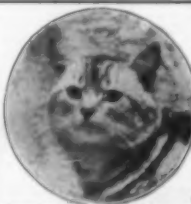
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THERE is probably no existing business to-day that offers those engaged in it so much return, aside from the financial end, as the publishing business. An organization which has for its purpose the issuing of magazines and books may or may not have "personality," but it is more apt to be a sentient thing than a wholesale cheese dealer's house. We want our readers to feel that we have a personal interest in every one of them. We know that some of our readers have a personal interest in us, for we have often strong proof of this in the letters we receive from them. We suppose that many more people have had an impulse to speak a word of appreciation and have thought better of it on account of believing that it would not be looked upon except in a manner of a soulless corporation.

The following is an extract from a letter that was read personally by the editor of TRAVEL, the editor of HOUSE & GARDEN, the President of the company and several others connected with the magazine. It made us all feel good.

LOS ANGELES, CALIF., JAN. 31, 1912.

Gentlemen:—

I am in receipt of the January number of "Travel" and to say I am delighted, as I turn over the leaves of the beautifully printed pages of enameled paper and artistic and clear illustrations, hardly expresses the impression it made on me. "Travel" is worthy the place of honor on any gentleman's library table. I propose to have my numbers bound, and give them that place.

In looking over the many entertaining descriptions of the different places, I was particularly impressed with the piece entitled "Picture Towns of Europe." In following the terse description of the writer, I wandered through the quaint streets of Cintra, and the clear forceful style in describing the everyday life of the people who live amid the grandeur of the fifteenth century made me feel that through the courtesy of "Travel" I had visited Cintra, the show place of Portugal.

Very truly yours,

Everybody reads the advertisements in a magazine nowadays, so of course you have seen announcements of the new books we are publishing. There is nothing extraordinary in the fact of our adding a few new volumes to the list but—here is the point—that was only the beginning of our Spring list. We are growing fast over here in Union Square, but more of that later.

THREE NEW NOVELS

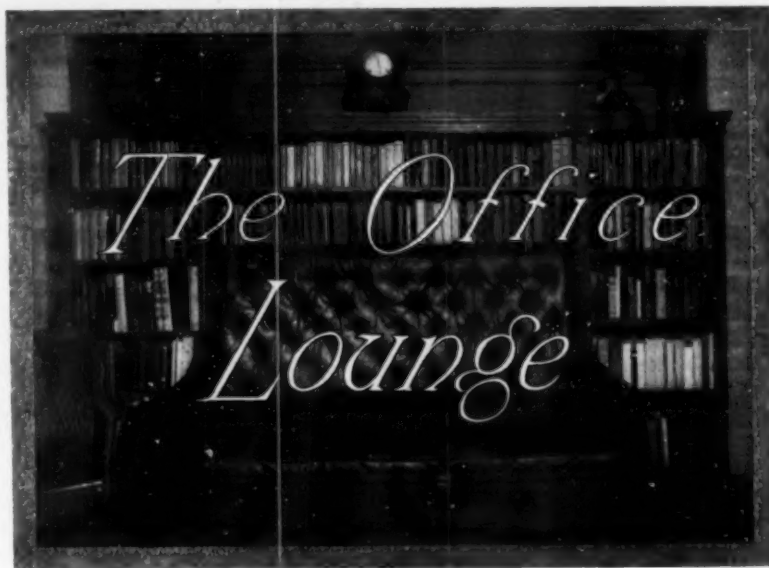
Ever since Noah told his grandchildren of how the flood came and wiped all the evil-doers off the face of the earth, it has been a weakness of the human race to want stories told them. There have been thousands, millions—well, ever so many—tales narrated since then, but the demand for first-rate yarns has ever exceeded the supply.

We shall do our part toward satisfying this innate craving for good fiction.

Curiously enough, one of the novels we shall publish this month is "The Second Deluge," a story of the earth's encounter with a watery nebula which envelops the planet



Leona Dalrymple, author of "Träumerei," carefully revises her manuscript before transcribing it on the typewriter.



absorbing in interest, so that the reader reads on to the end with unflagging attention; and through it all runs a delicate vein of irony, and an undercurrent of humor, which will be appreciated by discriminating readers. For boldness of imagination nothing equal has appeared since Jules Verne made science a playground for the fancy. But the writer has avoided the sometimes tiresome didacticism with which the great French romancer often overloaded his books.

Everybody knows and loves "Träumerei," Schuman's charming musical composition. The appearance of a novel by the same name will attract a great deal of attention. This new story by Leona Dalrymple will appear simultaneously with the "Second Deluge," but it is as different from Mr. Serviss's book as fire is from water. Most of the action takes place in a little Italian hill town near Naples and although the principal man of the story is an American, the heroine is a beautiful Italian girl of the higher class. There is true charm in the story and a love interest that in its delicate ardor has not been surpassed. The author, whose photograph is reproduced on this page, has been before the public in the pages of the best magazines, but this is her first novel. You will recall that the term "first novel" is often synonymous with great success. It has proved so in many instances, and we believe thousands of readers are going to like this story.

A new story by Mary Stewart Cutting is an event to which the reading public looks forward with keen relish. Here in the office we are anticipating the good time you are going to have with "The Lovers of Sanna," the story of a wonderfully charming young woman who is not quite sure of her heart impulses. Sanna is a girl we all hope to meet in the life. We're sure she exists other than in the pages of the book, and we believe we shall be fortunate enough, some day, to find her.

Hanna Rion, the author of "Let's Make a Flower Garden," is pictured here-with in a corner of her garden.

and spells destruction to everyone who disregards the prediction of Cosmo Versal. Cosmo seems to be an up-to-date reincarnation of Noah himself. His Ark is thoroughly modern—and the story is, too. The author is Garrett P. Serviss, whose scientific knowledge, in combination with the true story-teller's instinct, gives the yarn the greatest plausibility.

"The Second Deluge" will be a refreshing relief for readers who may have become wearied of the monotony of the ordinary novel. The idea is delightfully original; the style is dramatically forceful; the characters are unusual, and well-sustained; the incidents are ab-



Hanna Rion seems part and parcel of the floral world, so full of inspiration is her "Let's Make a Flower Garden"

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