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175 Pictures that Show How

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GARDENING GUIDE

APRIL 1910

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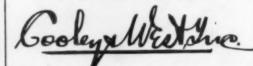
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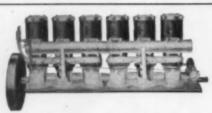
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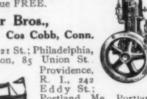
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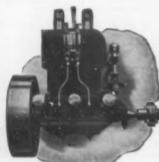
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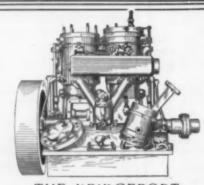


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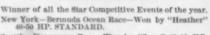
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### Ignition Troubles

BY T. E. WHITTLESEY

AN authority who has followed the history of motor boating from the infancy of the sport is responsible for the statement that nine times out of ten when the motor goes on strike ar inspection will locate the difficulty in the ignition. Though the number of times when the operator has to drop the wheel and "look her over" is becoming decidedly less with the steady improve ment in gasoline motor construction it is an open question whether the ratio of ignition troubles to those in other parts of the motor has changed appreci ably from that given above.

When one takes into consideration the fact that the ordinary high-tension system of ignition depends upon difference in the spark gap of som thirty to fifty thousand volts, it will be readily understood that the wires carry ing the current must be so thoroughly insulated as to be, as far as possible absolutely free from any chance

short-circuiting.

The very best insulated wire that is obtainable is none too good for use it the motor boat ignition system. Even though this does cost twenty cents foot, what does the cost of five or si feet of good wire amount to when weighed in the balance with the satis faction arising from the assurance that your boat isn't going to balk for yo every time you take it out?

If your boat is of the open type with its motor unprotected from spray

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of a summer home by the water. A country house with a situation, whether it be by lake, river or sea, is far from taking advantage of its opportunities engine. In this Motor Boat Section appear announcements of only reliable boat and engine manufacturers. Their product has become standardized through We shall be very glad to advise any of our readers in regard to the purchase or equipment of a motor boat or engine. Address correspondence on this subject to

you will do well to take the additional precaution of giving all the exposed wiring several coats of good shellac.

Still another cause of trouble is the wear on the platinum points of the vibrator—a trouble that is frequently blamed mistakenly on weak batteries. When these points become rough and pitted from the continued heat of the electric arc between them, take off the vibrator and smooth the table of the electric arc between them, take off the vibrator and smooth the platinum surfaces with a piece of fine emery cloth. One way of equalizing the wear on the two points is to shift the wires occasionally so that the direction of the current through the coil is reversed.

Provide yourself with an ammeterone of the watch-form pocket types reading to thirty amperes will serve, and test your dry cells now and then. New cells should show from twenty to thirty amperes; when they fall to five or six, take them out of the battery box and make them serve out their time in furnishing current for the electric bell system in the house, which requires far less constant drain upon their strength.

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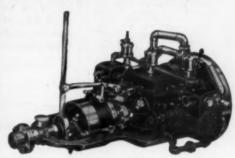
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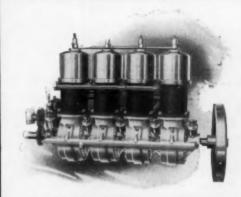
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### Some Points on Incubators

BY M. ROBERTS CONOVER

AN incubator is a box-like machine properly ventilated, heated by a tank of hot water or air, and is so constructed as to insure the egg chamber against external atmospheric changes, thus maintaining a uniform temperature during the period of incubation. This period, for chickens, is twenty-one days.
Reliable machines have three per-

fectly tight walls with air spaces between, although some manufacturers guarantee machines with only one such air space, which is packed with mineral wool.

The egg trays must be side by side, never one above the other, and the space below, used as a nursery, should be high enough to permit the newly hatched birds to stand erect. There must also be space



The typical incubator lamp has a metal fount with a durable handle and a metal chimney containing a mica-covered aperture opposite the flame

enough before and behind the trays to allow the chicks access to the nursery from the trays above.

In selecting a hot-water incubator it is unwise to economize upon the tank. Brass or copper will last a lifetime; the galvanized iron ones used in the cheaper incubators corrode in one season. The tank should be at least four inches above the egg trays.

The glass panels, admitting light through the top of the machine to the egg chamber, should be double, and there should be two sets of glass doors in the front of the incubator, one behind the other, with the egg trays so low that the operator may take note of the thermometer upon them.

Varnish and ornate woodwork are non-essentials of a first-class machine, but it is vital that its parts be well joined. that its doors fit snugly and easily and that the egg trays slide smoothly. The legs should be strong and well braced. This feature is overlooked by some manufacturers who turn out machines other-

wise satisfactory.

The typical incubator lamp has a metal fount with a durable handle and a metal chimney with a mica-covered aperture in the side, opposite the flame. It is so placed that it readily heats the air or water in a projection of the tank. This hot air or water passes through the tank in the top of the incubator and as it cools falls through a conduit on the opposite side and is returned beneath the egg chamber to be reheated.

A wick long enough to last through the hatch is an important forethought and it must exactly fit the burner. For a twohundred egg incubator the lamp fount should hold one quart of oil and the wick should be one inch wide. Morning and evening the lamp must be replenished with the best grade of oil, the wick trimmed evenly and soot removed from the chimney with a cloth. A lamp nearly empty is unsafe, and poor oil and a dirty chimney induce smoke, which is disastrous to the hatch.

A dry, light, ventilated cellar is the best location for an incubator. The ventilators of incubators should not admit cooler air directly to the egg chamber but in such a manner that it is warmed as it enters.

The regulator of an incubator is a device employing the principle of heat expansion and must control the temperature of the eggs in their trays. incubator which hatched every fertile egg obtained this result by a simple regulator consisting of a float in the water tank attached by wire to levers above. Any expansion or contraction of the liquid moved the levers, which, being connected with a sleeve about the wick of the lamp, raised or lowered the flame.

Some machines have a thermostatic bar of expansive material placed between the egg trays and affecting a valve or cap over the chimney by means of levers. Metal discs are also used instead of the thermostatic bar, and alcohol and mercury are employed with excellent results.

Whatever device is used, the expansion and contraction of the testing substance must be uniform and the reponse at the source of heat supply instantaneous. To insure this the operator should run his machine two days before trusting it with the eggs.

After the eggs have been in the machine twelve hours, they must be turned and twice daily thereafter until the eighteenth day. All large incubators have their own devices for rapid turning, but with the small ones this can be done as well by hand. It is advisable to remove the trays from the incubator for about five minutes night and morning keeping the machine closed meanwhile.

After five days of incubation the eggs should be tested. If the egg is held horizontally before the tester, the heart and vascular system of the embryo is revealed if the egg is fertile. Infertile

(Continued on page xxxiv)

### POULTRY DEPARTMENT (Continued)

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### The Collie: His Good Points Both in Character and Form

BY FRANK T. CARLTON

Mr. Carlton will gladly answer queries pertaining to individual problems connected with the care and training of dogs. Address "Kennel Department," and when an immediate reply is desired, please enclose a self-addressed stamped envelope.

THERE are two kinds of Collies—the "rough," and the "smooth." Both have the same points of conformation, and differ only in coat. Yes, there is another point of difference—the" rough" or long-haired variety is more popular, therefore more familiar in the house and on the show bench. The following general observations, therefore, will have

reference to this variety.

The Collie by nature and inclination is a pastoral dog. In the cradle of his race
—Scotland—and in many other countries whither he has migrated, he is the shep-herd's right hand. His wonderful beauty, high order of intelligence and general adaptability, have taken him largely out of the pastoral sphere, but long years of estrangement have little more than dulled in collies as a breed the instinct that prompts them to guard, marshal, or round-up the flocks of the field. You may prove this by your own Collie— practicing, of course, on your own sheep and cattle. He may be bred in the purple, and have led the citiest of city lives previously, but show him a flock of sheep and you will see that he feels he ought to be busy somehow. With the least bit of advice, and guidance, he will soon acquire the trick of corraling the lot for you in half the time that another dog would be thinking about it.

The history of the breed is as old, nearly, as Caledonia's hills, but it will suffice us to know that we have the Collie as useful to-day (when demanded) as ever he was, and infinitely more beautiful than his best-looking ancestor.

Collies abound all over the worldparticularly the English-speaking world,

special proteges of the Scots.

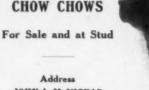
The Collie, among long-haired dogs, is, par excellence, the dog of the home. Indeed, no short-haired dog, except perhaps the Fox Terrier, can begin to chal-lenge his place here. In form, the world of dogs knows no creature so attractive, and his intelligence and all-round evenness of disposition have passed into proverb. He is as proud as a Bird of Paradise, and has the instinct of cleanliness. He is the antithesis of clumsiness, therefore easy to house. He is hardy and strong and valiant-yet never coarse. He errs a bit, perhaps, in using his lungs and legs more energetically than the occasion often seems to warrant, but, that's a fault you readily learn to forgive.

The popular Collie of to-day seems to be the sable and white-he predominates on the show bench, and that is a good index. But should you own a tri-colorblack, white and tan-of any merit at all, confess to it now, you never saw anything so superb.

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An increasing vogue in these latter days is the Blue Merle collie, and this country owns the first "champion" in this color. As a matter of fact, in Collie breeding the United States can challenge the mother country for all-round excellence. It is one of the breeds in which America has been most successful. Others are the Fox Terrier, Beagle, and several varieties of sporting Span-

All good Collies have pedigrees. Don't

consider owning any other kind. If your dog, exclusive of color, for that is a matter of taste, has a skull that is flat, moderately wide between the ears and gradually tapering to his almondshaped eyes, with a muzzle tapering to his black nose (without being snipey); his teeth meeting evenly; ears small, rather wide at the base and carried semierect (tips hanging over) when at attention; straight muscular forelegs; powerful arched neck with a generous frill of hair, body rather long; chest deep with plenty of lung room; loin slightly arched and muscular hind-quarters suggesting speed and propelling power; compact arched toes, soles well padded; with outer coat dense and harsh to the touch and inner coat furry; his tail or "brush" moderately long with a slight upward



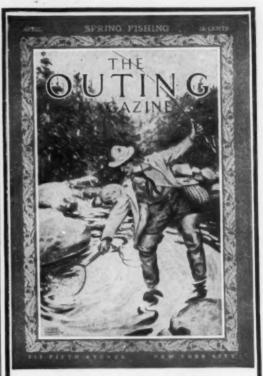
The Collie as a breed is as old as the hills, but never so well developed as now

curl at the end; forelegs well feathered, and hindlegs profusely so, above the hocks-if you have such a Collie, and the inclination to enter him in a show, you have a prize winner.

Males run from 22 to 24 inches high at the shoulder, and weigh from 40 to 60 lbs. Females are not built quite so generously.

Faults to look for are: lack of alertness, light eye (except in Merles, which often have blue and white or "china" eyes), pendulous or prick ears, full staring eyes, curly or soft coat, crooked legs, hareshaped feet, tail carried over back, and (greatest fault of all) an overshot or undershot jaw.

His coat is a Collie's crowning glory. To get and retain such he must be kept in good health, well groomed with a suitable brush and given plenty of exercise. Wash rarely, brush often. Feed liberally but exercise more so, throwing



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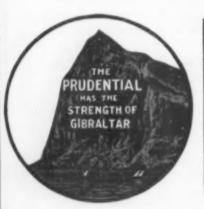
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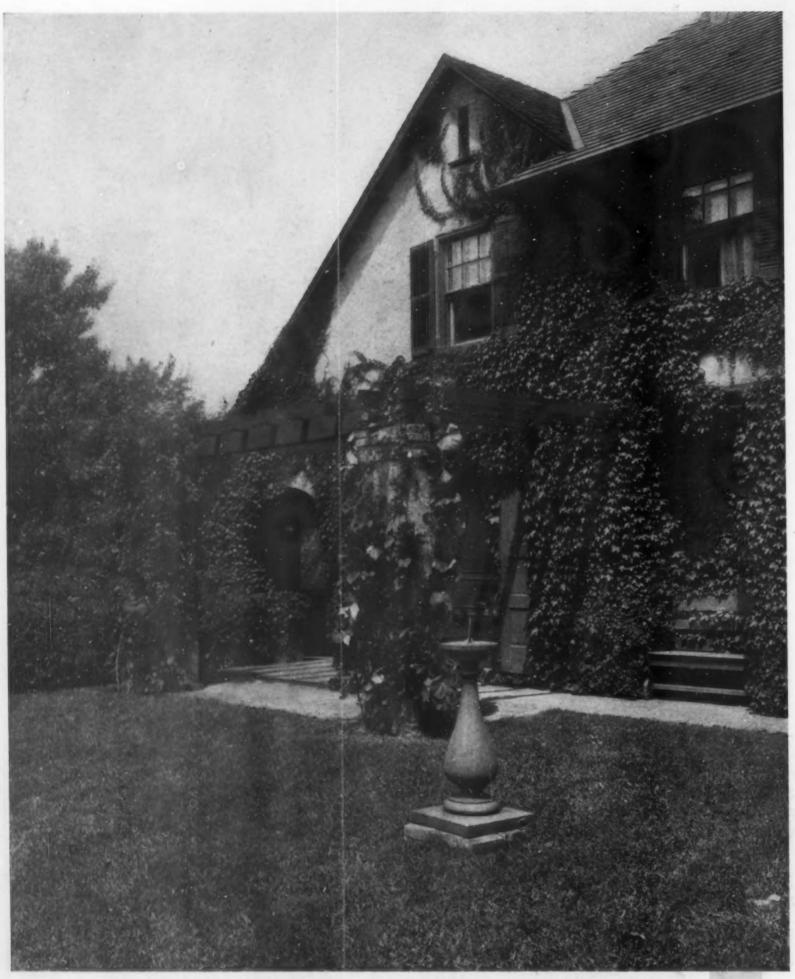
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# House&Gaiden

VOLUME XVII

April, 1910

NUMBER 4



A border of fresh blooming Iris is one of the garden's loveliest features

# Making a Better Flower Garden

ALL THE NECESSARY INFORMATION, IN THE MOST CONCISE FORM, REGARDING SOIL, PLANTING, FERTILIZERS, AND ALL THE OTHER DETAILS THAT WILL ENSURE A SUCCESSFUL GARDEN THIS YEAR

BY GARDNER TEALL

Photographs by N. R. Graves, H. H. Saylor and others



IE making of a successful flower garden is not a matter to be left to chance, and perhaps it is one of man's inconsistencies that he is willing to dig and delve for a vegetable, while, more often than not, he begrudges the care he should give a Verbena, as though the satisfaction of a sense of the beautiful should not have half a chance with one's appetite. Now there is scarcely anyone who does not care for flowers, although it must be admitted there are many who give them little enough thought. With the first breath of spring, and the return of the birds from

their winter holiday, one should feel an enthusiasm for making just as good resolutions as ever New Year's day brings forth. Among them there could not be one more fitting than a resolve to have a better flower garden the coming season. The joy of it all will more than repay the trouble, a thousand times over. If

your last year's garden, started without plan or thought, and all in a hurry, was not a success, you can only put the blame upon your carelessness, or to your not knowing how to go about it, if you have not had experience in these matters. In this latter instance the following hints, directions, and tables will be of service in the planting preparations for this season's garden.

Every flower garden should have a sunny position, to the south if possible, and where it may have both morning and evening sunlight. Protection from prevailing winds is always to be sought.

THE SOIL

The soil for the reception of seeds of garden flowers must be carefully prepared. The following directions, if faithfully carried out, will do wonders in helping your flower plants to better growth. Mother Nature's way of carrying seeds hither and thither, to be dropped carelessly in places of indifferent soil, cannot always be imitated successfully. It is all very well with wild things, but garden flowers are another matter altogether. For them proper soil conditions are essential. Annuals especially require an earth



Foxgloves lift spikes of beautiful flowers above the level of the foliage



Pyrethrum, a large daisy-like flower variously colored



Pansies are ever popular and prolific blooming flowers



Cosmos, tall-growing and fine for cutting

rich in humus, if best results are to be obtained. Well rotted barnyard and stable manure or leaf-mold worked into the ground, will supply this where the soil is deficient in richness. Without enrichment of this sort soils are given to baking or drying out. which is, of course, disastrous to the growth of all tender plants. When you have chosen a plot for your flower garden spade up the earth to a depth of fully a foot. Work this over a second time to a depth of six or eight inches, pulverizing the surface to make the beds mellow and smooth. Top-soil, being more rich than the earth under it, should always be removed, in making new beds, for replacing later, after manure has been worked into the under soil.

### FERTILIZING

The fertility of the soil of the flower garden may be maintained, or

increased, by the application of natural and commercial fertilizers. With the former, an ordinary barrowful of manure should be quite sufficient for every ten square feet of garden area. On account of the phosphates they contain, wood ashes tend to sweeten the soil, but they should be applied directly to it after other fertilizers have been worked in, and never mixed directly with them. Manure, for instance, if mixed with wood ashes loses its ammonial value, and becomes far less useful to the needs of growing plants. Soot, mixed with water, forms an excellent plant food for Pansies and Roses, just as ashes do for Asters and Gladioli. Barnyard manure is especially suited to Pansies, Iris, Gladioli, Violets and bulbous plants, and to sandy soils, while stable manure is preferable for clayey soils. As a fertilizer for the Rose garden,



Asters, one of the longest blooming annuals



### THE BEST FLOWERS



Hollyhocks dignify any garden

Key	Plant		Color	Height (inches)	Sow	Depth for Seed (inches)	Dis- tance of Plant Apart (in.)	Blossoms (early and late)	Landscape Use
	Aquilegiat	Various .		12-24	¶May		12	June-July	Mass-border
A	(Columbine) Achillea. Adonis. Ageratuntii. Anemonet Asterf. Bachelor's Button†*  . Balsam. Bleeding-Heart (Dicentra)	Yellow Blue white White to Various White-blue Various	terose	12-36 12 24 12-36 12-18 15-20 10-18 8-19	¶May March-April ¶ May ¶May May May May ¶May	 and adjusted	5 12 12-15 6	July May-June June-Oct. AugOct. July-Sept. July June-Sept. May-Aug.	Border Border Mass-edging Mass-border Mass-edging Border Mass-border Mass-border
AAPAAAAAPAAAAPPPPPPPAAAAPPB	Calendula California-Poppy Campanula Candytuft† Castor Bean Chrysanthemum† Clarkia† Cockscomb Coral Beill Coreopsis† Cornflower† Cosmos† Dahlia Daisy Evening Primrose Forget-me-not§ Four-o'clock* Foxglove§ Gaillardia† Godetia† Godetia† Godetia† Godetia† Godetia† Heliopsis Helianthus§ Hollyhock	Orange-y White-bl White Foliage Various White-ro Coral red Yellow-bl White-bl White-bl White-bl White-pl Various White-pi Yellow White-re Pink-wh Red-yell Pink Red whi Various. Yellow Yellow Yellow Yellow Yellow Yellow Yellow	se-purple. d-yellow-purple we-rose. nk-rose. ink-rose. d-yellow-tite ow te. colored fruits	22-24 12 18-36 6-8 60-90 12-36 18 6-12 12-30 12 24-72 2 to 4 ft 6-8 60 6-18 30-60 18 10-36 30-60 18 12-24 5 to 15 feel 30-48 2 to 10 feet 30-68	May. May. May. May. May. May. May. May.	de de de		June-Oct. August June-July June-Sept. Poliage AugOct. June-Oct. June-Oct. June-Oct. June-Aug. June AugSept. May July-Aug. July-Aug. July-Aug. July-Aug. July-Oct. July-Oct. July-Oct. July-Oct. July-Oct. July-Oct. July-Oct. July-Aug. ApgSept. August	Mass-border Mass-edging Border Mass-edging Screenery-ornamenta Mass-border Mass Border Border Mass Mass Mass Mass Mass Mass Mass Mas
PP A A A A A	Iceland Poppy. Iris* Larkspurt* Larkspurt* Lavatera Lobelias†! Love-lies-bleeding* Love-in-a-mist* Lupinet*:	White-b Rose Blue-crit Yellow t	ellow-bluelue-pink msonto scarletlue	15 18-30 12-60 36-72 6-12 36-60 12-24	May ¶ May ¶May ¶ May May ¶ May May May May May	1		June-Sept. May-July June-July July June-Sept. June-July June-Sept.	Mass-border Border Screening Mass-edging Mass



Violets are worth all the trouble one spends to raise them



The gorgeous Dahlia is one of the garden's delights



German Iris should find a place in every garden



Pinks are one of the quaintest annuals

sheep manure is especially recommended. Perennials, of course, are more gross feeders than annuals; hence they require greater fertilizing.

### SEED

Good seed is essential to obtaining good plants; therefore select it carefully from reliable dealers who may be trusted to give you fresh packets. Then, having made the topsoil mellow and smooth, sow your seed in drills, always planning to place seeds of the taller plants in the center of the beds or at the back, so the grown plants may not hide those of less height. Nothing is more disappointing, when your garden seeds come to maturity, than to find you have to hunt for little plants behind a thicket of tall ones.

It is a good rule to plant seeds of annuals at about five times the depth of their own thickness, sowing thickly, to be thinned out later. One can never be just sure of the proportion of seeds that will germinate: hence thick planting obviates disappointment.

When the seeds have been sprinkled in the drills (that is the grooves you have made for them in the soil), sift earth over them, after carefully marking both ends of each seed-row with a wooden name label. Then press the soil down over the seed by patting it with the flat of a hoeblade. As you will have marked your seed-rows accurately, anything growing up between them it will be safe to consider weeds, and all such weeds should be pulled up and burnt as soon as they appear. Nothing so quickly exhausts a soil's richness, and consequently the vitality of tender flowering plants, as do weeds.



The old-fashioned Bellflower or Campanula

### FOR SPRING PLANTING

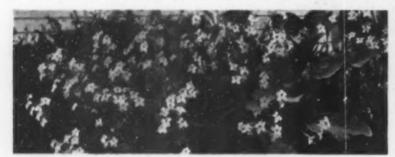
Key	Plant	Color	Height (inches)	Sow	Depth for Seed (inches)	Distance of Plant Apart (in.)	Blossoms (early and late)	Landscape_Us
P A A P	Mallow§ Marigold†* Mignonette*† Monkshood   (Poisonous)	Rose-white	18-30 10-24 12 36	¶May May May ¶May		8 6 6	July-Sept. AugOct. July-Oct. July-Aug.	Mass Mass-edging Mass-edging Border
A A A P!A P!	Moonflower; Morning Gloryto Nasturtium*††: Nicotiana*†  Pansy†  Peony†. Petunia°	White Various White-red. Various Red-pink-white. White to claret.	10 to 20 feet 1-60 3 to 5 feet 6 24-36	May May May May May ¶ May May May.	of the state of th	8-12	AugSept. July-Aug. July-Oct. July-Aug. May-Oct. May-June July-Sept.	Screening-vine Screening-vine Mass-screening Mass Border Mass Mass-edging
A					soil			
P A P A A P P P	Poppyt* Portulaca*. Primrose. Pyrethrumt. Rudbeckiat. (Golden Glow)	All except blue & yellow. White to rose. White to scarlet. White-red-yellow. Yellow-pink. Various. Yellow.	4-12 6-24 6-9 4 12-24 60-100	May April ¶ May May May-June ¶ April ¶ May ¶ May	-866	8-12 5 4 4 5 12		Mass-edging Border Mass Mass-edging Mass-border Mass-border Mass-screening
P A	Salpiglossis Salvia†°  Scabiosa† Schizanthus Silenet	Various Scarlet. White-yellow-blue. Mixed yellow-lilac White to rose.	10-24 12-36 24	May May ¶ May ¶ May ¶ May ¶ May	1	6 5 8	June-Aug. June-Aug. July-Aug. June-Aug.	Mass-Border Border Border Mass-edging
P A P A	Snapdragont	Various	36-100 8	¶May May ¶ May May May ¶ May May		8 5 24-48 4	July-Aug. June-July	Mass-border Border Screening
A P B	Sweet Pea*t‡ Sweet William	Various	1 to 6 ft.	April May ¶ May	Trench 3	8 8	June-Oct. July-Aug.	Screening Border
P P P	(Dianthus) Verbena† Veronica Violet*§	.   Violet	6 in.	¶May ¶May ¶May		1 2 8 6	June-Aug. August March	Edging Border Mass-edging
PBA	Wallflower*			May ¶ May May		6 8	July-Aug. July-Oct	Border Mass

dicates hardy or tender perennials.
dicates biennials,
dicates annuals,
dicates time for setting out perennials,
dicates flowers especially good for cutting.

sowing annuals. uals which will thrive with partial shade.



Columbine, an old-time favorite



Nicotiana is an excellent plant for mass effects, flowering profusely.

It loves a hot, rich soil



Scabiosa, attractive for cutting



California Poppies, yellow to orange in color

### SORTS OF PLANTS

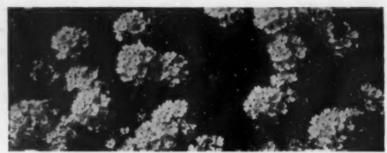
Your flower plants will of course be of two sorts, annuals (which die, root and branch, at the end of every season and have to be planted anew from seed every year) and perennials (hardy shrub-like plants that survive from year to year and which spring up anew from their roots from season to season). Perennials seldom blossom until the second season after planting from seed, and so the annuals are the plants to which the amateur gardener turns when in need of flower effects the first year. If you have not had an opportunity of starting perennials, you may obtain grown plants from your florists, and after these have found themselves at home in your garden they will increase, with care, year after year, until you in turn will be able to exchange with your gardening neighbors. Thus one may have all sorts of beautiful flowers in his first year's garden.

### TRANSPLANTING

Some species do not bear transplanting, therefore one should never attempt to transplant seedlings of Candytuft, Love-in-a-mist, Lupine, Mignonette, Nasturtium or Poppy.

### WHAT TO PLANT

The accompanying table is designed to guide the beginner at flower gardening to the standard



Verbenas, with their lovely bloom and delicate fragrance, should be grown by everyone

annuals and perennials everyone may grow almost anywhere. It indicates time of sowing, blossoming, etc., which information everyone planting a flower garden will find most useful to have for reference. For all general purposes the plants in this table have been divided into perennials, annuals, and biennials, indicated by the letters P, B, A. Many of the perennials may be treated as annuals, certain annuals as biennials and certain biennials as annuals. Therefore, some of the species in the list are prefixed by two or more letters. As the Chimney Bellflower (Campanula pyramidalis), Rocky Mountain Columbine (Aquilegia cærulea), and Iceland Poppy (Papaver nudiculæ), are so short-lived at best, they may, for all purposes, be treated as biennials.

As the wise among mankind are those to whom far-sightedness is sure to bring its rewards, so, among gardenkind, looking ahead will help one along the pleasant paths of garden making.

Every one should try to picture the garden as it will appear in its wealth of bloom, long after the dull colored earth has donned its garb of green and gorgeous color. If the garden maker will do this he will not wake up to find that he has planted scarlet Gladioli next to delicate pink Cosmos, purple Iris next to blue Campanula, nor mixed the exquisite Love-in-a-mist with blatant Zinnias.



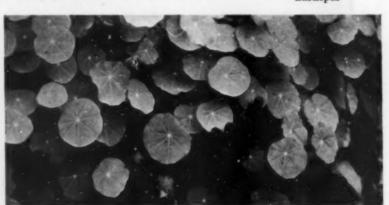
Schizanthus, yellow to lilac



The Delphinium or Larkspur



Sweet Alyssum edging a bed of bright colored Zinnias



Nasturtiums are not to be surpassed for foliage and cutting



Sow seed of cauliflower in May or June and let it follow some early crop



Sow pole beans about May 15 to June 10. These are of the Long Stringless variety



Start early cabbage in the seed-bed now, following with a late variety outdoors

# Grow Your Own Vegetables

III. GETTING THE GROUND IN PROPER CONDITION TO RECEIVE THE SEED OR SEEDLINGS —FERTILIZERS AND HOW TO APPLY THEM — GARDEN TOOLS THAT PAY THEIR WAY

BY F. F. ROCKWELL

[This is the third of a series of articles which will cover in a thorough and practical way the subject of amateur vegetable gardening. The aim is to furnish information covering every detail of what to do and in such a form that it will be clear to the very beginner just how to do it. Each article and its tabular data will give the information needed at the time of its publication, so as not to confuse the home-gardener with an overwhelming quantity of detail; that is, the reader will learn what is to be done at the proper time for doing that particular thing. Those who follow the suggestions made, from the selection of seed to the storing of winter vegetables, may confidently expect a successful garden—Editor.]

THE suggestions already given in the February and March issues, if followed out, will have left the prospective gardener with his garden carefully planned for the most satisfactory results, and a supply of thrifty, stocky, and well hardened-off young plants of cabbage, cauliflower, lettuce, etc., on hand, and his boxes of tomatoes, eggplants, peppers, and other tender vegetables nicely under way.

With these preliminary results of his efforts already visible, and full of promise of good things coming, the beginner will be

watching anxiously for the first signs of spring, when the more extensive and absorbing work out-of-doors may be begun. He will have selected a spot in as sunny a place as possible, sloping slightly to the south or east if he can find one, or sheltered to the north or west. He will have looked also for the kind of soil known as "light sandy loam"-the sort that crumbles up nicely in the hand without sticking to it. But he should not be discouraged if, from the necessity of making the garden near his home, he has had to be satisfied with a different soil. If it is rather heavy, cultivation the year previous, or ploughing the fall before, will have helped it greatly. Such a soil will be improved mechanically by the application of stable and barn yard manure, wood, or even coal ashes, or any rotted vegetable matter.

As soon as the frost is out, and the ground can be worked without becoming "sticky," operations should be begun without a moment's delay. Every day

missed means some garden opportunity gone—irrevocably. If the garden is a very small one, it may be broken up with a spade or a flat-tined fork, but if there is room enough for a horse to turn around in it, by all means have it ploughed. A plough will lift, turn up, and *break* up the soil as no hand digging can. If the job has to be done by hand, see to it that the soil is dug as deep as possible, and each forkful turned completely upsidedown. It should be stirred, whether by plough or spade, down to the sub-soil (the layer of earth underlying, and usually harder

than, and of a different color to, the rich top soil). If the land is not naturally well drained, and you can get a man who understands the work, have it "subsoiled" at the time of ploughing. This breaks up the hard second surface, and provides additional drainage; and thorough drainage is one of the most important requirements of a good garden. When having the ploughing done, be sure to get someone who understands the work, even if at some inconvenience. If you begin operations with a poorly ploughed piece, you will work with a very serious handicap.

Before taking up the preparation of the seed-bed, the question of fertilizers requires attention. If you want the ground to feed you, you must first feed it, and in proportion as you do so are the results likely to prove satisfactory. And with such a small family of vegetables as you will have to feed in the home garden, there is no excuse for stinting. What will they need? Nitrogen, phos-



Follow the planting instructions given so that you can gather fresh vegetables all summer



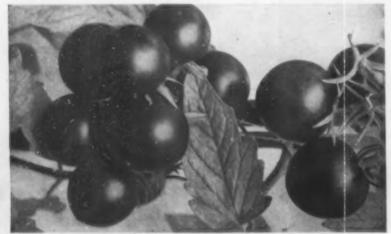
Do not forget to plant some of these big peppers. Stuffed with chopped meat, they make a fine

potash; but you will have to supply them in one or more of many mixtures. If you can get it, rely principally on old, well rotted stable manure, preferably that of horses and cows mixed, and if pigs have run on it, so much the better. With a layer of this three inches thick ploughed into your garden patch, you will be certain to raise a tremendous crop of something-whether tempting vegetables, or a forest of weeds, will depend on your own at-

phoric acid and

tention and industry. This manure may bring you some weed seeds with it, but probably the ground contains so many already that it will not make much difference. The weeds are only a sign of trouble; they come to remind you that you have been neglecting your job of cultivating. This stable manure — five to eight two-horse loads will not be too much—should be spread evenly over the surface of your ground before ploughing and you should see that your ploughman turns it all under, leaving no bunches to clog the harrow, rake, or seed-drill later on.

If good manure is not to be had in your vicinity, you will have to fall back on some of the chemical fertilizers. It will be more convenient to use one of the many ready-mixed brands. As a general rule, the more you pay per bag, the cheaper you are really getting your plant-food. If you can, mix your own fertilizers. Directions for doing this, and for preparing an excellent fertilizer for your garden, will be found in the February issue of this magazine, page xxii. All chemical fertilizers should be applied broadcast after ploughing. Use, for a 50 x 100 foot garden, 200 to 300 lbs., according to quality. Later applications may also be made, as described subsequently. Unleached wood ashes is another excellent fertilizer, both for its plant food and for its action upon the soil, and it can be obtained readily in some



Tomatoes will do well in almost any soil. Support them above the ground if you would have them without blemish

localities. Apply fifteen to twenty bushels broadcast on the above space before harrowing.

Nitrate of soda, which forms probably the most important element of mixed fertilizers and plant foods, can with much greater economy be used pure for many purposes. But the beginner will have to be exceptionally careful in applying it. One of its most valuable features is its remarkably quick action. To force plants to early maturity, and to help along backward crops, it has no equal. For application it may be mixed with equal parts of ashes, light soil, or other suitable substance to give it bulk. But personally I have always preferred to use it pure,

### PLANTING-TABLE FOR

Vegetable	When to sow or plant <sup>1</sup>	Depth to sow in ins.	Distance		Seed or	No. days	No. days
			Apart in rows <sup>3</sup>	Rows	plants for 50-ft. row	ger- mi- nate	to mature
Asparagus, plants Bean, pole Bean, lima	April-May	I 4	3-4 in. 1 ft. 3 ft. 3 ft.	15 in. 3 ft. 3 ft. 3 ft.	1	20-30 6-10 6-10 7-15	1 year 65-10 60-90
Beet, late Carrot, late Corn, late	April-August May-July	1-1	3-4 in. 2-3 in. 3 ft.	15 in.	I OZ.	7-15	

May 20-June 10	2	3 It.	3 1t.	t pt.	0-10	00-00
April-August	2	3-4 in.	15 in.	I OZ.	7-15	75-90
May-July	1-1	2-3 in.	rs in.	doz.	10-20	00-120
	2	3 ft.		+ pt.	4-10	80-100
	Y					60-85
	4					125-150
				25		2 -2-
	-			1 07	6-20	120-150
May re-Tune re						
May re-Tune re	*					
	1.			2		
April Man	3-1					
	, 2					
						100-150
	1			toz.	6-15	125-150
	Manual	2 ft.		25		
April 15-June 20	4-6	ra in.	21 ft.	pk.	15-20	75-100
May 1-June 20	1-2	6-8 ft.	6-8 ft.	doz.	6-10	100-150
April	-	2-3 ft.	3 ft.	25		r year
April-May	I	3-6 in.	18 in.	doz.	8-15	125-150
May 15-July 1	1-2	4 ft.	4 ft.	doz.	6-10	60-75
	1-2	6-8 ft.	6-8 ft.	Z OZ.		100-125
	4					125-150
May 15-July 20	-	3 ft.	3 ft.	20		
	April-August. May Jo-July 10. May 10-July 15. June 15t. June 15t. June 1-20. April. May 15-June 15. May 15-June 15. May 15-June 15. May 15-June 15. April-May May 15-June 20. May 1-June 20. May 15-June 20. June 15-June 20. June 15-June 20. June 15-June 20. June 20. J	April-August 2 May July 10 2 May 10-July 10 2 May 10-July 15 1 June 1st ½ June 1-20	April-August	April August 2 3-4 in. 15 in. May July 15. 1 4 ft. 4 ft. June 17. 2 4 in. 15 in. June 17. 2 4 ft. 2 ft. April 2 4 ft. 3 ft. 4	April - 15 in.   1 oz.   4 ft.   4 ft.   5 in.   1 oz.   1 oz.   4 ft.   4 ft.   5 in.   5 in.   6 oz.   6 oz.	April August 2 3-4 in. 15 in. 1 0z. 7-15 May July 10 2 3 ft. 4 ft. 1 0z. 4-15 June 15 1 4 ft. 4 ft. 1 0z. 4-15 June 15 1 4 ft. 4 ft. 1 0z. 6-12 May 15-June 15 1 4 ft. 4 ft. 1 0z. 6-12 May 15-June 15 1 4 ft. 4 ft. 1 0z. 6-12 May 15-June 15 1 4 ft. 4 ft. 25 May 15-June 15 1 4 ft. 4 ft. 25 May 15-June 15 1 4 ft. 4 ft. 20z. 6-20 May 15-June 15 1 6-8 ft. 6-8 ft. 20z. 6-20 May 15-June 15 1 6-8 ft. 6-8 ft. 1 20z. 15-25 May 15-June 15 1 1 5 in. 1 5 in. 1 0z. 15-25 May 15-June 15 1 1 2 ft. 3 ft. 1 2 0z. 15-25 May 15-June 15 1 1 2 ft. 3 ft. 1 2 0z. 15-25 May 15-June 20 1 2 ft. 2 ft. 2 ft. 2 ft. 2 ft. 2 ft. 3

II. CROPS FOR SUCCESSION PLANTINGS.

Endive4	May 5-Aug. 15 April-August April-July April 1-Aug. 1 April 1-Aug. 1 April 1-Sept. 15 April 1-Sept. 15 April-Sept. 15	2 1 1 2 2 3 2 3 2 3 2 3 1 1 1	2-4 in. 1 ft. 6-12 in. 1 ft. 2-4 in. 2-3 in. 3-5 in. 4-6 in.	1½-2 ft. 1 ft 1½-2 ft. 1-1½ ft. 3 ft. 3-4 ft. 1 ft. 18 in. 15 in.	r pt. d oz. d oz. so r pt. r pt. d oz. d oz. d oz. d oz. d oz.		75-100
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taking care to pulverize all lumps. If the following two rules are observed, it may be used without any danger of "burning" the plants. First, see that none of it ever lodges upon the foliage, and never apply when there is moisture upon the plants. Second, apply in many small doses,—10 to 20 lbs. at a time for such a piece as we have been considering. It should be put on so sparingly as to be barely visible; but its presence will soon be denoted by the moist spots, looking like big rain drops, which each particle of it makes in the dry soil.

If you can have ploughed under for your garden a good coating of rotted barnyard manure, followed by a dressing of wood ashes or fertilizer harrowed in, and can apply 50 to 100 lbs. of nitrate of soda during the summer, your fertilizer question will be settled—and you can pick out a place on your wall right now for some of the blue ribbons to be awarded next fall at your local fair.

In his hurry to get the first plants out and seeds sown, the beginner is likely to hurry over the preparation of the ground. Instead of hastening things a few hours, he is delaying them days. In order to have the best crops, it is necessary that the plants make an unchecked growth from the very beginning, and nothing is more important in giving them the right start than a properly prepared seed-bed. If the ground is in just the right condition

twice over with a harrow may be sufficient; but keep it going until all lumps are broken up, if it takes a dozen goings-over. And it may need to be rolled once or twice during the process! Then it will be ready for the iron rake—and lots of elbow grease. Take a strip about as wide as you expect to plant at once, and rake it from one end. Make it just as smooth as possible, with a backward-and-forward motion of the rake. Rake up just as little sod, stones, and other trash as possible.

When your strip is thoroughly "fined," and as nearly tablesmooth as you can make it, the preliminaries are over, and you are at last ready to plant.

Distance Soud or days No days

### OUT-DOOR SOWING

	When to sow	Debtu			Seed or	to	No. days	
Vegetable	or plant1	to sow in ins.	Apart in rows <sup>3</sup>	Rows	plants for 50-ft. row	ger- mi- nate	to mature	
	III. CROPS T	O BE F	OLLOWED I	ву Отнв	RS.			
Broccoli, early <sup>4</sup> . Borecole <sup>4</sup> Brussels Sprouts <sup>4</sup> Cabbage, early <sup>4</sup> . Carrot. Cauliflower <sup>4</sup> . Corn, early. Onion Sets.	April-June. April. May 10-20. AprilMay 15. April 1-May 1.	1-1 1-1 1-1 1-1 1-1 1-1 2 1-2	3-4 in. 1½ ft. 2 ft. 1½ ft. 1½ ft. 2-3 in. 1½ ft. 3 ft. 2-4 in. 2-4 in.	15 in. 2 ft. 2 ft. 2 ft. 15 in. 2 ft. 3-4 ft. 15 in. 3 ft.	1 oz. 35 25 35 35 3 oz. 35 2 pt. 2 pt. 1 pt.	7-15 5-10 5-10 5-10 10-20 5-10 4-10	100-140 85-120 100-140 100-125 60-80 100-115 60-80 40-60	

IV. CROPS THAT MAY FOLLOW OTHERS.

Borecole	July-August May-June <sup>2</sup> April July 1-Aug. 1 May 15-Aug. 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3-4 in. 2-ft. 2 ft. 1 ft. 2 ft. 2 ft. 1-2 in. 6 in. 2-4 in.	15 in. 2½ ft. 2½ ft. 2½ ft. 2½ ft. 2½ ft. 3-4 ft. 4 ft.	1 oz. 25 25 35 25 25 1 oz. 1 ot.	5-10	75-90 85-126 100-146 100-146 120-186 100-146 125-156
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In the vicinity of New York City. Each 100 miles north or south will make a difference of 5 to 7 days later or earlier.

This is for sowing the seed. It will take three to six weeks before plants are ready. Hence the advantage of using the seed-bed. For instance, you can start your late cabbage about June 15th, to follow the first crop of peas, which should be cleared off by the 10th of about June 15th, to follow the list crop of peas, which stream of the seed, for crops sown in drills, should be sown several times as thick.

\*Best started in seed-bed, and afterwards transplanted; but may be sown where wanted and afterward thinned to the best plants.

Before taking up special directions for the various vegetables, I want to say a word about seed-drills, and also give a few general rules. No matter how small your garden is, get a combination seed-drill and wheel-hoe, if you can possibly afford it. A seeddrill will enable you not only to get your seeds in more quickly, and with greater ease, but it will do the job better than can possibly be done by hand. It will open the furrow, drop the seed evenly, cover with moist earth, roll down the drill, and mark out the next row, all with one operation, and nearly as fast as you can walk. And then by changing a few bolts and nuts, you can convert this same machine into a wheel-hoe, that will save you even more work in cultivating than the seed-drill did in planting. You cannot afford not to have one. But in case you are just beginning, and do not feel like investing a few dollars this year in one of these machines, keep the following suggestions in mind when planting by hand. Seeds as a rule should not be covered more than three or four times their own depth. They should be planted as soon as possible after the ground is ready, before the surface of the soil has a chance to dry out. They should be "firmed" into the ground, either with the edge of a board, back of a hoe, or by being pressed firmly with the foot, to prevent the formation of air spaces to dry up the newly sprouted rootlets. Great care should be taken to get the rows straight, as cultivation should be begun when the little plants are scarcely up, and it will be much facilitated by even rows.

Get a stout string and stretch it tightly just above the ground for your first row. With a hoe handle mark off along it a shallow drill, deep enough for whatever seeds you may be planting. If a seed-drill is being used, it can be adjusted to plant at different depths, as desired. For peas, beans, and other large seeds, it will be necessary to open up the drill still more, with a hoe. There is an implement with a heart-shaped blade, called the "Warren hoe," made especially for opening and covering drills.



Corn takes up a lot of room, but there is all the difference in the world between bought and home-grown corn

Sow the seed evenly in the freshly opened drills, press down as directed above, and cover level with a hoe, or back of a rake. A second firming on top of the row is advisable if the ground is very dry.

So much for those vegetables which are planted in the open from seed. But many crops may be had several weeks earlier by setting out young plants which have been started ahead, as described in the next preceding article of this series. If the following few simple things are done in the important operation of plantsetting, practically every one will live, and they will receive little check in the process. Do this work on a cloudy day, or late in the afternoon if you can. If it must be done on a bright hot day, shade the newly set plants with newspapers. Prepare the ground as for seeds. Mark off the rows lengthwise, and also across, at the proper distances. With a trowel or hoe, dig out at each intersection a hole four or five inches deep. Mix up in an old pail manure (hen manure is the best) and water, until about the consistency of thin paste, and throw half a trowelful into each hole; then mix this up thoroughly with the dirt and cover over level, making a mark with the trowel to indicate just where the prepared spot is. Take your plants, which should be well

(Continued on page xix)



Sow your cucumber seed May 10—July 15 for a crop to remain throughout the season

# A Long Island Home and Its Garden

THE COUNTRY HOME OF MR. F. D. SHERMAN, OVERLOOKING MANHASSET BAY AT PORT WASHINGTON, —A DISTINCTIVE ADAPTATION OF THE COLONIAL FARMHOUSE—TROWBRIDGE & ACKERMAN, ARCHITECTS

BY JARED STUYVESANT

Photographs by Mr. Sherman and J. D. Walter

AVE you ever tried the interesting mental exercise that consists in outlining a mind picture of some person with the aid only of a story or a letter he has written or a picture he has painted? It is astonishing how wide of the mark such conceptions often turn out to be. I am inclined to believe that your mental picture will be far more nearly accurate and true to life if it be based on the character of house a man

builds, and the manner of its furnishing and decorating. It looks the Bay, or on the garden side among the old-fashioned matters not how much a man can afford to spend on his home; much or little, there always remains the possibility of stamping upon the result the hallmark of individuality, the fairly accurate expression of one's personality.

But what of the man who hires a decorator and goes abroad to await the completion of the work? Well, there are two possible alternatives: if the decorator is really a master of his art he will succeed in showing forth in the completed house the character, aims and taste of his client; if the decorator is not able-or perhaps not cruel enough—to do this, the result will be the cold, stiff, conventional thing, faultless according to the canons, of course, but like a house without vines. And just as surely, in either case, would you be able to picture the sort of man who

would want that sort of thing for his

All of which is prompted by the perfectly evident fact that is proclaimed by the accompanying photographs and plans of Mr. F. D. Sherman's home at Port Washingtonthe fact that here is a house and a garden setting made for a man

A garden of old-fashioned perennials, filled out with annuals, lies just across the main entrance driveway, with a vegetable garden and garage beyond

The Sherman house shows a particularly successful adaptation of the American farmhouse type of architecture to modern needs as regards planning

who knew what

he wanted, and

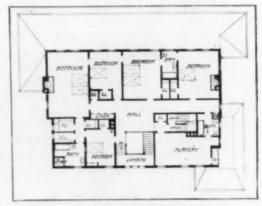
got it.

and equipment. There is absolutely nothing about either house or garden that is not perfectly in keeping with the modern healthful type of country living-a life lived largely outof-doors, on the long broad veranda that over-

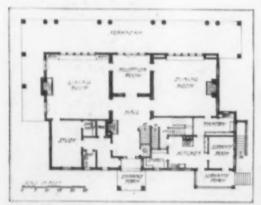
flowers.

The suburbs of our large cities contain quantities of another type of country home—large estates, laid out stiffly with severely formal gardens, cold marble seats, elaborately carved fountainsthe so-called show places of America. The houses are almost castles, with great oak-paneled libraries, in which nobody ever reads, with morning rooms, breakfast rooms, interior fountain courts—all usually large, inhospitable and deserted. Contrasted with places of this sort, the Sherman place is a real home for the American business man who wants a place to live in, not a transported Italian villa nor a feeble imitation of an English manor house for his neighbors to look upon. Based, architecturally, on the type that belongs solely to Long Island—the quaint low

farmhouses of the early settlers, which still lend a distinct flavor to localities like Easthampton, for example, it is designed with no slavish repetition of plans outgrown, no handicap of antiquated methods, but with the idea of making a modern, comfortable, sanitary, country home.



Three bathrooms, one containing a shower, are conveniently related to the five bedrooms



Large rooms, grouped conveniently around a spacious hall, make a splendid first story



A foliage-green landscape paper, in combination with the white woodwork, gives the dining-room a brilliancy approximating outdoors



A gold wall paper, with brown as the dominant color in furniture coverings and hangings, makes bright the twenty-five-feet-square living-room. French windows, flanking the fireplace, open upon the large veranda



The entrance driveway approaches the side of the house opposite that facing Manhasset Bay, and separates the house from the garden; the latter was not fairly started when the picture was made

Look at the first floor plan, for instance. Everything is on a generous scale but without ostentation or undue formality. The living-room and dining-room are each approximately twenty-five feet square, separated by a reception room, fifteen feet square, that is entered from the central hall, fifteen by twenty-four feet in size.

To my mind the arrangement of the owner's study and its adjoining photographic darkroom, toilet and telephone closet, is one of the most interesting features of the plan. This darkroom, by the way, is royally equipped with running water, enameled sink and glass shelves.

Opening from the living-room on the fireplace side are French windows that lead out upon the great veranda along the Bay side. With a total length of eighty-seven feet and a width of thirteen, it can readily be surmised that here is the real living-room throughout the summer months, with the enclosed living-room proper merely a withdrawing room for the late evening.

On the second floor, the abundance of bathrooms at once marks the long step forward we have taken in that particular direction over the old farmhouse prototype, wherein such luxurious necessities were not so regarded. It will be seen from the floor plan that only one of the six rooms is not immediately adjoining a bathroom, and in the owner's suite as in the study below, man's individual rights have been asserted and have found expression in a built-in, tiled shower-bath.

Throughout the second story, as in the first, the scheme of furniture and decoration is Colonial. Rag rugs are used on the bedroom floors, as in the dining-room, with cretonne and other brightly colored fabrics for the hangings and furniture coverings.

Storage space and the ser-



Fifteen by twenty-five feet makes a hall big enough to serve as another living-room

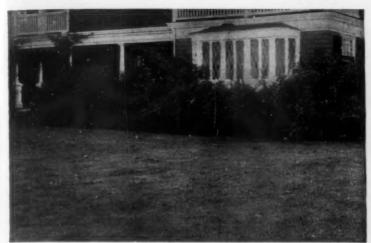


Along the full length of the house towards the Bay runs the thirteen-feet-wide veranda, eighty-seven feet long—the center of things throughout the whole summer season

vants' bedrooms are found on the third floor, reached, as the second-floor plan shows, through an isolated back stairway.

In the garden the plan is very simply geometrical, to give easy access around the beds and border of old-fashioned perennial flowers, filled in here and there with annuals. A row of tall Hollyhocks and Golden Glow surrounds three sides of the flower garden, leaving the lower end open to the vegetable garden adjoining. In this latter, which includes about 150 x 200 feet, an abundant store of all the vegetables is grown under a gardener's care.

At the end of the vegetable garden stands the garage, with comfortable quarters for the gardener and his family above the motor space.





In landscape work, whether it be grouping shrubs around the base of a house or planting them in masses about the outside edges of lawns, the individual specimen must give way to the effect as a whole

# Planting Shrubs for Mass Effects

THE LANDSCAPIST'S POINT OF VIEW IN THE MATTER OF SETTING OUT SHRUBBERY BORDERS—THE NECESSITY FOR DETERMINING THE PLAN AND SKY LINE ACCURATELY ON PAPER

BY GRACE TABOR

Photographs by Nathan R. Graves and others

[The seventh of a series of articles on the subject of landscape gardening as applied to the American home of moderate size, preceding titles being "Utilizing Natural Features," "Getting Into a Place," "Formal or Informal Gardens," "Screening, Revealing and Emphasizing Objects or Views," "Boundary Lines and Boundary Plantings," and "Planting Trees for Air, Light and Shade." Questions relating to planting details will be gladly answered.—Editor.]

THERE seems ever to have been an antagonism between the horticulturist's view of a plant and the landscape architect's. To the former it exists as a specimen, an individual that is filling an important place in the world in and by itself; the spread of its branches and the size and quantity of its blossoms are the things by which he judges it and by which he values it—consequently the more these are increased, the more any characteristic is exaggerated in it, the more valuable to him does it become. Naturally, therefore, his whole aim is to provide it with those surroundings which will promote such exaggeration to the highest degree.

But the landscape architect views it from a very different point. A plant is to him what a single note is to the musical composer, or what the tubes of raw, pure color are to the painter. One note, struck by itself, can mean nothing, no matter how loud and startling or soft and sweet the tone; one color in a great vivid blotch on the canvas expresses nothing, no matter how clear and striking it may be. It is only as the note is brought into relation with other notes, the color with other shades and colors, that a composition takes shape.

It seems, sometimes, as if the time would never come when this truth about plants would be realized by everybody. Year after year sees the same mistakes made, even on the larger estates where large sums have been paid for the services of professionals presumably skilled and cunning in the craft. With all the money spent the well planned and well planted place remains the exception, so rare as to be startling when one comes upon it, while examples of wrong ways, wrong from their fundamental ideas up, are everywhere. Almost every village and suburban street presents a solid front of garden misconceptions disheartening to

The two views just cited are of course antagonistic and one can readily see how utterly impossible it is to ever make them

anything else, so one need spend little time in attempting to harmonize them. Instead let us see what reasons there are for adopting one and rejecting the other.

First of all it is necessary to realize that there are certain special things, grown for show, and for competitive shows, which have no more to do with gardening, considered as a fine art, than chalk has to do with oil painting. The biggest Dahlia in the world, winner of all the prizes, would add little or nothing to a garden's beauty if it stood outdoors, among the growing things; the carefully trained and framed Chrysanthemum plant, bearing a thousand blossoms, might as well be a Coreopsis bush for all the effect it would create in relation to other plants in the border—and the rose bush, coddled and pruned and petted till it produces a single four-foot-stemmed American Beauty, becomes a sorry spectacle, once its solitary flower is plucked.

These may be exaggerated examples to be sure, but they illustrate the point we need to impress upon our minds—that individualism is *not* the garden's ideal. And though they are exaggerated, they are after all only the result of going a few steps farther along the path of individual culture than the usual practice which aims to plant shrubs in isolation "so they can develop."

Any view that persistently puts the *development* of a shrub before other considerations governing its location, is a mistaken one; and until, once and for all, we get over cherishing such views we will continue to go wrong in design, and to fail in attaining our proper effects.

Abandon completely and absolutely the mental picture that dissociates "shrub" from "shrubbery," and create in its place one which unites the two so closely that you will come to feel them one object and synonymous terms. Then live up to this creation determinedly, and let no remarks of misguided neighbors—however well meaning they may be—about things choking

to death and having no chance to grow, shake your resolution nor divert you from your course. They may think you crazy—that is to be expected, but you will know that you are not, and that time, and your grounds, even if they are only 50 x 100 ft., will be your vindication.

It is very simple if one wishes to reason it out, since any plant set in an open space and encouraged to "develop" is but a few steps short of the plant trained with the avowed purpose of producing phenomenal flowers or fruits, and phenomenal flowers or fruits are of absolutely no merit as garden ornaments and the plant trained to produce them usually suffers in the process.

Hence it follows that a plant—or, to speak more definitely, a shrub—set singly as a specimen in a garden or for the adornment of grounds, is an

Grounds are not ornamented by shrubs of this kind, for it is the shrub itself which holds attention under these Wonder and circumstances. perhaps a certain crude admiration are excited by it-but the idea of grounds or a garden is lost sight of completely. There is no impression of charm and beauty resting upon all, of a dwelling rising from a suitable setting, of an outdoors that appeals and satisfies, of a picture that is complete. These things are sacrificed to a monstrous something calculated to draw an astonished "oh!" from the beholder.

With the resolution to always mass "shrubs" until they form "shrubbery" and to always plant them so near together that they will interfere and encroach upon each other outrageously, firmly and immovably fixed so that nothing can shake it, let us examine first the points that come up in laying out the ground plan of such border or mass. The ground plan itself takes precedence over all other work. consequently it is upon that that the gardener must start, indoors instead of out.

Regularity, so far as that implies planting in rows or

squares, is of course to be avoided in an informal shrubbery border. But haphazard, grotesque zig-zagging is not the way to avoid it, neither is what nurserymen call "staggering." A carefully worked out plan is the only way, with an equally careful transfer of it from the paper to the ground.

Such a plan is made by first drawing in lightly the general large curves representing the inner line of the shrubbery—it being assumed of course that the plot to be planted is laid off to scale on the drawing paper. Then, starting at either end, the first shrub is located where its spread of branches can be calculated to come on this curve; follow all along this inner line first, leaving

a space of from two and one-half to four feet between the shrubs, depending on their size.

Next, proceed to fill in back of this—in some places a dozen plants may be required within a very small distance along the boundary while in others only one or two will be needed to build up the border.

The species and variety of practically every one should be determined as the shrub is set down upon the plan, otherwise difficulties will arise over the distances between them. In a very large planting this is not always essential as there will be certain locations calling for many of one kind. But even here it is well

to have a general idea of what each lesser group composing the large group is to be, as they are set down. It takes time—but it is the thorough way.

In field work a plan is divided into squares of convenient size and every shrub in a given square is located by a stake driven into the ground and labeled to correspond with the label on the shrub, before any planting in that particular square is really done.

Reference has been made in a previous article to sky line. It is as much to be considered in planting shrubs as trees, for although the top of shrubbery may not cut the sky when viewed under ordinary circumstances, the outline of its top, taken as a whole, has an important place in a composition.

To give this sufficient variation there must be intervals of comparatively low-growing varieties that are not backed up by larger specimens; and these intervals, constituting the variation in the "profile" or vertical section of the border, must be as carefully thought out and planned as the ground plan of the group. Generally speaking they will take the ground plan for their guide and rise from it quite as the elevation of a building rises from its plan; but here, as in architecture, the designer must have the instinct which

Elevation of Shrubbery Border

| 10 feet | 10

This "elevation" of the border shows it, particularly the upper outline of it, as it would appear to a person standing on the lawn and looking against it. Wherever the mass broadens on the ground, the sky line rises higher—wherever it narrows on the ground the sky line descends. Dotted lines across the elevation are at the 5, 10 and 15 foot elevations respectively.

Number and Name	Bloom	Height	Color of Flower
r Callicarpa purpurea. 2 Amygdalus communis, alba flore pleno. 3 Clethra alnifolia.	May	6 feet 8 to 10 feet	
4 Deutzia gracilis. 5 Deutzia gracilis, rosea	May-June April-May	4 feet	White Pink Red-yellow-white
7 Hydrangea quercifolia	July-Sept June	2 feet 3 feet	Pinkish white Golden yellow Rose pink
o Andromeda Mariana  1 Caryopteris mastacanthus  2 Eleagnus longipes	AugOct	s feet	White Violet blue Yellowish white
5 Cornus sericea	June	Io feet	White White or pink White
6 Azalea viscosa. 7 Baccharis halimifolia 8 Cornus alba	June-July Sept	# feet	White, tinged red White seed vessels White
9 Rhamnus Frangula o Tamarix Gallica, indica	May	12 feet	Inconspicuous Pink
Lonicera fragrantissima Calycanthus floridus Crataegus Oxyacantha	June	8 feet	Creamy white Brown White
4 Viburnum Lentana 5 Syringa vulgaris 6 Syringa villosa 7 Porsythia Portunei	May.June May-June	20 feet 20 feet 8 feet	White White and lilac Pinkish lilac Yellow

adopts the right form and rejects the others.

The diagram appended shows the principle, and the manner in which the plan serves as a guide to the profile. Notice that wherever the border deepens on the ground, it rises higher in the elevation; by determining the ground plan first, therefore the elevation will rise from it almost automatically and with no trouble to the designer and no confusion. And a glance at the elevation shows exactly where the tallest and the lowest shrubs must stand and the intermediate ones as well. Make your plan therefore first, in rough sketch form, then develop the elevation or profile

(Continued on page xxii)

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If you have a sun-dial in your garden see that its base is accessible from the paths



Steps and flanking pedestals for formal plants may easily be made from cement



Even in the informal garden a marble is an effective foil for the shrubbery



When the circular shelter is more luxuriantly covered with vines it will make an ideal resting spot



An old Japanese lantern of wrought iron in Mr. Thomas W. Lawson's garden



A basin of marble or cement, in which the water is renewed by hand, attracts the birds



Useful as well as ornamental is this graceful seat in brilliant contrast with its green background



Reproductions in cement of old Italian fragments are not expensive



Do not use a Japanese stone lantern unless you can give it a setting of curious rocks and dwarf trees



Although the paneled wainscoting and much of the furniture is of the Elizabethan period there is no apparent incongruity in the introduction of the upholstered easy-chairs

# Congenial and Uncongenial Furniture

THE NECESSITY FOR SELECTING FURNITURE THAT WILL HARMONIZE WITH THE ARCHITECTURAL STYLE OF AN INTERIOR — HOW FAR ONE MAY GO IN GIVING PLACE TO ODD PIECES

BY MARGARET GREENLEAF

Photographs by Floyd E. Baker and others

IN selecting the furniture for the new house the ambitious amateur must take first into account the architectural demands made by the type of the house to be fitted, and second the requirements of those whose lives will be lived within its walls. This done, there is little likelihood of failure in the completed rooms, as the finished result must of necessity be consistent and suitable and therefore beautiful.

There are, however, several varieties of pitfalls awaiting the inexperienced and unwary. One may fortify one's self, however, by thoughtful observation and intelligent reading upon the subject-matter of ornament and furniture of the several periods most frequently encountered in the architectural designs and types of furniture in use today, and thus have ability to distinguish and select that best suited to the house under consideration.

The present extensive employment of cement and concrete in the construction of houses has brought forward the "Craftsman" type of house, as well as the half-timbered English, as both styles lend themselves well to this material. The furniture used in the Craftsman house must carry the same plainness of line and sturdiness of construction as the building itself expresses. That variously known as Mission or Craftsman can be used throughout, and will seem at once a part of the rooms in which it is placed, although in houses of some other designs (notably Colonial) this furniture is wholly incongruous and difficult to place. As

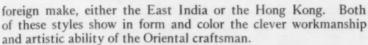
much of this furniture is very heavy, it is a good idea to supplement such large pieces as the davenport, long table, and easy-chairs, with some chairs of wicker or willow. These may be of



No type of furniture would harmonize so well with the architectural character of this dining-room as the so-called Craftsman type



The rather unusual combination of mahogany furniture built on Mission lines is found in this spacious living-room



Houses modeled somewhat after the bungalow, and other small houses in which the elimination of all ornament is the keynote of the interior detail, will also be found to hold such furniture agreeably. This furniture is usually made from oak or ash, darkly stained and finished with a soft polish. Occasionally, however, mahogany is used, though not so successfully, as this wood is too closely associated in our minds with the more elegant lines of Colonial furniture.

For the Colonial or semi-Colonial house, reproductions of the numerous furniture designs of that period find appropriate setting. However, to make a successful Colonial room one need not necessarily be a purist. The charge of stiff formality is sometimes brought against the careful Colonial treatment of rooms. This is by no means necessarily attendant upon correct Colonial decoration. While there can, of course, be no over-crowding of such rooms, we should bear in mind that no style of furnishing should be considered which does permit of this.

In furnishing the Colonial house we are by no means restricted to the designs of Chippendale, Sheraton, Hepplewhite and others of their kind, but with perfect propriety pieces ante-dating the time of the Georges may be introduced, as the Colonial is the direct outcome of the Georgian and previous periods.



Colonial furnishing is sometimes accused of being too austere for comfort, but this consistent living-room disproves it



A sample of the over-decorated gaudy "parlor" of a decade ago, including the ubiquitous "what-not," which, fortunately, we have left far behind

There is a distinct difference in the type of furniture which was used in the Colonial mansions of the South, and that of the New England houses of the same period. In the former one feels the French influence in the ornamentation and carvings of the rosewood frames of the more formal designs, while the New England type is austere and affected by the Puritan spirit of the time. Thus furnishing and decorating a house of Colonial suggestion can become a very real pleasure to the owner, as in fitting it with suitable and congenial pieces of old furniture or some of the many excellent reproductions of good design which are to be had to-day, a beautiful and livable scheme may be worked out. After the wall decorations and hangings are in place the furniture should be added slowly and carefully, each new piece being thoroughly tried out before its final disposition is determined.

There are many helpful books on Colonial furniture to be found in our libraries which should be read and digested by any one who purposes undertaking the fitting up of such a home.

We have given special prominence to the consideration of Colonial furniture as in the treatment of houses of this beautiful and dignified style the amateur may readily meet with success. This is largely owing to the careful reproductions which are made of the furniture best suited to such interiors, and also the excellent examples of these houses which are now extant and which, through actual acquaintance, or pulished illustrations, are well known to the public.

So many and such unspeakable mistakes are committed in the name of "French Period Decoration" that even the least experienced have come to fear it. It must be recognized that this treatment has no place in the home of modest pretensions. A house to be so decorated must be designed along lines characteristic of the period, the architectural detail of the interior making ready the way for the silk-paneled walls, framed in stucco garlands and overlaid with floating ribbons, swags of fruit and flowers, and the ornate cornice and chimney piece which will supply a proper setting for the carved gold leaf, tapestried furniture, and delicate brocades of that time.

In the recent past, American manufacturers have flooded the markets with so-called Vernis-Martin cabinets and tables, as well as frankly gilded and machine-made chairs and couches labeled Louis XIV, XV, or XVI period, as the fancy of the dealer or the customer has dictated. It is furniture of this and kindred types which makes for the very bad decorative effects shown in many of the more elaborate of our homes! Fortunately, however, this condition is also passing and the building public is individually

(Continued on page xix)

# Practical Talks with Home-builders

BUILDING A HOME UNDER A SINGLE CONTRACT OR UNDER A DOZEN OF THEM—THE ADVANTAGES OF EACH METHOD AND THE COMPARATIVE COSTS

BY ALEXANDER BUEL TROWBRIDGE

[This is the sixth of a series of intimate helpful talks with those who are about to build. The aim is to offer untechnical suggestions to prospective home-makers in the hope that many of the common mistakes and difficulties may be avoided through foreknowledge. The talks are written for those of moderate means rather than for those to whom economy is no object.—EDITOR.]



ONTRACTS are usually written by the architect, who follows well known customs regarding payments, etc., unless requested by builder and owner to substitute special agreements. The wording of an ordinary building contract was determined several years ago at a convention of builders and architects and is now issued in printed form with blank portions reserved for filling in with names, amounts, dates, etc. This form, called "Uniform Contract," may be purchased at any well supplied stationer's

carrying architectural materials. As in the case of specifications, it is not necessary for the owner to read the contract with the intention of criticising its phraseology, but rather to acquaint

himself with the obligations he assumes. Contracts for a house may be let in two or three different ways. A contract may be signed with a carpenter who agrees to complete the entire work; that is he stands responsible for the installation of heating, plumbing and lighting as well as for those branches more nearly allied to his own trade, such as masonry, plastering and painting. The advantage in this method is secured through placing the responsibility for everything in the hands of one man or firm, thus reducing the possibility of complications which might arise if each tradesman worked independently. The disadvantage becomes apparent when it develops that the general contractor is carrying on his business with little or no capital. He is then apt to make his sub-contractors wait for their pay while he applies what he receives to settle the debts of some previous building In this way liens are filed against the work and the owner finds himself in an embarrassing position.

Again, a separate contract may be signed with each tradesman. This has a decided advantage, as the owner saves whatever profit a general contractor would receive if the first mode of procedure were followed. That is, the owner lets contracts on a competitive basis with mason, carpenter, plasterer, painter, steam fitter, plumber and electrician. In large operations the number of sub-contractors will be three times as many as those mentioned. It must be noted, however, that this mode of procedure requires "canny" specifications. The architect is obliged to describe in words that will not admit of two meanings the duties of each contractor, so as effectually to prevent any tradesman from evading his obligations by shifting to another what is really his own work to perform. The separate contracts must receive the same kind of care in writing. Whatever points are not covered by the specifications must be cared for in the contracts.

This method of building requires the services of a "clerk of the works"—a man who spends his entire time on the job. He not only acts as a superintendent in assisting the contractors to interpret the drawings, but he keeps the architect in daily touch with the progress of the work and gives preliminary notice to the contractors as to the dates for commencing work and when to ship their materials. A clerk of the works is employed by the architects at the expense of the owner. Good men may be secured at salaries varying from \$25 to \$50 per week. For complicated

operations involving the supervision of many trades and many men, a high-priced man is a necessity. Whether the work is done under a general contractor or through many sub-contractors, a clerk of the works is an assistant of value. The architect's ordinary fee, covering superintendence, does not include constant supervision. It generally is interpreted to mean visiting the work several times a week in order to explain drawings, pass upon the appearance of completed work, etc. He does not agree to stand over the concrete workers, for instance, and watch with minute care the proportions of cement, sand and stones that are being mixed together. A clerk of the works, however, is able to give this kind of careful scrutiny and is often the means of securing dependable, honest construction.

A third mode of procedure is a compromise between the two foregoing. An owner may let the masonry, carpentry, plastering and painting in one contract and let heating, plumbing and wiring or gas piping separately. The chief advantage in this is the saving of the general contractor's profits on such contracts.

It is customary to insert in a contract a date for the completion of the work. As this clause is hedged about by counter agreements relieving the contractor from personal obligation in case of strikes or other unforeseen calamities, it is almost impossible to enforce the usual "time clause." If, however, a separate clause is written calling for a forfeit for each day of delay after the proposed date of completion and a bonus for each day gained through rapid work, the courts have a definite agreement upon which to argue and a decision may be reached.

In the question of city contractors versus country contractors, the writer's experience leads him to state that if the owner is not in a hurry and is not expecting the highest grade of finish in the work, he can profitably engage a country builder. Their prices are generally much lower than those of city builders and their work is good enough for all ordinary house construction. If speed is important, the country builder must be eliminated. One reason why they are compelled to work slowly is because the mills favor the bigger contractors in turning out mill-work, and the country carpenters are obliged to wait the pleasure of the millmen.

The saving through using a country builder is large enough sometimes to warrant the custom. For example, a house which came to \$12,000 in city estimates was built for \$9000 through five different contracts with country contractors. It would have been possible to employ a clerk of the works for even this small job at a salary of, say, \$30 per week; to have used up twelve months in building the house, and to have been a gainer by approximately \$1500. In this small operation the architect increased his fee as follows: The regular fee for the work was 71 per cent of the cost. By dividing the work into five contracts the architect increased his own office work and his supervision, but he saved the owner, it was estimated, at least 10 per cent on the amounts paid to the heating contractor, the plumber, the painter and the electrician. The architect therefore added to his regular fee an amount equal to one-half of this saving, an arrangement which is well worth the careful consideration of every owner. It can be just as profitably undertaken with city contractors. In fact, as general contractors often obtain more than 10 per cent on the sub-contracts, the saving would be proportionately greater.



An interesting corner porch, with an upper balcony and a Germantown hood. George Spencer Morris, architect



The old-time southern Colonial porch, exteniing through two stories, is an expensive type, but unsurpassed for stateliness



It is becoming increasingly common to have either an uncovered terrace or one that is shaded by a pergola



If one can swing out a generous octagonal or circular corner, comfort is gained with less darkening of the first-story rooms



Mr. Chauncey Olcott's home at Saratoga Springs shows the modified Dutch Colonial type, where the long sweep of the roof comes down to cover the porch. Keen & Mead, architects



The small stone entrance porch marks the center of a long open terrace. Andrews, Jacques & Rantoul, architects.



One too infrequently sees second-story porches such as this one. Myron Hunt & Elmer Grey, architects



Many of the old Colonial homesteads had comparatively small entrance porches, usually showing a wonderful delicacy of woodwork



On this quaint Dutch Colonial house may be seen the prototype of such porches as Mr. Olcott's above

A PAGE OF PORCH SUGGESTIONS

# THERE ought to be no country home, no suburban residence without a small space allotted to grow berries and other fruit. By planning judiciously, Strawberries from fruit of all kinds. one's own garden make mouths water as no other fruit will. Climax, Fairfield and Virginia sufficient for a family of six or eight, can be grown in a

Small Fruits for Every Garden

HOW ONE MAY HAVE FRUIT IN THE GARDEN FROM MAY UNTIL OCTOBER-WHAT VARIETIES TO PLANT AND HOW TO PLANT AND CULTIVATE THEM

BY S. L. DE FABRY

Photographs by the author and Nathan R. Graves

Three feet away, but parallel with the above fruits, plant early strawberries. They will ripen first, and will be out of the way before the raspberries and blackberries are gathered. strawberries in rows, fifteen inches apart each way, so that all three will be within a strip forty-five inches in width. This is termed a matted bed, and gives a large yield in a small space. A row fifty feet long will require 150 plants, fully enough for family use. In planting strawberries take a garden line and mark out the rows. Then with a pointed stick make holes one inch wide and about three inches deep, fill these up with water, and place a root in each hole; then press firmly around the plant, in order to let the air out, being careful not to bury the heart. Strawberries set out this way will live. Water the young plants for a week in the late afternoon. Never let the ground get dry or hard. Hoe often to keep weeds out and the soil loose. Strawberries like shade and water. Among the good early varieties recommended are

In order to supply some shade, plant gooseberries and currants next to the strawberries, about four feet away from the outside row of matted bed. Here use two-year-old plants and set them out four feet apart in the row. The mode of planting them is similar to that for raspberries. About four currant bushes, and as many gooseberries, will fully supply the family table demand. If you like red currants use Fay's Prolific. In white varieties, White Grape is one of the best; while Houghton is one of the best table gooseberries as well as one of the best varieties for preserving-a factor that must not be left out of consideration.

Climax, Fairfield and Virginia.

Gooseberries\*like these may be grown in every garden

from your own garden from spring until autumn. The work requires less care than vegetable growing, and when the plants are once started the culture is simple and the harvest fascinating.

are among the best early vari-

space of the size of

an average back

yard and enjoyed,

freshly gathered

Select your plot, possibly the rear of the lot, near the fence, adjoining the vegetable garden, or any suitable ground you can spare. The end of March or beginning of April is the ideal time to plant the fruit garden. Broadcast the ground with well rotted manure, so that every part of it is covered with a three to fourinch layer. Spread evenly over this ten pounds of muriate of potash and twenty-five pounds of ground bone (procurable at any seed store) to every square of twenty-five feet. Now spade the ground by hand deeply, turning the manure and fertilizer under. When this is done, rake the soil fine with a steel rake, so it pulverizes well, then the ground is prepared to receive the berry plants or trees, no matter how poor the soil was. Before setting out, soak the roots of plants or trees for an hour in a vessel containing liquid poultry manure. A small shovelful of droppings to a pail full of water, well stirred, will do the trick. Earlier sprouting will reward you.

Raspberries and blackberries are climbers and delight in upright growth. Plant about six plants each, three feet from the fence, allowing four feet between the plants in the row. Use yearlings. Dig a hole of sufficient size, mix bottom well with rotted manure, place roots evenly distributed in the hole, cover with fine soil and press firmly around plant, then water liberally. One of the best varieties of red raspberries is the King. In blackberries, Rathbun ranks as having the largest berry and is the best yielder. In order to get large fine berries, they must have sun. Avoid the old idea of bush formation, which will shade all except toppers. Let two or three shoots on each side of the plant grow, tie the growing shoots to the fence, adding small posts to the latter, and cross-wire their tops at a height of six feet. Pull up all other shoots, letting the strength of sap concentrate in the selected canes. After they have fruited, cut them off and repeat with new shoots. This is called by some the "new" though it has been practiced by the writer for a decade.

The after-culture for currants and gooseberries consists in cutting out the dead canes every spring. Some wood ashes worked in around the bushes with a hoe is beneficial. Keep the soil loose, hilled up a trifle and free from weeds. Prune the plants to three feet in height. It is well to watch for the currant worm. A white caterpillar, which often appears very suddenly after the fruit has set, greedily devours the foliage and ruins the fruit. Care must be taken to pick off and destroy these intruders.

Most berry bushes will bear crops the second summer after planting. Strawberry beds should be renewed every two years. You can obtain new roots for this from your own bed by setting out the young layer plants called "suckers," which are thrown out by the old plants.

Raspberries, blackberries, currants and gooseberries, once planted and properly taken care of, should last for ten years or more.

Besides a variety of berries, a few fruit trees will be needed in the garden to make the selection greater and the period of fruit gathering longer. The tall varieties or standard sorts require so much room that dwarf trees must take their place in the small garden. The merit of these is appreciated to the full where an

orchard is not possible. Apples, pears and cherries can be grown, to full perfection, by using the minimum of space required by dwarf trees. These trees should have been grafted on quince stock and, if properly pruned, should not exceed six to seven feet in height, often less. They come into bearing sooner than the Stand-What they lack ard trees. in quantity they make up for in quality and in the size of their fruit. They can be planted at a distance of from six to eight feet apart, and, for the first two years of their growth vegetables or flowers can be grown between the rows. Trees from two to three years old are used for setting out. Before planting them, clip the top branches off, so that only the largest, forming a fork in shape

by the planter while his assistant holds the tree vertical. Then water freely, after which fill up the remaining space to the ground level, treading soil solidly around trunk of tree. Two or three trees of each variety will be all that is needed at the most for the family table.

The after-culture of dwarf fruit trees consists in fertilizing and pruning the trees. The first two years



Caring for the half-grown fruit of the dwarf Pear, Duchess d'Angouleme

very little pruning is needed on dwarf trees. Bear in mind that the formation wanted is a vase form of from five to six feet high, in proportionate width. Later, in pruning, cut off the straight shoots overlaying or growing inside branches; this should be done in winter when the tree is in a dormant state.

Every spring the soil around the trees must be enriched. A proper way to fertilize dwarf fruit trees is to dig a circular

trench around each tree to a depth of fifteen inches, about three or four feet away from the trunk. Fill this in with a few shovels of good stable manure and a mixture of one pound of muriate of potash and two pounds of ground bone to each tree. Then fill up to the ground level. Hoe frequently in order to keep the soil loose and mellow and free from weeds.

Large nurseries where fruit trees of fine quality are grown generally have on hand an assortment of dwarf trees. As to varieties, the following are especially

recommended by the writer as a good list to select from: SUMMER APPLES: Red Astrakan, Early Strawberry, and Yellow Transparent.

AUTUMN APPLES: Duchess of Oldenburg, Golden Pippin, and

WINTER APPLES: Ben Davis, Newton Pippin, and Wine Sap. Summer Pears: Clapp's Favorite.

FALL PEARS: Duchess d'Angouleme.

The writer has grown the Duchess d'Angouleme pear on dwarf trees to the size of a small cantaloupe; it combines exquisite flavor with long keeping qualities.

CHERRIES: Yellow Spanish and Napoleon Bigarreau can be recommended if you like sweet yellow ones. For dark acid sorts Early Richmond and Baldwin ought to find a place in your garden.

PLUMS: Some of the Japanese varieties grow compact enough and, if pruned back, will take very little room. Of the Standard sorts Abundance will be found the best. It is a very early and prolific bearer of fine flavored plums, and the growth of the tree commends it to a small garden.

PEACHES: These are not grown on dwarf trees, as the stand-



a hole of sufficient

size, in the bottom

of which place

some well rotted

roots having been

treated previously

with liquid ma-

nure) should next

be set in the hole

which has then to

be half filled up

with fine, good soil,

firmly trampled

down under foot

The tree (the

manure.



When winter finds your fruit trees like this paint trunks and larger branches with whale soap solution



aroma, ripening as early as August, and Elberta, a well known yellow sort, good for the table as well as for preserving.

Plums and peaches should be set out two to three feet farther apart than the dwarf trees. The pruning of peaches is different from the other sorts. Before they bear, prune tops low, about half the wood of last year's growth, but cease this the season they start to fruit, as bear in mind that the fruit of peaches comes on last year's growth of wood. After they reach bearing age, cut out suckers, crowded branches and all the old wood already fruited the tree can stand. This will drive the sap in young wood, and a good crop is assured every year.

The quince, though not a popular fruit, is one that must not

be overlooked. It requires a deep rich soil, and the trees should be well mulched with thoroughly rotted stable manure. Plant quince trees not less than ten feet apart. The Champion variety bears a fine quality of tender fruit and bears very young.

Berry bushes, as well as fruit trees, are subject to diseases, which have to be combated. "Leaf Blight," "Rust" and, on peaches and plums, "Brown Rot" are the most common fungus diseases which, fortunately, are recognized. Bordeaux mixture is the great all-around fungicide, and may easily be applied with a small hand spray-pump in the home garden. For use in small quantities it is as well to buy Bordeaux mixture of the standard formula in concentrated form from some seed store. It comes thus in cans holding from one to ten gallons. For ordinary use one gallon of this paste is dissolved in twenty gallons of water before it is ready for the spray-pump. If used on plums or peaches while in foliage, the solution should be 50 per cent weaker, otherwise leaves will be burned. By adding six ounces of Paris Green to every fifty gallons of diluted Bordeaux mixture, all insects which bite the leaves or fruit can be killed with the same application, but care must be taken in using Paris Green anywhere.

A first-class knapsack spray pump may be bought from almost any dealer for \$8 or \$10, which price should include six feet of hose with nozzle. It makes an ideal pump for home use. An extension rod for higher trees can be added for \$1.50.

Fruit trees should be sprayed three times every spring. First when the buds are swelling, then when leaves are sprouting out, the last application being made after the blossoms have fallen. Never spray while the trees are in bloom; it kills the bees and you will have no fruit. Trees affected by San José Scale (a mite of an insect which burrows itself into the smooth bark and twigs of trees) is easily recognized in winter by the rough, ashy surface of the bark. Get a few pounds of whale-oil soap, two pounds of which dissolve in one gallon of hot water and apply it, warm, with a brush, to the trunk and larger branches of any tree affected. Spray the tops with this same solution. The chemical action of the potash in the soap will dissolve the armor of the scale, and free the tree from this pest.

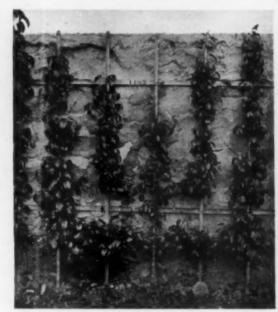
Home-grown fruits have come to be the delight of every home gardener, and the old-time idea that they require more care than they are worth never lingers long in the mind of those who test the matter.



The formation wanted for dwarf fruit trees is the vase-shape



Blackberries of quality are one of the most satisfactory breakfast-table fruits



Wall-grown fruits take up little room and are interesting to cultivate

## Growing the Finest Sweet Peas

THE WHOLE ART OF GROWING ONE OF THE MOST DESERVEDLY POPULAR GARDEN FAVOR-ITES-VARIETIES THAT HAVE BEEN TRIED AND FOUND TRUE. IN THE VARIOUS COLORS

BY EDWIN JENKINS

Superintendent of "Bellefontaine" Gardens, Lenox, Mass.

Photograph by Nathan R. Graves

VERYONE who has a garden, large or small, should not neglect planting Sweet Peas, for there is hardly another flower giving more pleasure to the grower for the small expenditure necessary for its successful cultivation. Almost every day through a season of three or four months this beautiful annual will lend notes of varied color to the landscape, and supply the house with cut-flowers of exquisite fragrance.

Passing from its decorative merits to the cultural methods, which, as here set forth, are the result of the writer's own experience in specializing on the subject, in which there have been no

particular soils or advantages other than those met with in common almost everywhere, it is interesting to note that by following the methods described, sprays producing seven flowers each were produced in quantities of bloom on strong vines from nine to ten feet in height.

PREPARING THE SOIL

In preparing the soil to receive seeds for Sweet Peas one does not have to go back as far as Oliver Wendell Holmes' estimate of the beginning time of a man's education-a hundred years; however, it is necessary to begin in the autumn before if we would hope for the most perfect plants.

Having selected the planting plot (which can stand a little shade, as the plants will be the better for it in hot weather, and such varieties as the "Henry Eckford" will also be set off to the best advantage thereby), lay out your rows from four to six feet apart, depending on the extent of the area at your disposal. Then place stakes at each end of the rows and open up trenches two feet wide and thirty inches deep. As the bottom soil for eighteen inches is scarcely fit for anything in most sections of the country, it should be turned out to form paths between the trenches, first removing the good soil from this

section to a depth of nine inches, which, with the good soil first taken out in trenching, will probably fill the trenches again. But in replacing the dug-out, soil mix with it some well rotted stable manure, and about 100 pounds of plain superphosphate to every hundred feet. Likewise add a half bushel of fine lime to counteract the acidity of the soil, and to keep away worm pests of all sorts. The soil, and the manurial additions to it, should be made as fine as possible for out-door seed-sowing.

#### BUYING THE SEED

As the cost of the seed forms but a small portion of the total cost of growing the plants, it is foolish economy to invest in cheap

seeds that one does not obtain from a reputable seedsman, whose business depends on his integrity in keeping up to standards, and whose word and recommendation therefore it is pretty safe to trust. As an ounce of Sweet Pea seed will contain over four hundred potential plants, it will be seen that this quantity will be sufficient for a good display of any variety in any good-sized garden, as in the planting these seeds will be about nine inches apart.

SOWING THE SEED

One can hardly be too early in the matter of out-door sowing. So long as the ground is dry enough to

walk on without clinging to shoes and garden tools, the soil will be safe enough to begin planting in. Take a garden line and run it along the trenches of prepared soil to make possible opening up the drills, to a width of nine inches and a depth of four, in a straight line. In this drill sow the seed thinly. After covering with earth press the soil down firmly on

the planted seed, after which place a mulch of litter over each row. This will prevent the ground below from drying unduly, and cracking, besides furnishing protection to the young plants as they push their way up.

CHOOSING VARIETIES

It is not always an easy matter to pick varieties as there are so many to choose from, each differing (perhaps in only a slight degree) and many seeming, to the amateur, to be nearly identical one with another. But there is some consolation in knowing that no one will have room for all varieties and that even the most intense enthusiast would not wish to attempt to grow them all, were it possible.

to grow them all, were it possible.

White: Dorothy Eckford, Nora Unwin, White Spencer.

Pink: Countess Spencer, Gladys Unwin, Bolton's Pink.

Primrose: James Greive, Primrose Spencer, Mrs. Collier.

Rose: John Ingman, George Herbert,
E. J. Castle.

Scarlet: Queen Alexandra, Marie Corelli, King Edward.

Maroon: Black Knight, Othello, Duke of Westminster.

Orange: Miss Wilmott, Helen Lewis, St. George.

Light Blue: Flora Norton, Mrs. George Higginson, Jr., Romolo Piazzani.

Dark Blue: Lord Nelson, Navy Blue, Captain of the Blues. Variegated Blue: Helen Pierce, Prince Olaf, Phenomenal. Lavender: Asta Ohn, Frank Dolby, Lady Grisel, Hamilton.

The above may be recommended as furnishing varieties that will produce delightful results in any garden.

The vines, which always require support, are the better for early attention in this matter. It is doubtful if anything surpasses the old-fashioned method of brush support, but brush

(Continued on page xvi)



One of the Spencer types. Choose your varieties carefully and keep the colors separated for the most satisfactory results



A good hedge is more beautiful than any wall man can devise—one of Nature's own bits of living architecture

## The Essentials of a Good Hedge

CHARACTERISTICS OF ALL THE PLANTS COMMONLY USED FOR HEDGES-HOW TO START THE PLANTS, HOW TO CLIP AND HOW TO MAINTAIN A STURDY, COMPACT GROWTH

BY J. J. LEVISON, M. F.

Arboriculturist, Brooklyn Park Department

Photographs by Henry Troth and Nathan R. Graves

THERE is no better way of marking the boundaries of a lawn, or of a garden, or of securing some privacy to the premises surrounding a house, than by means of a hedge, so thoroughly in keeping with landscape effects, only giving place, occasionally, to the stone wall, and even then almost always requisite to setting off the wall's advantages.

The careful selection of a hedge, with consideration from all points, and its maintenance concern us here. The ideal hedge has much to live up to, but no matter how careful the selection of the species may be, if the hedge chosen is not tenderly cared for it will really turn out to be no hedge at all, but only a row of thinfoliaged sticks. There are the conditions of soil and of climate, of exposure, of preservation against insect and fungous diseases to think about, longevity to encourage and compact growth to coax forth. Many of the hedge plants we see fall short of having been encouraged by thought of these matters, and others seem bent on evading man's diligence. The Hawthorn, for instance, is constantly menaced by scale, the Lilac by mildew, the Boxwood with red-spider, and Spruces continually lose compactness at the base of their trunks. To avoid all the natural pitfalls, and the stubbornnesses of some of the plants that otherwise might make

good hedge-growths, one must choose carefully and with anticipation of the conditions of a plant's future growth.

Early spring is the proper time to plant your hedge. The soil should then be enriched with additional black loam and the plants set in very carefully at a distance of twelve to eighteen inches apart for low hedges, and at ten to twelve feet apart for tree hedges. Do not plant too close, if you wish your hedge to look compact with plenty of lateral shoots. The roots should be cautiously protected from exposure to wind and sun and carefully spread out when set into the ground. The earth should then be firmly trodden in to keep the plants in place.

If the plants happen to be of a species like Privet, which will stand heavy clipping, cut off the shoots to a distance of three inches from the ground immediately after planting. This will establish an equilibrium between the supply and demand of sap in the plant, and thus enable its diminutive root the better to adapt itself to the new soil. This form of cutting will also insure the more compact growth of all sides of the hedge.

The following year the plants should be cut again, a little less heavily, and by the third year the permanent shaping of the hedge may be commenced. With plants that grow loosely, like

the Barberry, it is only necessary to make the plants uniform by clipping all such straggling shoots as have grown faster than others.

The after care of the hedge consists in keeping out all weeds, and in trimming the plants to induce bushy growth near the base. This is very important, particularly with young hedges. The hedge should also receive frequent cleaning so no insects can gather there and remain to despoil the growth.

General trimming of established medium-sized hedges is necessary at frequent intervals in order to insure the formation of lateral shoots for a dense appearance. The work can best be done in early spring while the sap is still down. The formal hedge of Privet and similar species should always be cut in some form of a triangle in order to obtain the greatest exposure of surface to sun and light and thereby securing a more vigorous growth of all parts of the hedge. The loose hedge of such a species as the Barberry needs just to be kept down to uniform shape by the removal of the stragglers. Where high stumps are seen protruding from old hedges, they should be removed and the more vigorous younger shoots allowed to take their place. All these large wounds and cuts should be covered with coal tar to prevent disease taking hold of the plants and insects from finding an easy entrance to the interior of the plant. Coal tar is preferable to paint for this purpose because the tar has an antiseptic as well as a protective influence on the wound, while the paint only remains on the surface, drying up in course of time and eventually peeling

An annual mulch of leaf-mold or well rotted stable manure, put on before the ground freezes, is also desirable for the maintenance of good hedges, and in case of Rhododendrons and the smaller evergreen plants, protection from wind and extreme cold during the winter months will be found helpful to the growth and even necessary at times.

Most of the deciduous plants will stand exposure better than the evergreens.

The accompanying lists have been compiled, after much thought, with the intention of suggesting the best hedge-plants for various purposes.

DWARF HEDGE-PLANTS-DECIDUOUS

JAPANESE BARBERRY (Berberis Thunbergii). Dense, low shrub; brilliant red berries; hardy.

CRANBERRY BUSH (Viburnum opulis var. nanum). Compact; scarlet color all winter; hardy.



A Spruce hedge, properly planted and trained. Trim your hedges in this triangular form to secure light and air to the lower branches

JAPAN ROSE (Rosa multiflora). Compact; thrives in poor soils.

#### EVERGREEN

DWARF Box (Buxus sempervirens var. nana). Well suited to edging.

DWARF JUNIPER (Juniperus Sabina var. fastigata). Well suited to edging.

DWARF JUNIPER (J. Virginiana var. tripartita). Well suited to edging.

DWARF CEDAR (Retinospora filifera aurea). Beautiful golden color.

(Continued on tage xvi)



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The hedge as a boundary marker adds a desirable air of privacy to any premises



The California Privet, quick growing and hardy, is an admirable hedge for every purpose



We are all too apt to consider a fountain as a garden luxury beyond our means. Given an adequate water supply, a simple concrete basin of this type may be built very inexpensively. Chas. W. Leavitt, Jr., landscape architect



An interesting variation of the usual garden is shown above, where instead of being in path-divided beds, the flowers are massed around an open grass plot, edged with stepping-stones



It your nouse is of the Colonial type, nothing will so well serve to bring the garden into harmony with it as a white-painted picket fence and arched gate



It is an idea full of real hospitality that provides a home flower garden flanking the central path which is the main entrance to the house



Water lends an invaluable charm to any garden, particularly when it is made to serve as an opportunity for informal bridges and rock-edged ponds

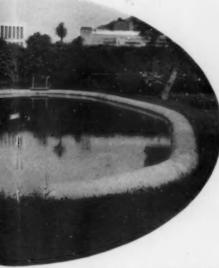


Mr. J. B. Mott's home at Bellport, Long Island, he the English type beyond which a grass path lea door swimming-pools in America



Whether your garden is large or small, it will through the introduction of a long central axis in an architectural feature

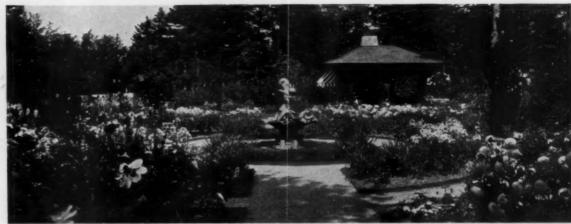
## ND GARDEN



ng Island, has adjoining it a formal garden of rass path leads to one of the few private out-



mall, it will gain enormously in electiveness g central axis that provides a vista terminating



The garden at "Biair Eyrie," Bar Harbor, Me., designed by Andrews, Jacques & Rantoul, architects, contains at one corner a tea house, from which, over the foreground of flowers, one may enjoy a distant view of the mountains



One sees pergoias of all materials and all types in present-day American gardens, but seldom a more effective crossing feature than this one of octagonal plan



Of all pergola types that modern ingenuity has developed, the combination of white plaster columns with dark creosoted beams is probably the most effective



"Willowdale," the summer home of Mr. Harry B. Russell, architect, on the shore of Cape Cod, contains a typical old-fashioned garden, where the flowers are massed informally along the grass paths



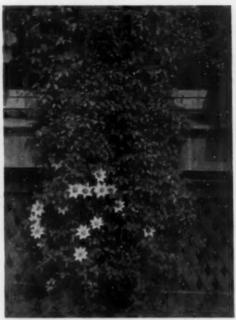
If you are fortunate enough to have an old well in your garden you will do well to make a feature of its top and covering as Mr. Chauncey Olcott did with his



The fleecy clouds of flowers of the Clematis paniculala, its rapid growth and hardiness make it one of the best vines we have for all purposes



There is not a lovelier vine in the world than the Wistaria with its wealth of perfect blossoms which reward one for its slow growth



Large-flowered varieties of the Clematis give notes of color to the sides of house and porch, and produce attractive foliage as well as blossoms

## The Best Vines for Every Place

CLIMBERS THAT ARE HARDY AND MAKE A WINTER SHOWING, AND THOSE WHICH DIE DOWN EACH YEAR—A LIST OF THE TWENTY-FIVE THAT FILL EVERY NEED

BY EDWARD C. CARROLL

Photographs by Nathan R. Graves and others

WHEN you come to plant your garden, make your lawn, set out your trees and shrubs, and have finished building your garden walls, fences and trellises, there will be the vines to take into consideration.

Perhaps no branch of garden adornment is more carelessly attended to by the amateur than that of selecting the proper vines for the premises. It is always so easy to fall back on Virginia Creeper, or to feel that with a little spatter of Wistaria the whole field has been covered. Nevertheless, looking into vine-lore at planting-time is well worth while.

There are, generally speaking, two sorts of vines; those which are hardy and shrub-topped, and those which die down in winter to spring up again the next season, or which are annuals that have

to be started from seed each year, though some of these may be self-sowing.

The following list of twenty-five vines is sufficiently inclusive, in both divisions, for almost all vine planting purposes.

#### SHRUB-TOPPED VINES

Akebia
False Bittersweet
Virginia Creeper
Boston Ivy
Clematis

4 Boston Ivy
5 Clematis
6 Virgin's Bower
7 Climbing Euonymus
8 Wiid Grape
9 English Ivy

10 Silver Vine 11 Honeysuckle 12 Honeysuckle

13 Honeysuckle 14 Kudzu Vine 15 Dutchman's Pipe 16 Wistaria 17 American Wistaria (Akebia quinata)
(Celastrus scandens)
(Ampelopsis quinquefolia)
(Ampelopsis tricuspidata)
(Clematis paniculata)
(Clematis Virginiana
(Euonymus radicans)

(Vistis vulpina)
(Hedera Helix)
(Actinidia arguta)
(Lonicera sempervirens)
(Lonicera flava)
(Lonicera Japonica)
(Pueroria Thunbergiana)
(Aristolochia macrophylla)

(Wistaria sinensis) (Wistaria speciosa) (Tecoma radicans)

VINES WHOSE TOPS DIE DOWN IN WINTER (NORTH)

10 Moonseed 20 Hop 21 Japanese Hop 22 Scarlet Runner

Trumpet Creeper

22 Scarlet Runner
23 Morning Glory
24 Moonflower
25 Thunbergia

(Menis permum Canadense) (Humulus Lupulas) (Humulus Japonicus) (Phaseolus multiflorus) (Ipomæa purpurea) (Ipomæa Bona-nox) (Thunbergia alata)

Vines should never be planted where they are not really necessary nor where they will not add beauty to the premises, nor yet again without due regard to the grouping of varieties. One does



The careful planting of vines adds greatly to the beauty of any place

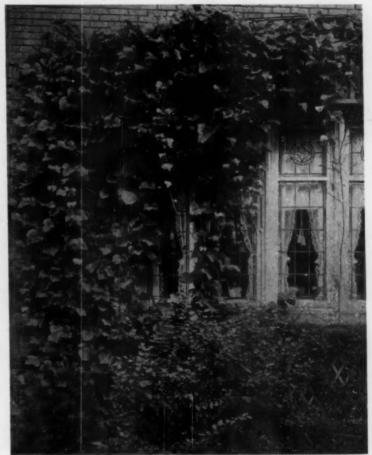
not always wish to turn the side of a house into a flower garden by a vast expanse of large-flowering Clematis, for instance; restraint is the better course. Let your flowering vines appear here and there in smaller patches, or around your porches, giving more area to vines such as the Boston Ivy, with its expanse of green, and the Kudzu Vine with its ability to cover an extensive space in a wonderfully short time.

Again, too many varieties and species should not be planted together unless it is desired to obtain a jungle effect, which is hardly what one strives for in this day of decorative discretion. The Japanese are masters in the art of attaining satisfying effects—next to them come the English gardeners. As nature has the whole world for her premises, we must not be led into the mistake of attempting to translate her swamp, forest, and hillside effects to our lawns and gardens without some consideration for adaptation.

Those vines which require winter protection must not be planted before you ask yourself—that is if you live in the far northern parts of the country—if you wish to have your porch and house-fronts littered (as surely they will have to be when tender vines are met by chilling winds and winter's snows) by straw and matting protections. For instance, the winter sun is too bright for the English Ivy in its dormant season, wherefore one often sees whole house-sides that in summer were green with the Ivy's beauty, yielding, in winter time, to the necessity of an ugly covering of flat mats. Nevertheless we do not plant half enough of this vine, and there are always many nooks and corners of walls and spots that are fairly well sheltered where it will thrive admirably. Apropos of vines and the seasons, the Silk Vine (Periploca Graca) retains its foliage very late into the fall, and is an excellent vine for arbor, stump, trellis or tree-trunk.

It must not be forgotten that vines need cultivation in common with other plants. It will not do merely to let them struggle along the best they can. The soil around them must be worked carefully, fertilized, and protected by mulches to retain moisture in summer and to protect the vines from frost in winter. Then, too, it will be found that some of them are of very slow growth, like the Wistarias, while others, like the Kudzu Vine, reach out with amazing rapidity. Every year the seedsmen and nurserymen are paying more attention to this important subject, so the garden and lawn planter has always a variety to select from.

If vines are to thrive well against the house-side they should not be planted too near the foundation. It is far better to run them out at least ten inches from the walls in order that the roots



The Kudzu vine often attains the height of fifty feet in a single season and is the most attractive of the rapid growers

may have a chance to grow out in all directions from the stalk. Before new growth begins with each succeeding season, some of the old wood of shrub-topped vines should be cut away, that new shoots may have a fair chance when their time comes.

Summer pruning, or pinching, as it is more often called, is the most advisable. The ends of the canes (vine branches) should be kept tied to their place, and when dense growth is desired heavier pinching back may be resorted to.



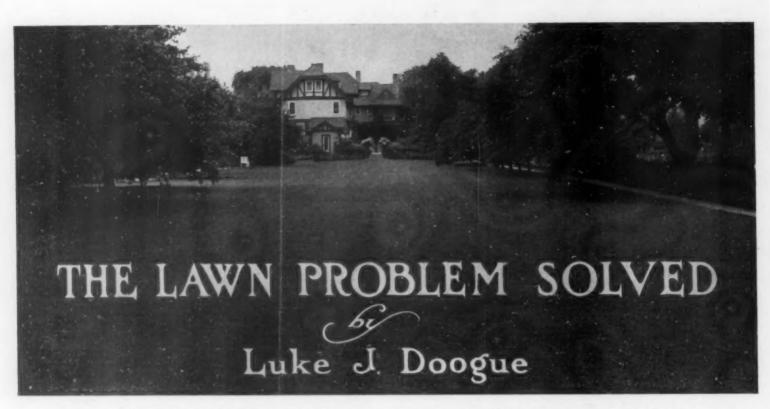
The Boston Ivy (Ampelopsis tricuspidata, or A. Veitchi, as it is more often called) thrives in almost any soil



Hall's Honeysuckle (Lonicera Halliana) climbs to a height of fifteen feet. Its blossoms are very fragrant



The Dutchman's Pipe (Aristolochia macrophylla) affords dense shade by reason of its uniformly large-sized leaves



ESSENTIAL REQUIREMENTS OF A VELVETY PIECE OF TURF—THE GRASS SEED TO BUY AND THOSE TO AVOID—SPRING TREATMENT THAT WILL BRING A SUCCESSFUL LAWN THIS SEASON—HOW TO CUT GRASS AND HOW TO SAVE RAKING IT

Photographs by Nathan R. Graves and others

WHEN the average man buys a package of grass seed at a grocer's and shakes the aforesaid seed on the ground he often imagines that the result will be a velvety lawn that will make his neighbors die of envy. But he has reckoned without counting that warm weather will probably find his seed producing weeds and a few lonesome looking blades of grass. It is scarcely an exaggera-

tion to say that eight out of ten people hope for grass on their lawns from just such thoughtless beginnings.

If you want grass to grow you must make up your mind to work for it, week after week, and month after month, until a perfect lawn is achieved. No absent treatment will effect anything short of a meadow, but consistent attention will produce a turf to be proud of.

If you have a patch of ground that you have been accustomed to call a lawn (though you feel shamefaced every time you call it such, by reason of its neglected and bare appearance), and if in the spring it seems to start off well, only to burn out later in spots, while the weeds get so numerous that you give up in disgust and wait for another year, hoping for better things, you may be sure that the trouble lies with your not having taken the time to spend on the matter. As a result of this neglect year after year you have had a symphony of weeds and bare spots.

Now the nearest thing by way of comparison to a lawn is a bed of plants that you set out in your garden every spring. When you think it is planting time you go to this bed with spade or fork and turn the earth up deep from the bottom, putting in plenty of well rotted manure, thus ministering to the soil according to its needs. Then you set out the plants, and if weeds grow up you dig them out, after which you water

the spot intelligently. For this labor your reward comes to you in the shape of an abundance of bloom and foliage.

Just as truly is a lawn a bed of plants needing an equal amount of treatment. Grass is nothing but a collection of thousands of little plants crowded together, which must have nourishment, and from which the weeds must be taken. Likewise the soil must be given water as it is needed, and the earth must be made mellow for the roots, to a good depth. It makes no difference how much you pay for your grass seed, how good or bad it is, or what kind of fertilizers you use, if the bed is not properly prepared in the first place. Without this fundamental preparation grass plants will not grow, or if they do, will not thrive.



It is better not to rake the cuttings from a lawn, for even a wooden rake tears the little grass plants from their roots. Put a grass catcher, costing about \$1.75, on your mower.

RENOVATING AN OLD LAWN

If you have one of these misfit lawns, examine the soil, and if you

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find the loam shallow and the subsoil as hard as a rock, go at it and turn it over to a good depth, putting into it plenty of manure. Manure may bring weeds, but it is scarcely surpassed by any other fertilizers.

When you see a velvety lawn it is safe to say that a lazy man never had anything to do with it. Making a lawn is not the lazy man's forte. If your grass patch is all right with the exception of certain bare spots, treat these as you would the whole area were you to do over the whole lawn. If you don't wish to dig up these spots again to any depth, as you should, at least rake into it some fresh grass seed.

After every winter the lawn needs to be rolled well. This is done to pack the roots of the grass well into the earth so they will be able to draw up the moisture they require from the depths of the soil. If rolling is not done the grass is sure to burn out. The alternate thawing and freezing during the winter heaves the sod, breaks the roots and pushes them out of the loam. Rolling overcomes this trouble.

#### THE BEST SEED

It is all very well to say "get the best seed possible," but it is not so easy to predict just what that seed will produce. It is not the prettiest package that holds the best seed, neither can the price you pay keep down the number of weeds that generously pop up. Grass seed is a prize package at best, for in some of the combinations that are put out under the most alluring names you are apt to get a choice collection of floor sweepings and weeds, with scarcely a sprinkle of grass in the mixture. Therefore procure from a reliable dealer clear Red Top and mix with it a very little Kentucky Blue and White Clover (very little Clover). Sow this in the proportion of about three bushels to the acre. There is nothing better than this, but you will probably have to go to a horticultural supply store to get it. Grocery stores are always short of this class of goods.

In sowing seed try to spread it evenly. Throwing it around carelessly, trusting to chance to arrange it, will result in a patchy appearance. Don't try to sow grass seed on a windy day, for if you do you will find little of it where you wish it.

#### CUTTING AND RAKING

When cutting your grass you will find it a great saving to have some sort of a grass catcher on your lawnmower. One can be made easily, but very handy ones are sold at a small price. They prevent the wear and tear to a lawn that results from the



Roll your lawn in the spring and get after the weeds. When cutting them out, drop a little grass seed from a can sifter into the hole



Grass on terraces and under trees is the most difficult to keep luxuriant
There are special seed mixtures for such locations

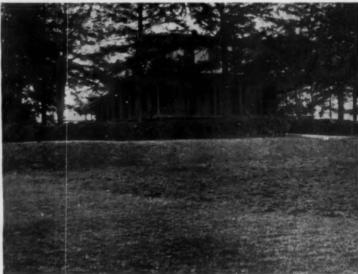
hard raking necessary when not used. If you prefer the rake it is best to use a wooden one, as iron teeth do great damage to a heavy sod.

In watering, either use a fine spray or lay the hose on the grass, with a board under the nozzle, and let the water flow forth slowly, giving it time to soak into the soil. A heavy stream washes out the loam, and does great injury to the lawn.

For a spring dressing to an old lawn use hardwood ashes and bone meal. Use the ashes early, and spread them on until the grass looks white.

If the ashes are strong in potash they may burn the grass, but the chances are that you will experience no damage from this cause. Few ashes found in the market run high in potash. Spread the bone meal some weeks later, liberally. These two will work wonders for your lawn and your grass will grow thicker and be better color from their use.

As a final word one cannot do better than to repeat: The only way to have the sort of a lawn you will be proud of is to make sure of a good depth of soil—and it is astonishing how soon after ploughing up a lawn you can have thick grass again. But, above all, chase the weeds night and day.



Stable manure is the best thing for a lawn but unsightly. Pulverized sheep manure, as used in the foreground, is practically invisible



When the garden-maker knows what shrubs and flowers to plant in shaded places no longer will there be dark, bare and unattractive spots to mar the landscape of the home.

## Flowers and Shrubs for Shaded Places

WHAT TO GROW ALONG THE NORTH WALL IN THE TREE-SHADED CORNER OR IN THOSE SUNLESS PLACES THAT EXIST ABOUT EVERY HOME

BY IDA D. BENNETT

Photographs by Thomas W. Sears and others

THE garden-maker or lover of plants and flowers has often to meet the problem of planting for shaded places, especially if the area before him is a limited one, and an abundance of sunshine cannot reach all its nooks and corners. The list of plants which require or prefer complete shade is not large, but there are many which do well in partial shade.

#### SHRUBS

Generally speaking, few shrubs or dwarf trees thrive as well in shaded positions as in open ones, yet almost any hardy plant suited to the locality in which it is grown will do well on the north side of a building or fence, or under trees where the air and sunshine from east or west is not entirely intercepted, or where the branches of the trees do not overhang it.

A high fence or wall often proves a decided advantage as it protects the wood of the shrub from the winter sun which often proves more injurious than the cold, in which connection it may be noted that the pressing of large shrubs or small trees about the base of evergreens or soft maples which have been trimmed high is of protective advantage to these trees.

One of the most valuable acquisitions to the list of hardy flowering shrubs appears in the new "Snowball" Hydrangea (H. arborescens sterelis), a variety differing markedly from the well known H. paniculata grandiflora in its greater freedom of

bloom, whiteness of the flower, quality of foliage and the fact that it is in bloom practically all summer. It requires more shade than the older form. Any good soil containing an appreciable amount of humus will grow it successfully if well enriched with barnyard manure, and kept in a moist, though not wet condition during the growing and blooming period. Less exacting as to soil and moisture, and succeeding well under the shade of trees, is the Snow Berry (Symphoricarpos racemosus) and the Indian Currant (S. vulgaris).

Some of the Snowballs (*Viburnum*) can be depended upon to give good results in shady places, and the Mahonia (especially *Berberis ilicifolia*) is an evergreen-leaved shrub most at home in shaded positions and a light dry soil. The leaves of this shrub are especially beautiful for table decoration.

The Golden Chain (Cytisus) is a charming small tree clothed in June with long racemes of golden blossoms, which finds its most congenial habitat in a cool and shady spot. It is an especially good tree for town gardens. Dogwood delights in the presence of tall trees, whose branches grow high above its head, as every one who has seen it in springtime well knows.

The Wintersweet (Calycanthus fragrans) does well in shaded places and bears its fragrant curious brownish yellow, purple-streaked flowers in June and at intervals thereafter. The varieties of St. John's Wort (Hypericum) do well in the shade, and some

of the more recumbent varieties, like *H. Moserianum*, are fine for planting in front of shrubs of more robust growth, as well as for carpeting barren spots. The *Hypericum* blooms continuously throughout the summer, and is one of the most desirable hardy plants we have. *H. aureum* has a stiffer, more compact growth and golden-yellow flowers in cymes in July; preferring a rocky, moist soil and a shady place, while *H. bircinum* does best in dry soil and bears its yellow flowers in clusters of two or three in August

The golden-leaved Syringa (*Philadelphus*) is a beautiful thing when contrasted with a background of dark green and does well in partial shade. Like most hardy shrubs the Syringa is not particular as to soil, almost any good garden soil growing it successfully.

Rhododendrons are excellent shrubs for shaded places. They require a deep, well drained soil which should contain a generous proportion of leaf mold and be quite free from lime. Where this latter is present in the soil the Rhododendrons should not be planted, or, if they are desired, the earth should be removed from the beds to a depth of two feet and suitable soil supplied. The Azalea, while requiring, practically, the same soil and conditions as the Rhododendron, is not so sensitive to the presence of lime in the soil.

#### FLOWERS

Where there is only shade in which to create a garden, one will, naturally, wish to lighten it up as much as possible and by a glow of color compensate for a lack of sunshine. For this purpose there is nothing better than white and yellow and the list of shade-loving plants affords some fine examples of each color.

The Golden Glow, which would seem to require the fullest amount of sunshine, will grow and bloom with little loss of vigor in a partially shaded position; and that glowing scarlet flower, the Salvia, does remarkably well on the north side of a wall or building.

For positions where a tall-growing plant seems called for, Stenanthium robustum may be recommended. This hardy peren-

nial is a recent introduction which sends up tall flower stems, four or five feet in height, crowned with panicles of fleecy-white flowers which are wonderfully effective. It requires a rather moist situation or should be given abundance of water during its season of growth and bloom.

Somewhat resembling it in the foamy-whiteness of its flowers, the Giant Knotweed (Polygonum) affords abundance of bloom during August and September. The plant is very tall-growing, sending up blooming stalks six and seven feet in height clothed with large leaves from which spring large, drooping clusters of foamy-white flowers. A rose-colored form of Polygonum is found in P. bistortum superbum, and a dwarfgrowing form, suitable for the edging of borders, in P. compactum. later variety is easily raised from seed and so may be had in quantity to use as an edging for beds of tallgrowing plants or to break up the formality of what might otherwise be too stiff a planting of erect growths.

A beautiful, tall-growing flower with blue Forget-me-not-like blossoms is found in the Dropmore variety of the Italian Borage (Anchusa Italica).

Unlike the Forget-me-not, however, the blooms of this lovely plant are an inch or an inch and a quarter in diameter, borne in large spikes on stems five and six feet high. This is an especially effective plant to row in connection with the *Stenanthium*.

The Monk's Hood (Aconitum) rejoices in partial shade and its flowers are much finer and deeper in hue if afforded a congenial location. There are some very good new forms of this old-time favorite, but the nearer the flowers approach to the clear, ultramarine blue, the more satisfactory they will prove. Its gem-like clearness of ultramarine is really a wonderful color, and one seldom met with in flowers. Some varieties of Delphinium possess it and a certain form of Browallia. The dwarf Lobelia speciosa has it, but most blue flowers show azure or sky-blue tints and many verge too closely on lavender to be fairly considered blue. The newest Aconitum is A. Wilsoni, an introduction from northern China; this is entirely distinct from all other species and has the extremely dignified height of six feet, with very large flowers of a light violet-blue. It comes into bloom early in September. In striking contrast to this vigorous sort is the dwarf variety, A. Fischeri, which grows but eighteen inches high, and shows very large pale blue flowers. A. Napellus bicolor is a blue and white form very dainty and pretty. The earliest-flowering forms come into bloom in June and continue well into July, while the late-flowering forms remain in bloom well into October, thus giving a continuance of bloom scarcely exceeded by any class of flowers. It may not be matter of general knowledge that the Aconitum will give a succession of flowers after the first florescence has passed, if the plants are not allowed to form seeds. This species is benefited by frequent lifting and division. The old root dies out and new plants form about the old crown, which should be taken up and reset. Another point to be taken into consideration in growing the Aconitum is its proneness to bend, when fully grown, under the stress of heavy rain especially if accompanied by wind. It is necessary, for this reason, to afford the plants some support. The wire Peony supports are excellent for the purpose, or one may manufacture a home-made support of

three or four neat stakes with wires run through them a few inches apart; these if painted green will not be at all conspicuous and will keep the plants in shape. The *Aconitum* is very difficult to lift, once it is down, as the stalks are brittle and inclined to break at the crown.

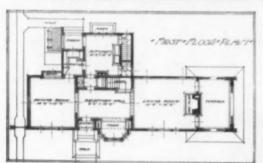
The varieties of the Bell Flower, (Campanula) are satisfactory plants for semi-shady places and some of the tall-growing sorts are highly ornamental. They have the advantage of being very easily grown and some of the varieties may be depended upon to come up year after year, self-sown, C. Pyramidalis being especially reliable in this respect and making a growth of five or six feet. It bears spikes of saucer-shaped blue or white flowers excellent for cutting, the white being especially attractive. They are the handsomest in foliage of all the Bell Flowers, their leaves being very glossy and shaped much like that of the violet. In early spring before the plants begin to run up, the low cluster of foliage is handsome. The Campanula is a

A mass of gorgeous blossomed Rhododendrons now grows where once there was a grassless plot under the thickfoliaged tree

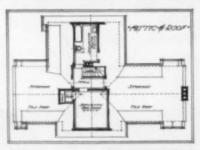
(Continued on page xxiii)



Rough-cast gray plaster walls, brick chimney and base, with lighter plaster in the half-timber gable over the entrance, and flat tile roof, form the rather unusual combination of materials used. In architectural style, the building has a strong suggestion of modern German work

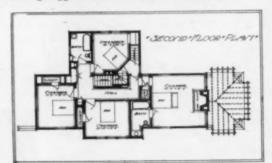


A long, narrow house of this type of plan is sure to be light, cheery and well ventilated. Its single drawback is the increased cost over a more nearly square plan



There is one servant's room and a bath in the third floor, with abundant storage space





Four good bedrooms and two baths, with numerous closets, are included in the second story The closet marked "linen" seems better adapted to clothes space for the largest bedroom



With windows on the long sides and French windows opening upon the paved and latticed porch, the living-room suggests unusual cheer

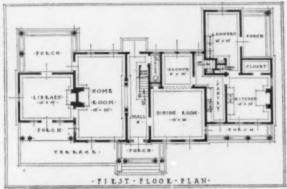


The large reception hall, with its built-in seats and refreshing color scheme of white and gray, has an air of spaciousness and hospitality

A HOUSE AT GROSSE POINT, MICHIGAN



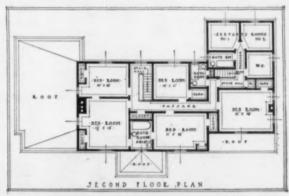
The front of the house was made lighter inside by removing the long front veranda, shown in the picture below, using the old columns and moldings of pure Greek contour in a simple entrance porch at the front door



The living-room and dining-room were each made by tearing out partitions between two rooms. At the right the whole service wing is new

# A REMODELED FARM HOUSE NEAR NEW YORK

Alfred Busselle, Architect



It will be noticed that in the four corners of the old structure where the low roof was maintained the lower height has been given to closets

'HE old farmhouse, with its splendid setting of lawn, and grand old trees, with an. orchard behind, was substantial but uninhabitable. There was no plumbing, low ceiling, few and stuffy bedrooms, yet the available structure was worth \$5,000 or \$6,000. Two useless parlors became an airy livingroom, the dining-room was expanded in a like manner; on the south end the bedrooms and closets became a library, with a porch facing the orchard.

The second floor presented greater difficulties.



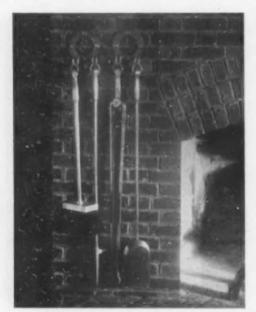
At the near corner an old bedroom and its closets were turned into a library, with a porch on either side

To remove the roof and raise all the walls meant oo great cost; but by lifting the center part, front and rear, like tent-flaps, the second story yielded four comfortable bedrooms and two baths. A modern wing gave another main bedroom and the servants' quarters.

The value of a well established setting, often with mature shrubbery, usually with old trees, suggests possibilities in remodeling many an old house where nature has done her part whether man has kept up his end of it, architecturally, or not.

#### The Fireplace Tools

MOST people keep their fireplace tools in a brass rack on the end of the hearth. They are then conveniently ready for use and ordinarily not in the



A distinctive set of fire tools and a convenient way to keep them

way. Mr. Ernest E. Calkins, however, in one of the many fireplaces in "Upwey." his country home, which was described in the February issue, has designed not only the brass fire tools but another ingenious way of keeping them near at hand. Two heavy brass rings are nailed directly into the brickwork, the diameter of the rings



A plant shelf that is an improvement upon all widths of window-sill

being such as to bring the nails on the joints, and brass hooks for the four tools are welded into these rings. R. F.

#### Hotbed Protection

IT may be of interest to readers of House & Garden to know that I have discovered that the laying of newspapers over the earth in hotbeds for the first few days after planting seeds therein materially aids their germination by keeping them from drying out before they have time to sprout. H. L. D.

#### Natural Bulb Planting

WE have a delightful country place, around an old Colonial farm-house, and while there is nothing pretentious about it I doubt if there is a lovelier or more attractive place in the country. A few years ago I read, in a foreign newspaper, a paragraph that interested me very much. It suggested that planting bulbs here and there in the woods, on the edge of a copse and elsewhere about one's country home, would lead these bulb plants to naturalize in time. The writer The writer suggested that one stand and toss from him a handful of bulbs, at a time in various directions, planting them where they fell, thus securing a natural arrangement, most delightful in effect when the bulbs came into blossom. I tried it and the suggestion worked like a charm. Now our place is more beautiful than ever in the springtime. Bulbs located in this way seem to have sprung up according to nature's own planting.

#### The Plant Shelf Problem

ONE sees many arrangements of potted plants to make attractive the sunny windows of our living rooms. Usually, however, the window-sill itself is not wide enough to support a medium size pot, and even if we put in a wider shelf the usual effect is rather untidy.

The illustration shows one of the

The illustration shows one of the most attractive solutions of the problem we have seen. The shelf is portable, and the well designed railing around the top of the shelf is one of its most attractive features, hiding, as it does, the unattractive pots, page or boxes.

attractive pots, pans or boxes.

The little trellis that runs up at the corner is another unusual feature of this ingenious bay window arrangement. H. H.

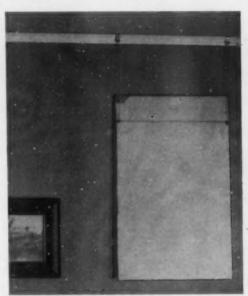
#### The Insect-proof House

A HOUSE with windows carefully screened still had considerable difficulty from mosquitoes until it was discovered that they came down the chimneys and entered through the open fireplaces. Nets were made for the fireplaces and the difficulty ceased

Ingenious

#### Hanging Pictures with Vertical Wires

I READ with much interest the article by Mr. Schell in the February House & Garden on "The Art of Picture Hanging." He mentions therein the advisability of hanging large pictures by means of two vertical wires instead of by a single wire running from the two screw-eyes up over one supporting picture-hook. There is no doubt that the appearance of large pictures, or in fact



The simple way to hang a picture from two hooks with one piece of wire

any pictures, hung with two vertical wires is far more pleasing. Some time ago I had occasion to hang a number of pictures in this way and naturally found it a tiresome matter to arrange the two wires so that they were precisely the same length. After I had covered all my walls with pictures hung in this way it occurred to me that the simple and natural way to secure the same effect would have been to run one wire from a picture-hook down and through its corresponding screw-eye, across back of the picture through the other screw-eye and up to another picture-hook. In this way the level of the picture could be adjusted at will after the height had been established. I. S.

#### Sash Support for Hotbed

ONE of the best supports for slightly raising the sash of the hotbed is the clothes-pin. The forked part holds it firmly and prevents jarring or any-

## Devices

thing else from loosening the support, causing the sash to slam down, often breaking panes of glass. K. G. C.

#### A Convenient Medicine Closet

THERE are, no doubt, many of your readers that have made use in building their homes of the fairly well known scheme of building a medicine closet within the space occupied by an ordinary partition. For those who are not familiar with this scheme of utilizing waste room—hollow space between a pair of studs in the wall—and also be-



A medicine closet in a partition that is roomy enough to hold large bottles

cause our own medicine closet in the bathroom has one or two unusual advantages, a photograph of it may be of interest.

It will be seen that a greater depth has been secured by building out the trim that surrounds the door opening an inch and a half beyond the face of the plaster. An additional molding around this trim will cover the joint and you will have space enough for the wider bottles—an advantage that the ordinary partition medicine closet lacks.

d

The second advantage of this particular device is the mirror that is set in the door frame.

M. H. M.

#### Flowers Next to Hedges

I HAVE found that my English gardener sinks planks into the earth as an underground partition between hedges and shrubbery and any perennials that

may be planted in front of them. In this way the roots of the hedge-plants and shrubs will not encroach upon those of the perennials, and take from the soil around them all the nourishment they should have, as they would do if some such measure of protection were not taken.

H. W. L.

#### Growing Cornflowers

FOUR years ago when we were abroad we were so impressed with the beauty of the effect of the cornflowers growing in the German fields that early the following spring we made the experiment of growing a quantity of the seed in our pasture, along with timothy seed. Here and there we also sprinkled some poppy seed, and now both cornflowers and poppies seem to have become naturalized, and our fields are wonderfully beautiful, pleasant reminders of those we saw in Europe. Perhaps other readers of House & Garden would like to know of this.

#### Lima Bean Trellis

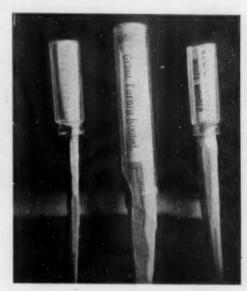
FOR many years I planted my lima beans so they would climb up poles set in rows four feet apart, and the poles three feet apart. As we have rather a small garden I devised the following method to increase the output. I left the poles and planted the same number of plants to climb up them, but in addition I ran a string from pole to pole, about the height the plants usually grew up to, and then ran other strings from it to the ground, for additional plants to run up. Clothes-pins are so cheap that I found it better to use them than to make stakes to fasten these trellis strings to, to drive into the ground. Then between each pole in the rows set the plants about five inches or so apart, so they will run up the strings. You will be surprised at what an additional crop you will secure by this simple method which does not take much trouble to install. The turned head of the clothes pins make a capital arrangement to fasten the string to.

#### Permanent Labels

In endeavoring to secure a permanent label which would be at the same time cheap and easily prepared, the following plan was hit upon. First secure a sufficient number of small bottles with corks. The small tubes that prepared photographic developers come in will do, or the one or two-drachm homeopathic vials may be secured at your druggist's. Wire and some small stakes with one end trimmed down to fit the necks of the bottles complete the equipment. Copper binding wire is best as it is very pliable and does not corrode when exposed to the weather.

For the seed bed, clip from the end of the seed package the strip bearing the

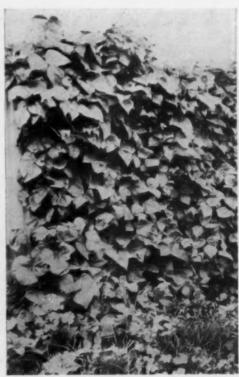
name of the variety planted, slip this into the bottle, cork tightly and wire to a stake at the end of the row. Or if desired the bottle may be slipped over the end of the stake as shown in the accompanying photograph.



Save small vials to protect your seed labels from the weather

For trees, shrubs, etc., the bottle enclosing a label written with indelible ink may be wired to a branch, twisting the wire tightly around the neck of the bottle and leaving a long loop for the branch. Labels attached in this way may be left in place for years with no danger of injury to the branch to which it is attached.

R. E. T.



Increase your yield of lima beans by training them on strings between the poles



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 envelope

#### A Comprehensive Color Scheme

I HAVE been much interested in this department, and wish now to ask a few suggestions for myself. We are building a house arranged in the following way: Parlor, northeastern exposure; living-room across central hallway, southeastern exposure; dining-room adjoining living-room, southwestern exposure; four bedrooms upstairs in the four corners of the house. The parlor to be finished in white; our furniture in this room is the Louis XIV shape, tapestry covering, with mahogany frames. The hall in oak, and the living-room and dining-room in oak with oak furniture.

We would like to have our walls all tinted at first, and beg to ask if you will suggest the colors which will be most desirable for the various rooms named. I may add that the fireplace in the living-room is in mottled brown brick. Would you be kind enough to furnish me with samples of the colors you may suggest?

I should also like to ask if any difficulty is experienced in making paper adhere to a wall which has been previously tinted. Also, would it be too much to ask further for suggestions of color and materials for door hangings, curtains, etc.? I send a stamped envelope for reply.

Before papering a wall that has been previously tinted it is necessary to have the surface thoroughly cleansed. water color tint has been used this is not a difficult task. Would you consider using paper in one or two of your rooms? This would be decidedly more in keeping with the character of your furnishings, for the parlor at least, as I note the furni-ture is of French design. Therefore, for this room we send a sample of an apricotcolored paper showing a formal design of medallions and baskets of flowers. With this, white enamel for your woodwork will look well. The ceiling should show the same tone of ivory as the woodwork. In selecting the drapery material the color would be largely influenced by the shades shown in your tapestry furniture covering. Some one of the predominating colors should be repeated in the door curtains and in the over-draperies at the windows. The material for the latter might be of brocade or damask. These curtains should have a suggested valance and be finished with a gimp or moss fringe.

For the hall we are sending a dull blue tint and for the living-room a soft shade of tan, to be used as a tint. The same ceiling color as advised for the parlor could extend throughout. For the upper third of the wall in the dining-room we again advise a paper. The one I have selected shows a soft mingling of dull



Where the opening of the door between kitchen and dining-room discloses too much of the former, a screen is of great value

blue, olive green, wood brown, and gray, in tapestry foliage design. The lower wall could be tinted the shade of dull blue shown in the sample attached. For curtains next the glass of the window we recommend net like the sample sent; this is 40 inches in width, \$1.15 a yard. It makes very attractive diaphanous curtains. For the over-draperies the thin blue crinkled silk is suggested. This silk is 30 inches wide, 90 cents a yard. The curtains should be finished with a narrow moss fringe in the same color and extend to the sill line. Door curtains of dull blue cotton velvet, 50 inches wide, \$2.55 a yard, would complete the scheme. The linen taffeta, the background of which matches the tan tint suggested for the walls, is advised for the over-draperies in the living-room. The design on this material you will note repeats the various colorings shown in the tapestry paper suggested for the dining-room adjoining.

Your floors throughout should be given a light brown stain and finished with three coats of the best floor varnish, the last coat to be lightly rubbed with pumice and oil. This will reduce the high polish and give an effect closely resembling wax, though it has not the drawbacks of the latter, as it does not spot with water, does not require frequent renewal and polishing, and can be wiped up with a

damp cloth.

For the bedroom of northern exposure a soft yellow tint is sent. I would suggest with this a paper ribbon border in a slightly different tone of yellow from the side walls, interspersed with occasional clusters of lilies of the valley. This border should outline each corner and be set below the picture rail and above the baseboard and will give a very decorative and attractive effect. White muslin draperies used next the glass, with over-draperies of white dimity bordered with a cut-out appliqué of yellow ribbon design are advised.

For the bedroom of southern exposure a light shade of pastel green is sent for the walls; with this you might use the same white muslin curtains at the windows and over-draperies of floral cretonne showing pink roses and green leaves on a white ground.

For the two remaining bedrooms delicate old rose is chosen for the walls of one, and pale gray with an underlying tone of pink is recommended for the other, with appropriate cretonne, linen taffeta, chintz, or art-ticking draperies over white muslin next the glass.

#### Inexpensive Rugs

THE complaint of a correspondent regarding the designs and colors of the inexpensive rugs found in the shops to-day and put out upon what she terms "a helpless and unoffending public" appears to us in a measure justified, and in publishing the following excerpt we feel



There is no form of floor covering better suited to the purely Colonial type of room and furniture than rag rugs

sure it will find an echo in the hearts of many women who have endeavored to find a good floor covering for little money.

"It seems to me in this day of appreciation of color and general harmony in house decoration that the manufacturers of the inexpensive rug have been unwise-not to say unkind-in the fearful combination of color, design and textile they offer us to put upon the floors of our simple homes. The term simple can certainly in no wise apply to the rugs themselves. Can anyone tell me the reason for introducing in the rag rug of our grandmothers an Indian Navajo design, or why in the same simple, unpretending, but artistic material we sometimes find ships at sea, or cottages set among wooly trees as decorative borders? While we may have escaped to some extent from the cabbage rose of lurid colors, and the faithful house dog on the rug of the Velvet and Brussels carpet put out thirty or forty years ago, it is a question to my mind whether we are really better off. I enclose a self-addressed envelope and ask if House and Garden will recommend to me some manufacturers who do make floor coverings which are inexpensive and also inoffensive."

We are pleased to send the troubled lady such addresses as we feel will be of service to her. There are fortunately

some excellent rugs which are low in price, but we have realized that these must be looked for. The least expensive rugs of this kind are of Chinese matting and show excellent colors and attractive designs. The Kobe rug also shows a good weave and should be durable. These come in very pleasing neutral tones and unobtrusive borders. In the size 9 x 12 ft. the price is \$10. Somewhat more expensive are the Bungalow rugs, which are made of wool and reversible, showing plain effects in two or three tones of the same color. A particularly attractive range of colors and shades is offered in Again the Body Brussels rug is made in some small and pleasing all-over designs of good color.

Of the conditions which produce and put on the market the impossible effects in floor coverings to which the writer refers, the manufacturer will say that these products are put out to meet the public's demand, and the public, of which our correspondent is but one, expresses itself variously, some objecting strenuously-as in this case-but the greater part accepting the inevitable and trying to live down the obtrusive floor coverings as best they may; while others will contend that only in such effects can they secure the "cozy appearance they demand for their homes. Nevertheless, we are on the right road to better things; slowly but most surely they are being demanded and supplied.

#### Screens and their Uses

WILL HOUSE & GARDEN be kind enough to give me some specific information in regard to screens? I have domestic problems which I feel can be successfully solved by the use of screens—if I can find something suitable.

First: The door leading into the kitchen opens directly from my dining-room into this department, allowing an unobstructed view from the table, which is not desirable. The rooms under consideration are in an apartment house. The dining-room has dark woodwork, oak, and above the wainscot the walls

are yellow. The furniture is also of oak. Could I use a screen near the door? In the same apartment a bedroom opens directly at the end of the hall, and this hall depends for its lighting on the windows of this room. except when artificially lighted. Would a screen placed in the doorway be awkward or objectionable? The room has paper in two tones of gray, with draperies, etc., of gayly figured



A floor covering in one or two tones would have helped greatly in lessening the distracting character of this room

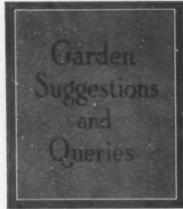
The screen for your dining-room would certainly successfully solve the difficulty of the door leading into the kitchen. The three-fold screen can easily be placed in such a way as entirely to cut off the view into the kitchen and yet leave a passage-There are screens made of wood (light in weight) which are stained to dark oak colors. Some of these show a stencil or burnt-in decoration in color of conventional design for the upper panels. Such a screen for your room wrought out in rich green and yellow on the dark wood would be effective. The screen should stand almost if not quite as high as the wainscot. A screen of this kind may be purchased for \$10 or \$12. If something less expensive is desired there are threefold screens in which the panels are covered with burlap in good shades, the frames of darkly stained oak. The upper section of the screen shows an effect of paneling. Such a screen costs from \$4.50 to \$6.

For your bedroom door we would not advise a screen as it would be found awkward for entrance and exit. Curtains would better serve your purpose. You fail to mention the color of the hall walls, but we would recommend that you select a fabric of sufficient weight to hang well,

(Continued on page xxv)



Reproductions of Oriental rug patterns that are good both in color and design are now made by American manufacturers







The Editor will be glad to answer in these columns subscriber's queries of general interest pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired, please enclose a self-addressed stamped envelope.

#### April

THIS is the traditional month of showers, when thirsty Earth drinks her lasting fill against the time of later droughts, much as the camel lays up his seven days' supply of water against the desert journey. If we plant carefully and generously now, June will bring many an oasis into our garden's present barreness, and pledge fruitfulness to Autumn. Everyone who has even only a tiny patch of ground should prepare now to plant every square foot of it, that it may hereafter lend beauty to house and garden.

#### April's Reminder

Look to the matter of this month's spraying, and do not neglect any part of your garden.

You will need to divide roots of your perennials in the hardy border this month.



April showers will be starting the landscape into such loveliness as this

This is a good time to build a bird-house, for birds are friends to your garden oftener than enemies. But for them many of your plants would be killed by the insects the birds destroy.

This is the month for planting deciduous trees, shrubs and vines, fruit and nut trees (especially dwarf varieties) and small-fruit bushes.

Fertilize asparagus bed and rhubarb patch with nitrate of soda.

Prune grape-vines and fruit trees, but not small-fruit bushes.

Examine your shade trees and if you find any cavities of decay in their trunks clean these out and fill up with cement.

Set out Standard Box and Box-edging early. Where Box-edging has been set out the year before, it can be pruned somewhat before growth begins in April. All varieties of hedges may be set out this month.

You can plant all evergreens this month.

Remove winter mulching from your strawberry bed.

Tender roses may be pruned late in the month; also spray them with whaleoil soap.

Have your coldframes ready for transferring to them tender vegetables and flowers from the hotbed for hardening by the middle of the month.

If you sow seeds of perennial flower now in coldframes they will bloom their first year.

Plough or spade the garden as soon as the surplus moisture from departing frosts is out of the ground.



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Love-in-a-mist is one of the fairest border flowers

Spray seedling hollyhocks with Bordeaux mixture.

Sow Sweet Peas as soon as the ground can be worked, and also Love-in-a-Mist (Nigella Damascena) for the garden border.

Start your Cannas in the hotbed.

Prepare labels for the seeds you will be planting.

Look over your garden tools and see that they are all in good condition, and sharpen those which need it.

#### Maidenhair as a House Plant

THE graceful feathery fronds of the Maidenhair ferns always excite interest. The most beautiful one, Adiantum Farleyense, often seen in the florists' shops, cannot be grown in the window garden, but there is a good substitute for it in the so-called "hardy Farleyense" (Adiantum Capillus-Veneris var. imbricatum). This will withstand the trying conditions of the house just as well as will the Boston fern. I know plants



The hardy Farleyense Maidenhair is a delicate house-fern worth cultivating

which have lived all winter in a New York City residence, a severe test for any plant, fern or not.

If the soil in which Maidenhair ferns are growing ever becomes dry, the fronds immediately wither and nothing can be done to recuperate them. Should such an accident happen, remove the injured fronds and keep the plant in as good a condition as possible until the following spring, when new growth will be made.

#### Window Light

WE have just moved into a three-story house and as there are large bay windows on the southern and western sides of the house we are anxious to try our luck at window-gardening. Which of the windows should we choose? We wish to confine our house-plants to one room.

The southern window is an ideal position, although you should anticipate the glare of even winter's mid-day suns by planning for adjustable shades. Although an abundance of light is necessary to success with most house-plants, the midday sun may prove too strong for "resting" plants. Palms and ferns will require such protection when the sun is high in the heavens.

#### The English Daisy

WILL you please recommend some bedding plant for April and May that will be profuse in flower and prove effective in two border beds in which, later, I can set out something else? We usually have an early, mild spring. When and how should seed be sown?

The English Daisy (Bellis perennis), a hardy perennial, should fill your requirements well. These profusely blooming little plants send forth thousands of pink and white rosettes, and with the Pansy they share the honors of being about the best bedding plants from the latter part of April through May. After that you can lift them and naturalize them else-

where. They thrive best in a rich, moist, partly shaded soil. Sow the seed early in the hotbed, or indoors, and transplant. The Longfellow is a particularly beautiful rose-colored variety, and the Snowball a white one. When sown in open ground May is the proper planting time. If left to themselves your English Daisies will need more or less thinning out from season to season, as they spread perseveringly when once they have found a growing spot that they take a fancy to.

#### Ratio of Fertilizer Elements

WILL you kindly tell me something about the proportion of elements necessary in high grade fertilizers?

See Mr. Crocker's article on Garden Fertilizers in House & GARDEN for February, 1910, page xii. High grade fertilizers have of nitrogen from 10 to 40 per cent, of potash from 14 to 50 per cent, and about 20 per cent of phosphoric acid. A good fertilizer, lasting in effect about the following ratio: nitrogen 2; potash 5; phosphoric acid 4, modified as the condition of the soil requires it. It bears repeating to urge the gardener to study the individual problem before him. If he is not sure of his soil he cannot do better than to send a sample of it to one of the Agricultural Experiment Stations in his state. Expert advice will then be given him, and he will have no need of guessing himself out of his difficulty.

#### The Child's Garden

DON'T forget to teach your children the delights of gardening by planning for them and showing them how to plant little gardens for themselves full of interesting things, not the plants you alone fancy but plants that will entertain and interest them. At first the plot should not be so large that the little fingers will tire in keeping it in order, for a wee gardener should have a wee garden that is not beyond his strength.



Nothing can be more effective for a wall border than a bed of Anemones

#### Anemones for Wall Borders

A LONG, flat, gray stone wall divides part of our garden from a corner of the tennis court, and I would like your suggestions as to what I could plant as a border along it that would be hardy and come up again. Something effective that would blossom into the fall, for we stay late in the country.

You could not have a better plant than the hardy perennial Anemone (A. Japonica), especially the beautiful, semidouble Queen Charlotte variety which has the pink of a La France Rose. This, with the beautiful green of its stem and leaves, will produce an exquisite color harmony against the gray wall. It blossoms from August through September. Mixed with the A. Japonica, var. alba, the pure white of the latter lends desirable contrast. A. sylvestris, thoroughly hardy and of tall growth, flowers from spring to July. A. coronaria, var. St. Brigid, is the best variety for April bloom.



Everyone knows and loves the English Daisy



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NOWHERE is the struggle for existence keener and fiercer than in the vegetable kingdom. Thousands of seedlings sprout for every one that reaches maturity, and everywhere along the way from root to branch and fruit, there is the same lavish extravagance in Nature to keep the balance up.

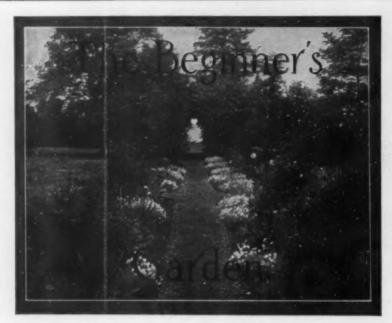
This is the chief reason for pruning, broadly speaking; the principle of it is always to relieve the plant by reducing this struggle. For of course when its best efforts are constantly strained to the utmost in just keeping alive, it cannot produce flowers or fruit in abundance nor of very high quality. And when there are too many branches, or many that are old and weak, it amounts practically to the same thing. None can be as strong and leafy as they None can should when all are insufficiently nourished; so it is virtually a struggle for life between them constantly. A little pruning every year is like the stitch in time-and the destruction of an ambitious shoot as soon as it starts

is far easier on the tree and the gardener too, than the laborious task of sawing through a good sized limb after it has had time to mature.

In the first place there are two things about form to remember in pruning: one, applying to trees, especially, is that leading branches must never be allowed to spring from the same point on the trunkor from opposite the same point, is perhaps clearer—while the other, applicable to every sort of plant-is that, generally speaking, the outer shoots or branches should be left and the inner ones cut

In the first instance the tree is weakened structurally and will split more readily under stress of wind or ice-or fruit-when its branches diverge at just the same level, forming a sharp crotch or Y; in the second, a plant becomes choked and top heavy if inner growth is constantly encouraged, and the branches suffer injury from rubbing against each other. So much for form.

Next in importance, to be always remembered and considered when there is any clipping to be done, is the fact that every tree or shrub or vine has its own little personal peculiarity about flowers and the manner of producing them-and produces them usually only on wood of a certain age-sometimes one year, sometimes two, and sometimes more yet. So it is always necessary to know the peculiarity of any plant in question in this respect before venturing to lop off a branch, else an entire season's product may be literally nipped in the bud



The Why and How of Pruning

The purpose of this page is to set forth in the most direct, non-technical form the fundamental principles of amateur gardening. Unlike the great mass of garden literature, it presupposes no knowledge of the subject, aiming to satisfy those who now for the first time want to know how to make things grow. The Editor will welcome any questions from beginners and will print in these columns the experience of contributors when they seem to bave a wide appeal.

> Of fruit trees the apple and pear bear on "spurs" of old wood that may be anywhere along the branches, but peaches are always borne on wood of the previous season's growth. Trimming off the annual shoots will therefore sacrifice the fruit of the latter but not of the former; while "heading in"-that is, removing the ends of the branches with their growing terminal buds, being a process that encourages the growth of lateral buds that are waiting for just this to happeninto shoots or young branches, of course increases the amount of new, therefore of fruit producing, wood. See the Beginner's Garden for March, where the matter is more elaborately explained.

Of flowering shrubs, the lilac and the hydrangea afford much the same contrast as the apple and peach among fruit trees. Hydrangeas bloom on wood of the season's growth, lilac on wood of the previous season. The former may therefore be pruned very early in the spring without danger of destroying the blossoms, but the latter should only be gone over with the knife immediately after flower-This gives them the chance to grow branches for the next season and to stow them with flower buds before frost interferes.

It is of course out of the question in this limited space to name a very complete list of trees and shrubs, with their peculiarities in regard to bloom, but some of the most commonly planted are included below-and questions will be most willingly answered by mail if the one plant that puzzles any reader is omitted.

#### TREE FRUITS

Apple: Fruit borne on old spurs; prune in winter or spring

Pear: Fruit borne on old spurs; prune sparingly in spring.

Plum: Fruit mostly on spurs but in some varieties on both spurs and annual growth; prune after harvest.

Cherry: Similar to plum; prune in spring or after harvest.

Peach: Fruit borne near base of previous year's shoots; prune after harvest.

#### SMALL FRUITS

Blackberry: Fruit borne on canes of previous season's growth; cut old canes out after fruiting; cut young canes back as soon as 2 ft. high; cut laterals on these sparingly at tips in spring, or not at all.

Raspberry: Same as blackberry; spring pruning is only to thin the fruit; a cutting out should be done the previous season.

Currant: Fruit borne on both old and young wood; the best on base of 1-year shoots springing from 1-year spurs; have no wood over three years old.

Grapes: Borne on wood of present season which rises from wood of previous season; fall or winter pruning is best.

#### FLOWERING SHRUBS

Roses: Flowers borne on new wood; prune out old wood and weak shoots after flowering, or cut back before sap starts in spring from 1 to 4 of bush.

Forsythia: Flowers borne on old wood; prune immediately after flowering. Hibiscus (Rose of Sharon): On the season's shoot; prune in fall or early spring.

Hydrangea: Borne on the season's shoots;

prune in fall or early spring.
Lonicera (Honeysuckle): Usually on season's shoots; safest to prune immediately after flowering however as some bloom very early.

Philadelphus (Syringa): Borne on old wood; prune immediately after flowering.

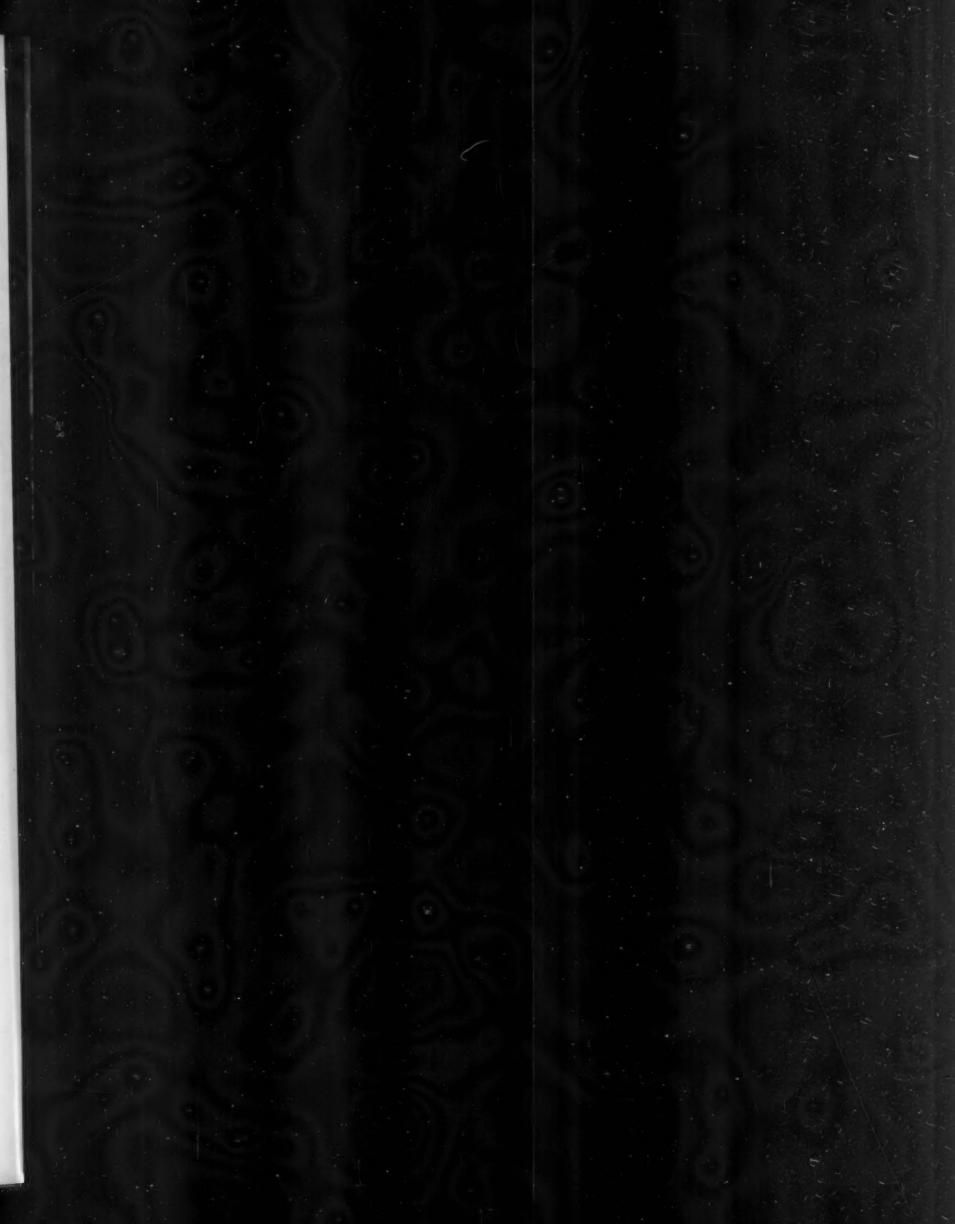
Spiraea: On old wood; prune sparingly after flowering.

Syringa (Lilac); On last year's wood; prune immediately after flowering. Viburnum: On old wood; prune after

flowering. Diervilla: On old wood; prune after

flowering.

(Continued on page xxiv)







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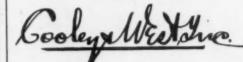
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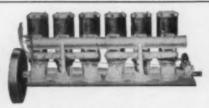
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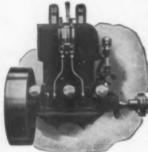


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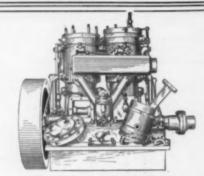


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BY T. E. WHITTLESEY

AN authority who has followed the history of motor boating from the infancy of the sport is responsible for the statement that nine times o of ten when the motor goes on strike a inspection will locate the difficulty the ignition. Though the number times when the operator has to drop wheel and "look her over" is become decidedly less with the steady improment in gasoline motor construction it is an open question whether the rat of ignition troubles to those in oth parts of the motor has changed apprec ably from that given above.

When one takes into consideration the fact that the ordinary high-tensi system of ignition depends upon difference in the spark gap of sor thirty to fifty thousand volts, it will readily understood that the wires carr ing the current must be so thorough insulated as to be, as far as possib absolutely free from any chance

short-circuiting.

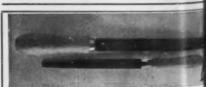
The very best insulated wire th is obtainable is none too good for use the motor boat ignition system. Ev though this does cost twenty cents foot, what does the cost of five or feet of good wire amount to wh weighed in the balance with the sati faction arising from the assurance th your boat isn't going to balk for y every time you take it out?

If your boat is of the open typ

with its motor unprotected from spri

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(vi)

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ou will do well to take the addional precaution of giving all the

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ATLANTIC SPECIAL NO TORS

When these points become rough and letted from the continued heat of the lectric arc between them, take off the herator and smooth the platinum surces with a piece of fine emery cloth. The way of equalizing the wear on the ropoints is to shift the wires considered the street of the street of the ropoints is to shift the wires considered the street of the ropoints is to shift the wires considered the street of the street o Itted from the continued heat of the ionally so that the direction of the curent through the coil is reversed.

Provide yourself with an ammeterne of the watch-form pocket types eading to thirty amperes will serve, and test your dry cells now and then. New cells should show from twenty to hirty amperes; when they fall to five rsix, take them out of the battery box nd make them serve out their time furnishing current for the electric system in the house, which requires ar less constant drain upon their trength.

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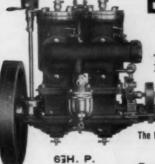
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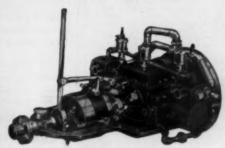
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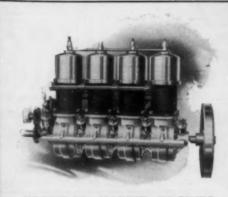
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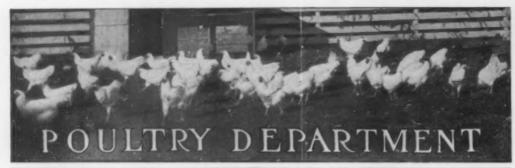
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ns and egg production.

#### Some Points on Incubators

BY M. ROBERTS CONOVER

AN incubator is a box-like machine properly ventilated, heated by a tank of hot water or air, and is so constructed as to insure the egg chamber against external atmospheric changes, thus maintaining a uniform temperature during the period of incubation. This period, for chickens, is twenty-one days.

Reliable machines have three perfectly tight walls with air spaces between, although some manufacturers guarantee machines with only one such air space, which is packed with mineral wool.

The egg trays must be side by side, never one above the other, and the space below, used as a nursery, should be high enough to permit the newly hatched birds to stand erect. There must also be space



The typical incubator lamp has a metal fount with a durable handle and a metal chimney containing a mica-covered aperture opposite the flame

enough before and behind the trays to allow the chicks access to the nursery from the travs above.

In selecting a hot-water incubator it is unwise to economize upon the tank. Brass or copper will last a lifetime; the galvanized iron ones used in the cheaper incubators corrode in one season. The tank should be at least four inches above the egg trays.

The glass panels, admitting light through the top of the machine to the egg chamber, should be double, and there should be two sets of glass doors in the front of the incubator, one behind the other, with the egg trays so low that the operator may take note of the thermometer upon them.

Varnish and ornate woodwork are non-essentials of a first-class machine, but it is vital that its parts be well joined, that its doors fit snugly and easily and that the egg trays slide smoothly. The legs should be strong and well braced. This feature is overlooked by some manufacturers who turn out machines other-

wise satisfactory.

The typical incubator lamp has a metal fount with a durable handle and a metal chimney with a mica-covered aperture in the side, opposite the flame. It is so placed that it readily heats the air or water in a projection of the tank. This hot air or water passes through the tank in the top of the incubator and as it cools falls through a conduit on the opposite side and is returned beneath the egg chamber to be reheated.

A wick long enough to last through the hatch is an important forethought and it must exactly fit the burner. For a twohundred egg incubator the lamp fount should hold one quart of oil and the wick should be one inch wide. Morning and evening the lamp must be replenished with the best grade of oil, the wick trimmed evenly and soot removed from the chimney with a cloth. A lamp nearly empty is unsafe, and poor oil and a dirty chimney induce smoke, which is disastrous to the hatch.

A dry, light, ventilated cellar is the best location for an incubator. The ventilators of incubators should not admit cooler air directly to the egg chamber but in such a manner that it is warmed as it enters.

The regulator of an incubator is a device employing the principle of heat expansion and must control the temperature of the eggs in their trays. One incubator which hatched every fertile egg obtained this result by a simple regulator consisting of a float in the water tank attached by wire to levers above. Any expansion or contraction of the liquid moved the levers, which, being connected with a sleeve about the wick of the lamp, raised or lowered the flame.

Some machines have a thermostatic bar of expansive material placed between the egg trays and affecting a valve or cap over the chimney by means of levers. Metal discs are also used instead of the thermostatic bar, and alcohol and mercury are employed with excellent results.

Whatever device is used, the expansion and contraction of the testing substance must be uniform and the reponse at the source of heat supply instantaneous. To insure this the operator should run his machine two days before trusting it with the eggs.

After the eggs have been in the machine twelve hours, they must be turned and twice daily thereafter until the eighteenth day. All large incubators have their own devices for rapid turning, but with the small ones this can be done as well by hand. It is advisable to remove the trays from the incubator for about five minutes night and morning keeping the machine closed meanwhile.

After five days of incubation the eggs should be tested. If the egg is held horizontally before the tester, the heart and vascular system of the embryo is revealed if the egg is fertile. Infertile (Continued on page xxxiv)

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BY FRANK T. CARLTON

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THERE are two kinds of Collies—the "rough," and the "smooth." Both have the same points of conformation, and differ only in coat. Yes, there is another point of difference—the" rough" or long-haired variety is more popular, therefore more familiar in the house and on the show bench. The following general observations, therefore, will have reference to this variety.

The Collie by nature and inclination is a pastoral dog. In the cradle of his race Scotland—and in many other countries whither he has migrated, he is the shepherd's right hand. His wonderful beauty, high order of intelligence and general adaptability, have taken him largely out of the pastoral sphere, but long years of estrangement have little more than dulled in collies as a breed the instinct that prompts them to guard, marshal, or round-up the flocks of the field. may prove this by your own Colliepracticing, of course, on your own sheep and cattle. He may be bred in the purple, and have led the citiest of city lives previously, but show him a flock of sheep and you will see that he feels he ought to be busy somehow. With the least bit of advice, and guidance, he will soon acquire the trick of corraling the lot for you in half the time that another dog would be thinking about it.

The history of the breed is as old, nearly, as Caledonia's hills, but it will suffice us to know that we have the Collie as useful to-day (when demanded) as ever he was, and infinitely more beautiful than his best-looking ancestor.

Collies abound all over the worldparticularly the English-speaking world, special proteges of the Scots.

The Collie, among long-haired dogs, par excellence, the dog of the home. Indeed, no short-haired dog, except perhaps the Fox Terrier, can begin to chal-lenge his place here. In form, the world of dogs knows no creature so attractive. and his intelligence and all-round evenness of disposition have passed into proverb. He is as proud as a Bird of Paradise, and has the instinct of cleanliness. He is the antithesis of clumsiness, therefore easy to house. He is hardy and strong and valiant-yet never coarse. He errs a bit, perhaps, in using his lungs and legs more energetically than the occasion often seems to warrant, but, that's a fault you readily learn to forgive.

The popular Collie of to-day seems to be the sable and white—he predominates on the show bench, and that is a good index. But should you own a tri-color—black, white and tan—of any merit at all, confess to it now, you never saw anything so superb.

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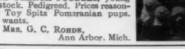
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An increasing vogue in these latter days is the Blue Merle collie, and this country owns the first "champion" in this color. As a matter of fact, in Collie breeding the United States can challenge the mother country for all-round excel-lence. It is one of the breeds in which America has been most successful. Others are the Fox Terrier, Beagle, and several varieties of sporting Span-

All good Collies have pedigrees. Don't consider owning any other kind.

If your dog, exclusive of color, for that is a matter of taste, has a skull that is flat, moderately wide between the ears and gradually tapering to his almondshaped eyes, with a muzzle tapering to his black nose (without being snipey); his teeth meeting evenly; ears small, rather wide at the base and carried semierect (tips hanging over) when at attention; straight muscular forelegs; powerful arched neck with a generous frill of hair, body rather long; chest deep with plenty of lung room; loin slightly arched and muscular hind-quarters suggesting speed and propelling power; compact arched toes, soles well padded; with outer coat dense and harsh to the touch and inner coat furry; his tail or "brush" moderately long with a slight upward



The Collie as a breed is as old as the hills, but never so well developed as now

curl at the end; forelegs well feathered, and hindlegs profusely so, above the hocks—if you have such a Collie, and the inclination to enter him in a show, you have a prize winner.

Males run from 22 to 24 inches high at the shoulder, and weigh from 40 to 60 lbs. Females are not built quite so generously.

Faults to look for are: lack of alertness, light eye (except in Merles, which often have blue and white or "china" eyes), pendulous or prick ears, full staring eyes, curly or soft coat, crooked legs, hareshaped feet, tail carried over back, and (greatest fault of all) an overshot or undershot jaw.

His coat is a Collie's crowning glory. To get and retain such he must be kept in good health, well groomed with a suitable brush and given plenty of exercise. Wash rarely, brush often. Feed liberally but exercise more so, throwing in a few hills if possible.



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Edited by Henry H. Saylor

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¶ The illustrations, of which there are more than three hundred, both of the exteriors of houses and their garden settings, and of the principal rooms inside, are all from photographs, reproduced in superb half-tone engravings, with line drawings of the floor plans.

I The carefully selected contents include examples in all of the well known architectural styles If The carefully selected contents include examples in all of the well known architectural styles designed for the country, suburbs, seashore and mountains. Chapters written by authorities cover all sides of the fascinating problem of home-building, interior decoration and furnishing. The relations between the home-builder and his architect, the matter of plans, specifications, contracts, the puzzling problem of extras and how to avoid them—all these subjects are clarified in a most comprehensive and interesting way. Throughout the text are many pages of pictures illustrating constructive, decorative and furnishing details—entrances, doorways, bay windows, outside shutters, chimneys, stairways, dormer windows, built-in china-cupboards, consistently furnished interiors, porches—all grouped so that the reader may, at a glance, compare all the best types.

¶ The chapter headings indicate very roughly the general scope of the text matter in Part I of the book, this being followed in the same volume by the finest collection of moderate-size homes in good taste that has ever been brought together.

Chapter I. The Home-builder and the Architect
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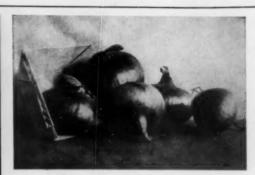
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A glance at the fifteen chapter headings will indicate the field which, along the lines indicated, has been covered thoroughly.

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- IV Nomenclature V Seeds and Sowing
- VI Seedlings and Transplanting VII Plants and Cultivation
- III Hotbeds and Coldframes
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- XV Tables

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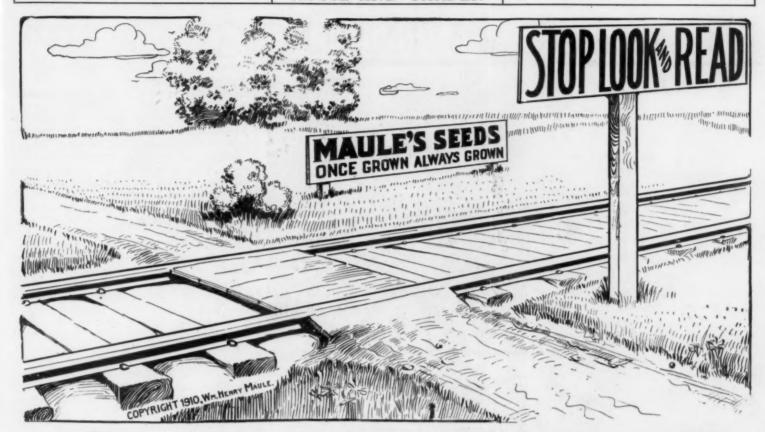
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#### A LETTER

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I want to express on behalf of Mrs. - and myself, our appreciation of and complete satisfaction with the work you have done in decorating and furnishing our home. Not alone are we delighted with it, but, without exception, our friends and guests never fail to express their admiration of the good taste displayed.

We desire also to compliment you on your business methods. You have always given me an estimate of cost before an order was given, and at the end of all the work, it came as a pleasant surprise to find that you had given me credit for a considerable amount which you told me you had been able to save from the estimate of cost.

In conclusion, permit me to say that I hope to have many opportunities of referring other clients to you.

Yours very truly,

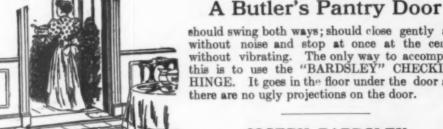
(The original letter can be seen at Hoggson Brothers' Office.)



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#### Growing the Finest Sweet Peas

(Continued from page 147)

for the purpose must be firmly set in the ground, and also tall and thick, so the vines may not overgrow it or bear it down. At the end of the season the brush can be carted away and burned. During the season it affords a certain amount of shade which the plants will appreciate. If one uses wire supports their permanency will tempt the gardener to replant on the same ground in succeeding seasons, which is not the best course to follow, as Sweet Peas are generally the better for being grown in a new location each season.

#### CULTIVATION IN GENERAL

When the plants are up and supports for them properly arranged, continue to keep the soil well cultivated on the sides of the rows, carefully keeping down the weeds by pulling them up before they get any start. Copious watering with clear water, or liquid manure, will do wonders for the plants, and an occasional dusting over the foliage with soft coal soot will not only fertilize the soil, to which the soot will find its way, but will ward off attacks of insect and fungous pests.

#### INSECT AND FUNGOUS PESTS

The chief of these which attack Sweet Peas are the green and the black Aphis (plant lice) and Mildew. For Aphis spray with a solution made by soaking a bushel of tobacco stems in a barrel of water for twenty-four hours. Spraying with this solution should be done in the evening after all the blossoms have been picked, as the solution will stain the open flower petals. For Mildew spray with Bordeaux mixture, using a solution of one part of this to twenty parts of water. The spraying with Bordeaux mixture must be very thorough.

#### ARRANGEMENT OF ROWS

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Straight rows, though by far the best arrangement for planting Sweet Peas, are not the only way of planting them. They may be placed in clumps in mixed borders, or in a series of circular rows, or grown in tubs and in window-boxes. For ver-anda or terrace their culture in tubs is very effective.

#### The Essentials of a Good Hedge

(Continued from page 149)

ANDROMEDA (Pieris Japonica). Hardy; possesses beautiful bronze color.

FETTER BUSH (Pieris floribunda). Hardy; similar in habit to Rhododendron; beautiful green in color.

MEDIUM-SIZE HEDGE-PLANTS-DECIDUOUS

COMMON PRIVET (Ligustrum vulgare). Holds foliage late in season; hardy; stands cutting well.

CALIFORNIA PRIVET (L. ovalifolium). Best for sea-side locations.

COMMON BARBERRY (Berberis vulgare). Hardy; rich colored foliage at all seasons.

YELLOW WILLOW (Salix vitellina var. aurea). Compact growth; golden yellow

branches; stands cutting well.

Rose of Sharon (Hibiscus Syriacus).

A flowering shrub thriving in any good soil. SPIREA (Spiræa Van Houtteii). One of the most beautiful early blooming shrubs.

SPIREA (Spiræa Thunbergii). An early spring-flowering shrub.

WEIGELIA (Diervilla rosea). Suited to many soils.

HYDRANGEA (H. paniculata grandiflora). Very ornamental: rich moist soil. JAPANESE QUINCE (Cydonia Japonica).

Fine shrub; spreading spring branches.

AMERICAN BEECH (Fagus ferruginea). Forms very compactly when cut young.

#### EVERGREEN

ARBOR VITAE (Thuya occidentalis). Branches low and stands clipping. HEMLOCK (Tsuga Canadensis). Forms

a compact hedge; stands cutting well. COMMON BOXWOOD (Buxus semper-

virens). Compact growth; stands trimming well.

RHODODENDRON (R. catawbiense). Beautiful flowers; adapted to cool shaded

AMERICAN HOLLY (Ilex opaca). Suitable for sheltered positions.

MAHONIA (M. aquifolia). Hardy, but needs protection in winter to prevent leaves from turning brown.

MOUNTAIN LAUREL (Kalmia latifolia). Adapted to cool, shaded places; any soil except that containing lime.

#### TREE HEDGE-PLANTS - DECIDUOUS

AMERICAN BEECH (Fagus ferruginea). Grows in dense shade; retains leaves late. ENGLISH HAWTHORN (Cratalgus oxycantha). Thrives in moist soils.

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HONEY LOCUST (Gleditschia triacan-Thrives in poor soils.

LOMBARDY POPLAR (Populus nigra var. Italica). Thrives in any soil; fast grower.

MULBERRY (Morus alba). Very hardy in nearly all soils.

OSAGE ORANGE (Toxylon pomiferum). Very hardy; free from insect and fungous

WILLOW (Salix alba). Thrives best in moist soils.

#### EVERGREEN

HEMLOCK (Tsuga Canadensis). graceful; conical in form; suited to many

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#### A Hedge Plant the People Ought to Know

THERE is a demand for a tallgrowing, vigorous hedge plant that is hardy in our northern latitudes. There is a plant that meets all of these requirements, known to the trade as Aralia pentaphylla, - its scientific species is Acanthopanox pentaphyllum. This plant has, for years, been used in borders as a decorative plant. It occurred to the writer some time ago to use it in a formal hedge. Being familiar with the characteristics and habits of its growth, we used it for a hedge plant the first time it was ever used to our knowledge, and the experiment was a success. Since that first planting we have used it frequently and always to the admiration of those for whom it was planted.

The following are its characteristics: It is a clean, vigorous plant that never kills back in our northern latitude. It lends itself kindly to the shears, can be trimmed to any desirable height and will make a hedge, if desired, eight or nine feet tall. The stocks are covered with stubbed spines which make it rather difficult for small animals to go through

without being punished.

The plants should be set in two rows, eighteen inches apart, alternating them, and the rows themselves nine inches apart. In this way a hedge is produced that is as solid as a board and will not allow cats and dogs to run through it. The plants can be set four or five feet high to start with and in a year or two they will grow up to any height that is required, to the extent of eight or nine feet. When it has attained the height desired, it should be cut off and kept to a uniform height by annual pruning. It does not grow laterally so as to cover a wide extent, but can be kept to a width desired with very little pruning.

W. H. WYMAN.

#### More Gardening Information

NEW readers of House & GARDEN will find in previous numbers of the magazine for this year many articles of value supplementing those which appear herein this month. Among them, "When, What and How to Spray,"
"Planting Trees for Air, Light and Shade," Grow Your Own Vegetables," Part II., "The Whole Art of Growing Melons,"
"Garden Entrances," "Why You Should
Grow Primroses," "Asters for the Million," "Chicken Wire in the Garden,"
"Shrubs for Dry Soils," "Concerning
Soils," "Planning for a Succession of
Bloom Through the Day," "The Garden
Herbarium," are all in the March num. Herbarium," are all in the March number; "Boundary Lines and Boundary



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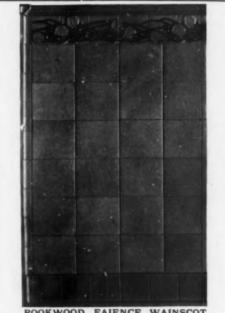
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Planting," "Potted Bulbs for Garden Bloom," "All the Birches Worth While," "Some Old Colonial Gateways," "Propagating the Gladiolus," "Pansy Culture," "Planning a Vegetable Garden," in the February number; and in the January number, "Screening, Emphasizing and Revealing Objects or Views," "Planning the Garden on Paper," "Japanese Gardens," In addition to these articles the regular department of Garden Suggestions (appearing each month) will be of the greatest service to everyone interested in plants and planting.

#### Congenial and Uncongenial Furniture

(Continued from page 141)

taking more interest not only in the design of the house, but in its interior fitting as well.

In a large majority of the American homes where refining influence, good taste, and modest means dictate the style of furnishing, there is rarely any period sug-The choice of furniture is influenced largely by the requirements of the household, undue ornamentation being avoided, and well made pieces such as are offered by the best makers to-day are selected.

In assembling the furniture in a livingroom, for instance, only that which is suited to the room and to the other pieces it will hold should be brought together. A softly toned and well arranged background of walls, floor covering and draperies will ensure an effect that is livable and harmonious.

Often one is possessed of some choice pieces of furniture of pronounced period characteristics, such as an Empire table or console, an Italian carved chair, or one showing the caned seat and carved dark wood frame of Flemish origin. It is quite possible to place and feature such pieces, giving them their full decorative value in a room which has no further suggestion of the period for which they

#### Grow Your Own Vegetables

(Continued from page 133)

hardened off, out of their box; carefully tear each one away, keeping as many roots intact as possible. Make a hole with the fingers, trowel, or "dibble" (a pointed piece of wood for setting plants) large enough to receive the ball of roots, and set the little plant in about half way up its stem. With the thumbs and knuckles, press the earth about it and press the plant down as firmly as possible. Then, when you get to the end of the row, come back over it, and still further firm each plant into the ground by pressing down with the ball of the foot, one foot on either side of the plant. Then take a watering-can with the nozzle off, and give the soil a soaking about each plant.

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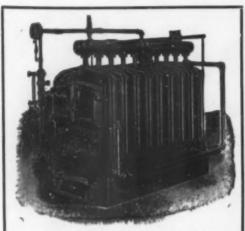


# **Cillett's Ferns and Flowers** For Dark, Shady Places

There is no corner so shady but that certain ferns and plants will thrive here. There is no soil so light and sandy but that some of our hardy wild erns will beautify it. For 25 years we have been growing these hardy ferns nd flowers and know what is suited to each condition. We can supply erns for the dark corner by the porch, or ferns and flowers, including our active orchids, in quantity, to make beautiful country estates. Wet and wampy spots, rocky hillsides, dry woods, each may be made beautiful by lants especially a sispled to them. Nothing adds greater charm to the some grounds than clumps of thrifty ferns. We also grow the hardy lowers which require open sunlight—primroses, campanulas, digitalis, iolets, etc.

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blished 1866. Glenwood Nursery, Rochester, N. Y.

It is all a much simpler task than might be thought from the foregoing. If you want to make a really neat looking job of it, take your iron rake and level the surface around and between the plants.

The following dates for planting are for the vicinity of New York, where garden work can usually be begun by the first of April. Plantings should be made earlier or later according to locality and season, allowing a week for each 100 miles north or south. Also read carefully any cultural directions which may come with your seeds, printed on the packets.

Asparagus. Set out two-year old plants in trenches three feet apart, in the bottom of which has been put six inches of well rotted stable manure, covered with four inches of soil. Set the plants about twelve inches apart, roots carefully spread out, and crowns covered four or five inches deep.

BEANS, DWARF. From May till September. Sow in drills two inches deep, seed one to two inches apart in drills, rows two feet apart.

POLE BEANS. Middle of May to June. First, plant in hills three feet apart each way, about two inches deep. Plant eight to twenty seeds. In planting limas, be sure to put in edgewise, that they may push up through the soi when sprouted.

BEETS. Sow thickly in drills fifteen inches apart, two inches deep, as soon as ground can be worked. Firm well into soil.

Broccoli: See directions for cauliflower.

BRUSSELS SPROUTS: Set out same as cabbage plants. For fall crop (and they are improved by a little frost) start in May or June in the seed-bed (see garden plan in February article), or in boxes, as directed last month.

Cabbage: Set out as soon as ground can be worked. Early varieties should be put about one and one-half feet apart in two foot rows. Late varieties two to two and one-half feet each way. Start plants for late varieties middle of June to first of July.

June to first of July.

CARROTS: Sow early varieties as soon as possible, in drills fifteen inches apart, and one and one-half to one inch deep, being sure to have seed-bed finely worked up. Late varieties may be sown up to middle of June.

CAULIFLOWER: Care for same as cabbage, but do not expose to frost.

CELERY: Prepare a strip of the seedbed as finely as possible, as soon as the ground can be worked. Sow in inchdeep drills one foot apart, and press into soil very firmly Sow a few radish or turnip seed with the celery to mark the rows, as the latter is very slow to germinate. Ten or fifteen feet of drill will give plenty of plants. Further directions will be given later.

CORN: Make first planting about May 15th, five to ten kernels, three inches deep, in hills three feet apart for the earlier varieties. Later plantings, four feet apart.

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CUCUMBERS: If plants have not been started on sod, in the frames prepare hills, four feet apart each way as follows: Dig out about four inches of soil, for a space eighteen inches in diameter. Mix thoroughly in the bottom of this three or four forkfuls of well rotted manure, or handfuls of fertilizer. Cover again, slightly raising the surface of the hill, and plant ten to twenty seeds, covering one inch deep. If soil is dry, give a thorough watering. The hills should be prepared in the same way to receive the plants, if started on sod.

EGGPLANT: Do not set out the plants before June 1st. Watch very carefully to keep potato beetles and other troublesome intruders off the foliage. Plants should be set two and one-half

ENDIVE: For early supply sow in April, but as it is more useful for the fall months, sow in seed-bed in June or July, and transplant.

KALE: As this is improved by being touched by frost do not sow until middle of June, and transplant as late cabbage.

KOHLRABI: Sow middle of May and later for succession crops. Sow about one and one-half inch deep in e ghteen inch rows, and thin out to six to ten

LEEK: Start in seed-bed, sowing one inch deep, one short row will be enough.

LETTUCE: Set out the started plants as soon as possible, one foot apart, in rows one to two feet apart. Sow thinly, one short row in seed-bed every two weeks

for succession crops.

Muskmelons: Pant the same as

WATERMELONS: The same, only hills should be at least six feet apart, and half as many seeds per hill will do.

OKRA: Sow middle of May, one to two inches deep in hills two feet apart, in rows three feet apart, and thin to best

Onions: Sow as early as possible, in rows one-half to one inch deep, and fifteen inches apart. A few turnip seeds will mark the rows, and enable earlier cultivation. If plants have been started under glass, trim off about half of the roots and tops, in length, and set about three inches apart in the rows.

Mark off fifteen-inch ONION SETS: rows, and stick the small bulbs, top up, about one inch under the surface, three to four inches apart.

PARSLEY: Soak the seed twenty-four hours in lukewarm water, and drill in seed-bed, one-half inch deep, one foot

apart. PARSNIPS: Sow thinly first of April in eighteen inch rows, one inch deep.

PEPPERS: Same as eggplant. PUMPKINS: Same general directions as for cucumbers, but hills should be six to twelve feet apart, and six to eight seeds. A few seeds may be planted among the hills of corn, at second hoeing, if there is no room elsewhere

RADISHES: Prepare a section of the



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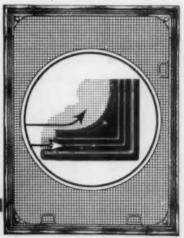
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seed-bed, raking in a few handfuls of land plaster, and sow one-half inch deep one short row every two weeks from April 1st on.

RHUBARB: Set out plants in April about three feet apart each way.

SALSIFY: Loosen the soil to a depth of at least fifteen inches. Mark out the drills fifteen inches apart, and cover the seed with sifted soil for about eight inches in depth.

SPINACH: Sow thinly in drills one inch deep, eighteen inches apart. For succession, every three weeks from April to August. Swiss Chard (beet) will give a continuous supply until frost from one sowing.

SQUASH: Same as cucumber, except that winter varieties require at least twice as much room. Six to eight seeds per hill.

TOMATOES: Set the young plants out in the open ground about May 20th, three feet apart each way. Prepare stakes or other supports to use as soon as they have become well established.

TURNIPS: Sow in April, and later for succession crops, thinly in one-inch drills, fifteen inches apart.

In the next article of this series will be taken up methods of cultivation, and the care of the started crops.

### Planting Shrubs for Mass Effects

(Continued from page 138)

above it on the paper-this for convenience in carrying the distances and lines from one to the other - and then proceed to the planting detail.

The matter of lines and forms sounds very dry and technical when one is longing for lilacs and roses and all the summer's sweetness, and I can well imagine the impatience with which many a heart will burn at the idea of calculating beauty in so unpoetical a fashion. But the most careful calculation is all that genius is, really—an "infinite capacity for taking pains"—and no lovely garden ever just happened. Consciously or unconsciously its creator has calculated every effect of line as well as color, of background and foreground, of light and shade.

And so I have placed the emphasis on plan and line especially, for just the reason that the thought of them is so hatefu to so many. They are classified in the adult mind about as scales and fivefinger exercises and grammar are in the child's - things to be slid over and gotten around by hook or crook if possible. But believe me, you cheat yourself on your garden by such evasion as much as you would have cheated yourself on your English if you had been allowed free rein as a youngster.

At last, however, with the plan and sky line outlined before us, we can go on to the joyous phase of shrub plantingthe phase which has to do with their greenery and their flowers and all their lovely poesy, the phase which is commonly considered to be real gardening.



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Briefly, there are five things constantly to have in mind when grouping shrubs: their height, their time of flowering, their flower color, their habit, and their preference for sun or shade. And there are two things to be aimed at in every mixed shrubbery border: succession of bloom and harmonious coloring. The profile drawing will show locations as to height, the ground plan locations as to spreador habit. These two are therefore practically disposed of and predetermined, so the questions of inflorescence and sun or shade are all that one need trouble about.

The plan here given is detailed under the assumption that it is in full sun. The same shape on the ground and in profile could be arranged if it were in partial shade, or even altogether without sun. The latter circumstance would hardly be likely to arise though, with a

border of this extent.

Finally, though I have said it so often that I am almost ashamed to say it again, let me urge the open center. Confine shrub masses to outer edges or boundaries, leaving broad sweeps of lawn framed by them but never cut into by either beds or solitary bushes. The single shrub which the plan shows at the end of the mass and the one isolated from it vet a part of it midway, are not exceptions to this rule, for neither of these breaks the continuity of the mass.

That is the test always-the continuity of the mass, whether that mass is lawn, flower border, shrub border or woods and thicket.

#### Flowers and Shrubs for Shaded Places

(Continued from page 157)

biennial, blooming the second year. In May Bleeding Heart (Dielytra spectabilis) will form a lovely clump of bloom, the graceful sprays of its pink and white flowers overhanging the fern-like foliage which in itself is highly ornamental. This is one of the most easily grown of the hardy perennials, requiring little more than to be planted in a half-shaded position and let alone for several years. It should not, however, be allowed to become choked with weeds, but should be kept clean and cultivated occasionally. A light dressing of manure should be forked in about the roots each spring, and if the location is at all exposed it will be well to protect the plants with a mulch of leaves during the winter season. The native Dicentra cucullaria may be grown in connection with the cultivated form of the Dielytera coming into bloom a month earlier. It is very dainty, and makes a lovely border for an early bed of the larger Bleeding Heart.

One of the most satisfactory plants for shaded places is found in the Meadow Sweet.

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like flowers of brightest yellow or orange. A yellow flower always suggests a sunny position, yet there are several strong yellow flowers which do admirably in partial shade, and where shade is compulsory anything which lightens it is to be desired. This the Trollius will do to perfection and one cannot do better than to make a planting of the five or six excellent varieties offered by the florists.

The Spigelia is a rare native plant rarely met with in cultivation in the North, but well worth while. It produces its brilliant red, tubular flowers from June to October. It requires a rather moist location or, failing that, should receive sufficient water for its needs during the

season of growth and bloom.

Salvias do quite as well in the shade as in full sunshine and in this position are not so seriously affected by early frosts. have grown them for years on the north side of the house and also in full sunshine and have always found the north-grown plants entirely successful. I do not think they produce quite the same amount of bloom, but the flowers last longer and seem more perfect than that of the plants grown in the sun, where the corolla drops almost as soon as opened, leaving only the scarlet calyx in evidence. Salvias appreciate very rich soil and a plant given generous treatment is a vastly different plant from one which is half starved and neglected.

For summer bedding in partial shade there is nothing lovelier than the Fuchsia, which will grow and bloom profusely all summer. Plants as stocky as possible should be selected for bedding, and they should be given a soil containing a large percentage of leaf-mold and some sharp sand. The soil from the under part of sods is sure to contain much fine sand, and when mixed with leaf-mold makes an excellent bedding soil for this class of plants. Tuberous Begonias, Gloxinias and Ferns will all thrive admirably on the north side of the house, in window-boxes with a northern exposure or in shady nooks. The Asparagus Sprengeri is especially satisfactory for north window-boxes, baskets, or for trailing over shaded rockwork, and there are many low-growing plants suitable for the rockery which may be utilized in this connection. The Saxifraga, Sedums, Prunella, Primulas, Marshallia and the like may all be grown to advantage by the flower lover who has but a bit of shaded ground to command.

#### The Why and How of Pruning

(Continued from page 166)

Clematis: On season's shoots; cut down in winter or early spring.

Evergreen Hedges: Prune in June, trimming just enough to keep the chosen form.

The final word in pruning must always "restraint." Dead and weak wood should be cut from shrubs, superfluous branches which crowd a tree should be



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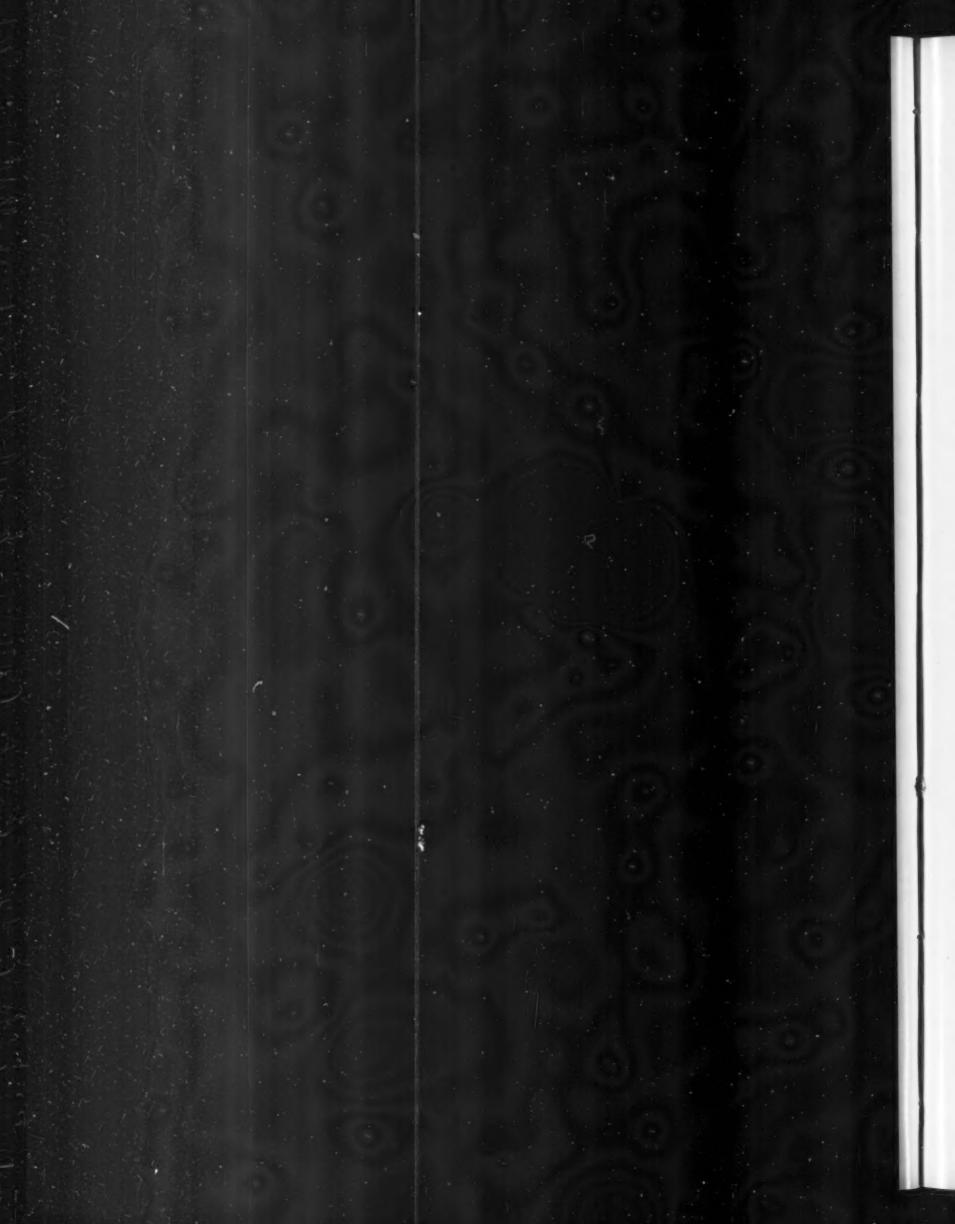
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taken away-but only a little should ever need doing at one time or season. And only a little will need to be done at one time, if that little is attended to as each

year brings it.

As to the manner and fashion of severing a branch or a shoot there is not a great deal to say. Not but that many wrong ways are in evidence, but the right way is simply explained. Large limbs should always be cut as close to the main trunk from which they spring as it is possible to lay a saw—and the cut should always be parallel with the main trunk and not at right angles to the branch being taken away. No way but this is right, no matter who practices it! In the case of very large and heavy limbs-which ought never to be cut down unless there is a reason absolutely imperative—it is best to remove the limb with two preliminary cuts, trimming the stub down to the proper level of the trunk afterwards. This prevents any splitting down of the limb as it gives way and makes a much neater and better job.

The first of these two cuts should be made from the under side of the limb up, about five or six inches from its rise on the trunk; this should extend more than half way through the limb. Then half an inch nearer the tree trunk make the second, from the upper side of the limb down; and the branch will fall to the ground without splintering or tearing the bark in the least. Then lay the saw flat against the main trunk and take off the stub. This levels the surface and prepares for the healing process which Nature

will immediately take up.

Shoots and small branches should always be severed just above a bud, as near to it as possible yet far enough away to avoid injuring it. And in plants on which the buds alternate, an outward setting bud should be the one left at the top of a pruned branch; in this way an outward growing branch will be assuredand that is the thing to aim for.

#### Screens and Their Uses

(Continued from page 163)

showing the same tone as your wall covering in the hall. These could be lined on the bedroom side with the chintz, if the color did not harmonize with the room, or a plain soft gray matching your wall covering may be preferable. These curcovering may be preferable. tains should hang on a rod placed about 8 inches from the top of the door and, when the light is required for the hall, could be well pushed back. Arras cloth might prove suitable for such curtains. This material is 50 inches in width and sells for \$1.25 a yard.

Double-faced jute velour would probably supply you the color you desire. This fabric hangs well and is very durable, it is 50 inches in width and costs from \$3 to \$4 a yard, according to

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# A Superb New Rose

We have a few plants of our new rose, Climbing American Beauty, that are in fine shape for planting this Spring. We did not intend to offer this superb rose until next Fall, but will fill orders as long as the stock lasts at \$2.00 each, postpaid. These are strong plants, not the regular mailing size. A beautiful color photograph of this rose sent on request.

In our Nursery, consisting of over 600 acres, can be found the choicest collection of Fruit and Ornamental trees, shrubs, roses, vines, etc.—the result of over half a century of experience.

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#### Southern Gardening Operations for April

BY A. B. MCKAY

Professor of Horticulture, Mississippi Agricultural College

IN the South Atlantic and Gulf States, April is perhaps the busiest gardening season of the year. During this month planting, cultivating and harvesting progress simultaneously. Cabbage, onions, English peas, and such hardy or semihardy vegetables as were planted during February and early March or, possibly, late in January, are now making most rapid growth and require frequent cultivation. With seasonable weather some of these first plantings should be ready for the table and for shipment by the end of April or early in May. First cuttings from asparagus are usually made early in March, the bulk of this crop being cut in April. Strawberries, radishes, green or bunching onions, turnips, spinach and head lettuce are ready to harvest during the early or middle part of the month. Raspberries, dewberries, blackberries, English peas, and, occasionally, the first Irish potatoes, find their way to the table on or before May first.

White or hoar frost is seldom seen after April fifth. With the best gardeners, April 1st finds strong, stocky tomato plants, showing blooms and fruit clusters and standing in pots or plant bands in coldframes, waiting to be transferred to the open garden immediately after the last frost. Eggplants, peppers, cucum-bers, squashes and melons—strong, splendid plants—started in small pots or bands, similar to those for tomatoes, wait in the hotbeds or coldframes a few days longer before being transferred to the

garden.

Seeds of these same vegetables planted now in the open ground follow with their harvest immediately after the fruit crop from plants started in hotbeds and coldframes. Beans, okra, and all other warm weather garden crops not heretofore mentioned, may be planted during early or middle April. April twentieth should find every crop on the gardener's list represented and no vacant planting ground save a small plot reserved for successive plantings of such short lived crops as peas, snap beans and radishes.

In the flower garden Snowdrops, Hyacinths and Daffodils go to sleep early in April. Pansies and Violets which for the past sixty days have been literally covered with bloom are giving place to Roses which, save during the late autumn, are now giving their best flowers. April is our month for setting in open ground the

tender bedding plants and climbers. What has been said above applies to the central sections of the South Atlantic and Gulf States. Generally speaking, ten days to two weeks later will apply to respective plantings made throughout the Northern portions of States mentioned. In the immediate Gulf region,

say within fifty to seventy-five miles of the coast, two to four weeks earlier than for the central zone will apply. Florida anticipates dates given for the coast region by days or perhaps weeks as one goes South through this state.

#### Planting Evergreens

EVERGREENS are not always successfully planted, and after planting sometimes behave as though something had gone wrong with them. Coming across a man who always had success in setting out evergreen trees and who seemingly never had a failure, the question was asked how he did it. He made no secret of it and told the whole story in a few words. "If you want to have an evergreen tree live never let the sun look at the roots." The directions were to transplant evergreens on cloudy days. The sunshine on the roots killed them and was very likely to kill the tree also. Neither heat nor drying winds appeared to have such an effect upon the root fibers as the rays of the sun. The uniform success which attended the man's work in handling evergreen seemed to be evidence that his system was correct; and it is worth while trying in view of the numerous failures of ordinary methods. The action of the sun upon the roots of other plants may also be the cause for other failures which at times appear to be quite unaccountable. The chemical, or actinic, rays of the sun have a powerful effect on all living organisms, and it would hardly be surprising to find that roots were in many cases extremely sensitive to the actinic rays, from which they are naturally completely protected.

W. E. P.

#### Hedge Trimming

ONE of the disagreeable features of hedges in this country is the bare open appearance near the ground. Even when our directions have been followed and early trimming has made the hedge thick near the ground there is usually an absence of leaves at the bottom which is unsightly. No matter how beautiful a hedge may be above if below it has the appearance of being upon legs, the effect is bad.

The reason for this bare strip near the ground seems to have escaped most people and has finally come to be accepted as one of the ugly things that cannot be helped. Finding that a privet hedge can be cut into almost any shape the ordinary person at once concludes that a wall is a good form, or some other straight sided form. Or perhaps the fashion happens to be a long horizontal roll. Now and then some one thinks that a broad flat top with a narrow base will be fine, and then we have a thin mass of leaves on a flat top, supported on a mass of sticks. These results should have taught people a lesson. But it is



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e also have the facilities for moving LARGE TREES, from ten to twelve inches in diameter, and so obtain immediate effects, r Landscape Architect can make a plan of your grounds. Do not wait until it is time to plant the stock before you make your plans tend to it at once; it is just the time; and then be ready for early planting. Send today for our Catalogue. Any further informately given. Address

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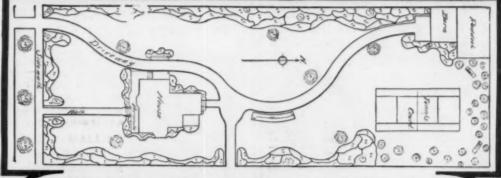
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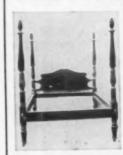
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Write for blue prints

very unfortunate that people prefer to follow the fashions instead of using their eyes and reasoning powers.

Hedges are bare near the base because those portions are in the shade and leaves cannot grow without light. All those forms of clipping which shade the bottom of the hedge leave a bare strip. When a hedge is clipped with walls inclining toward the centre line, leaving the bottom wider than the top, it becomes possible to have the hedge covered with leaves to the very ground. This of course presupposes that our instructions have been followed and a fairly thick base has been secured as the hedge started. When a hedge is considerably narrower at the top than the bottom the light is able to reach the lowest branches and leaves are the result. This gives a wide base instead of a narrow one, and there is then some protection at the point where ordinarily we have no fence at all, for with a bare bottom, dogs, cats, chickens and very often kids find the hedge no obstacle whatever from roaming where they please.

This method of trimming has the advantage of producing a good effect. The hedge has a base and seems to rest on the soil, and not a bulky affair supported on sticks.

W. E. P.

#### Collecting Glass

BY MARVIN COLE

THE number of objects in glass that have survived breakage for over a century is extraordinary when one takes into consideration the fragile nature of their material. However, the collector will find many interesting bits of old glass in almost every antique shop, though one may well disregard a noted collector's advice to collect only those pieces anterior to 1820, for much interesting glass, especially Austrian, Bohemian, and French, as well as Russian glass has been made between that date and the middle of the nineteenth century.

The collector of old glass will find much that is worth his while in the literature of the subject which is now fairly exhaustive and generally accessible in comparatively inexpensive volumes.

Perhaps our own collectors are more

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interested in American glass than in any other sort. Jamestown, Virginia, had the very first glass-makers in the new worldat least the first civilized ones-two Italians from Venice, who came over late in



This bit of glass miraculously survived the fall of the famous Campanile of Venice, being found in the ruins with only few

the seventeenth century to show the colonists how glass should be made.

Unfortunately we have extant no authentic examples of the work of these master-craftsmen, which would be great treasures indeed in illustrating the history of glass-making in America.

A little later came the early colonial glass-makers from England to Massa-chusetts. Early pieces from their factories are more interesting for their design than for their glass quality, as all the better glass continued to be imported from England for many years.

#### Grow Your Own Asparagus BY S. L. DE FABRY

A SPARAGUS, famed for its delicious flavor and healthfulness as a diet, recommends itself deservedly to the high esteem in which it is held as a palatable vegetable.

The growing of it is simple, requiring not any more care than other vegetables; therefore a bed should be included in every home garden, no matter how small and limited in space.

Contrary to the general supposition, any soil will grow asparagus, even a clay soil, if finely pulverized and well worked; but rich, sandy loam is the best.

For home use, plant one year old highly cultivated roots. Two year old ones are generally used, but the younger roots, if full of fine fibres, will sprout sooner, grow faster and outweigh in their

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See Asparagus Article in this Issue.

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products at maturing, poorly grown two year old ones.

Planting can be done any time in Spring and as late as June. Formerly, it was deemed of great importance to transplant in the dormant state; but experience has taught that roots, sproutin the seed bed, properly handled, will push forward much more quickly and will make better growth, besides the spears are visible and only well developed ones need be selected, which where it is impossible to discriminate when roots are dormant

In referring to an asparagus bed, I do not wish to conform the idea of a square space with paths, like a flower bed. The term bed applies here to rows three feet apart and as long as you wish, the roots planted twenty inches apart in the rows.



These plants, ready for setting, have had a start, thus enabling the gardener to dis-card the winter-killed roots

This is the minimum distance. If space allows it, it should be increased to four feet and twenty-four inches, respectively, as room is needed later for the roots, which, on mature plants, grow three feet away, in every direction, from the crown; entangling must be avoided.

As to varieties, the older sorts, like "Conover's Colossal", "Barr's Mammoth", and "Palmetto", have been excelled by a newer kind, the "French Argenteuils", used very extensively of late. If genuine, this can be grown to a giant size, of rich, melting flavor and, if properly cultivated, the cuttings are eatable to the end of the stalk.

The selected ground for the bed should be well drained, level and have sun exposure. Avoid the immediate vicinity of old shade trees. Prepare the ground by broadcasting well rotted manure in a layer of a depth of six to eight inches, then spade in deep, twelve inches or more; afterwards, with a steel rake, level and finely pulverize the surface soil.

For a permanent bed to last twenty years or more, the roots must be planted fifteen inches deep. The crowns grow upwards a trifle every year, besides the winter wash-outs have to be reckoned with, therefore less depth is not recommended.

In field culture, trenches of suitable depth are dug, in which the roots are

(Continued on page xxxii)



The spirited and perpetual charm of the hardy garden has won for it wide and in tense en thusiasm. Natural and restful in general effect, it has an ever-varying and ever-appealing beauty. Thoroughout the season the hardy garden flowers afford something of interest-something new every day. Even a few hardy plants will afford most satisfactory and pleasing effects, and their permanence makes them, in the end, more economical than the annuals of which the first cost may be less.

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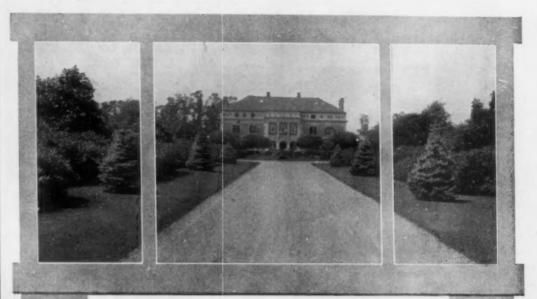
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Without any charge, we make and send you a complete plan for beautifying your city or suburban home. This saves you the usual professional fee and large expense bill.

Besides, we quote you the exact cost of the improvement—the price of the necessary nursery stock to work out the ideas. If our plan and quotation are not acceptable, they cost you nothing.

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fifteen inches deep and about five inches long; mix a small shovel full of fine black manure, with soil on bottom of hole; then place the root, previously soaked in liquid manure, horizontally in the hole, crown upwards, and straighten out the ends properly. Cover up with three inches of rich soil and press firmly around the root. Water now freely, and continue to water every afternoon for one week. In about ten days, the young spears will commence to appear, if they

still serving the same purpose.

intervals of about two or three weeks, according to the growth of the spears, until hole is filled up to level of ground. The after culture in the first summer consists of keeping the ground of the rows,

as well as between them, free of weed,

loose and mellow. In the first two years,

have attained a height of six or eight

inches, cover up with three inches more

manure enriched soil, and keep this up at

deposited; but for 200 to 300 roots, suf-

ficient for home consumption, the writer

has devised a simpler method, avoiding the laborious work of digging trenches, and

After the proper distances are marked out, take a trowel and dig in the rows,

wherever a root is to be planted, a hole



This is the sort of asparagus everyone may grow with a little care

lettuce, radishes, beets, turnips, parsley and carrots, at your choice, can be grown in the middles between the asparagus plants, especially so if the distance is four

End of March, the following spring, spade out over the asparagus roots in the rows a trench about five inches deep, fill in with a layer of about two inches well rotted manure and spread evenly over that a mixture of five pounds of Muriate of Potash and ten pounds of bone meal to every fifty foot row, and fill up with fine good soil. If the spears, now larger, appear, hoe frequently and keep free from weed, and soil well pulverized and loose. The growing of vegetables can be continued in the middles this year.

In early spring of the third year, manure the rows as previously stated and, after the trench is filled up, ridge up the

(Continued on page xxxiv)

# MONTROSS METAL SHIN



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rows over the roots, with loose soil taken from the middles, to a height of about eight or ten inches. Discontinue the sowing of vegetables. The asparagus can be cut now in early May for short season of two or three weeks.

In cutting asparagus, an asparagus knife, procurable at any seed store for fifty cents, is used. If the spears are about four or five inches above the ground, insert the knife in the ground and cut the spears four inches under the surface. After cutting ceases, manure the plants again the same as in early spring. This enriching, after cutting is done to strengthen the weakened roots, besides the eyes are setting now on the crowns for the next year's shoots.

The after culture is the same as the

previous year.

The following year the plants are fully matured and can be cut daily during May and June, but a full season cutting will require beginning of July somewhat heavier manuring than the previous year.

Every year, about the end of October, the foliage is cut off with a hoe and burned. This will prevent spreading of rust (a fungous disease) and destroy the late eggs of the asparagus beetle. The latter (a small striped bug) lays its eggs on the foliage. These are hatched by the sun into olive-colored larvæ, which greedily devour the foliage and, if not destroyed, ultimately will kill the plants. A twoquart tin can with a small piece of wood nailed on one side as a handle, perforated with a nail on the bottom, and filled with land plaster and enough Paris green to give it a light green hue, will be found convenient to rid the plants of this pest. This dusting with land plaster and Paris green should be done twice a week, early in the morning with dew still on the plants, and continued until end of August.

#### Some Points on Incubators

(Continued from page ix)

eggs are unchanged and may be cooked for chick food. Eggs showing a dark settled red circle within the circumference of the shell contain dead embryos and must be removed.

The egg tester is a lamp with a metal chimney having a small opening at the side through which the light shines and against which the egg is held. An experienced person may readily test the eggs in a dark room using an ordinary lamp. The egg is held horizontally between the thumb and forefinger about three inches from the light.

To prevent unnatural dryness of the eggs a little water should be allowed to evaporate in the egg chamber. A saucer holding about three tablespoonfuls of water is sufficient for an incubator of two hundred eggs capacity.

The temperature should be held at

(Continued on page xxxvi)



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#### Book Reviews

[The Publishers of House and Garden will be glad to furnish any books desired by subscribers on receipt of publisher's price. Inquiries accompanied by stamp for reply will be answered immediately.]

Felicita. A novel of Sienna. By Christopher Hare. 16 full-page illustrations in sepia from photographs. Cloth, 16mo, New York: Frederick A. Stokes Company. \$1.25.

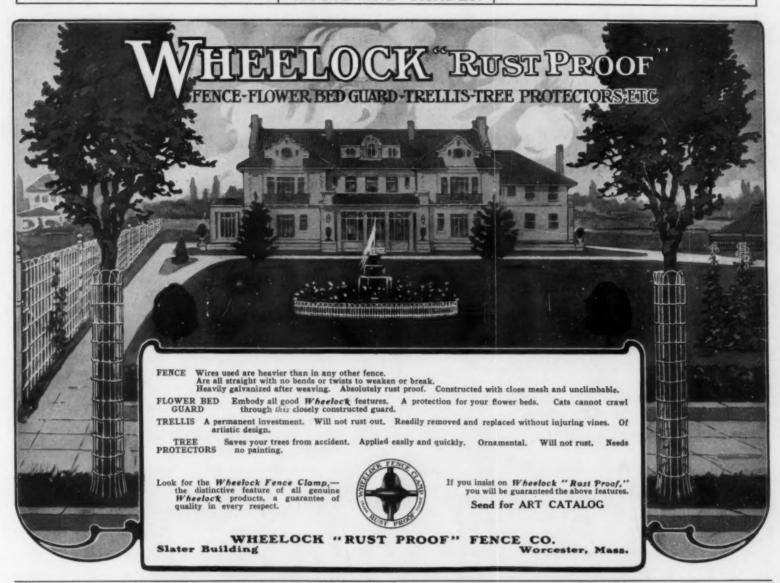
A delightful story of Siena in the olden days of the city's glory, beautifully told and rich in a sense of the mediæval period.

Fertilizers and Manures. By A. D. Hall, M.A., F.R.S. Cloth, 16mo, 384 pp. E. F. Dutton & Co. \$1.50 net. New York:

This is a companion volume to Mr. Hall's "The Soil," and contains much material heretofore unpublished. It is especially interesting to the owner of a small farm, as the subject is treated exhaustively.

The Fresh Air Book. By J. P. Müller. Illustrated. Cloth, romo. New York: Frederick A. Stokes Co. \$0.85 net.

Lieutenant Müller's little book urges a liberal use of fresh air for the skin as well as for the lungs, and makes a strong plea for a more natural way of living that is well worth the attention of everyone in this all-too-hurried age.



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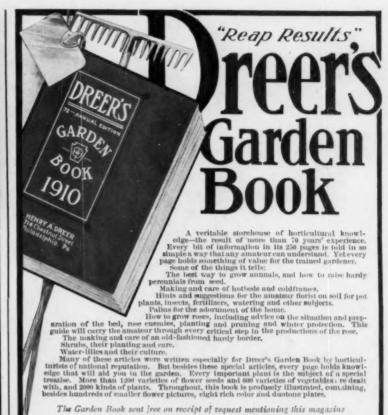
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