July 1910
Making Over Old Farmhouses — Perennials
That Should Be Better Known — Water
Gardens — Five Homes of Distinction — Vines

House & Garden
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Other varieties of small dogs are "coming" all the time, such as the trim, perky, spunky little Schipperke (pronounced "Skipperkey"), whose ancestral home is the Netherlands, and the long-coated Yorkshire, and Maltese Terrier. Alas, the poor Pug, I fear he must be reckoned, for the present at all events, a member of the "Down and Out Club"—though he is by no means threatened with extinction. He is just one other victim of that fickle dame, Fashion.

Gaze into the windows of Fifth Avenue's palaces to-day, or my lady's barouche, or Limousine car, and reclining at ease either on silken cushion or his fair owner's lap, your glance will almost invariably be returned by the black diamond sparkling eye of the Pom, or the lustrous melting orbs of a Peke, or one or other of the "royal" spaniels—King Charles, Prince Charles, Blenheim or Ruby.

But don't run away with the idea that in the Pom, the Peke and the Toy Spaniel you have inert, soulless, useless creatures—fit companions only for human feather-brains. Such a description applies to no living dog—and least of all to any one of
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In color the English Toy Spaniels run thus: King Charles, black and tan; Prince Charles, tri-color, white, black and tan; Ellenheim, orange and white; Ruby, a rich chestnut red, white-colored.

The basic points of perfection apply equally to all four varieties, but space will not admit of further detail in this article.

Pekes run in all colors—red, fawn, black, black and tan, sable, white and parti-colored. They have profuse coats, especially the mane, the body is heavy in front and falls away lightly behind. The tail, most generously feathered, should be curled well over the loins. The eyes are large, lustrous and prominent, and the ears heart-shaped, and not carried erect. Black masks and “spectacles” round the eyes, are additional marks of perfection.

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Pekes are often bred small enough to be stowed away—in a basket perhaps—but most people are content to get them anywhere under a dozen pounds. They are perhaps the hardest of the Toy, or Lap dogs.

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Poultry Enemies

BY M. ROBERTS CONOVER

W HILE vermin are the natural result of unsanitary conditions, quarters which receive the most fastidious care may become infested by the introduction of afflicted fowls. Whatever their origin, they must not be tolerated, since they are a direct menace to the health and profit of the fowls. Strange birds should be examined and, if necessary, treated before their admission to clean quarters.

Lice, mites and the gape worm are the most common forms of poultry vermin, and since they may appear ere the owner is aware and breed rapidly in the warm weather, it is well to make a midsummer cleaning of the house and pens. The presence of lice is a constant source of irritation to fowls, and the bird usually shows a Ruffled, untidy condition of plumage and a drooping, despondent air. By lifting the wings, or examining beneath the soft feathers, the lice may be seen moving about upon the skin. Flour of sulphur should be dusted through the feathers three or four times a week. Lice are frequently fatal to young chicks, as their tender bodies cannot stand the irritation.

The mites are not so dangerous as the lice, since they do not live continually upon the bodies of the fowls, but remain upon the perches and walls of the building during the day. The perch mite is a tiny red spider and directs its attacks along the legs of the fowls producing an unsightly roughness called "scaly leg.

Local applications of kerosene and melted lard ointment should cure "scaly leg." An effectual local treatment is the application of an ointment made by adding equal parts of kerosene and melted lard. This should be brushed over the legs and feet with a small brush, at least once a week until the parks regain their natural appearance.

All local applications are of no lasting value, however, unless the surroundings are overhauled.

Remove all nests and perches and burn flour of sulphur or sulphur candles in the building. Wash the perches with kerosene and burned lard. Local applications of kerosene to every pail of unsanitary conditions, quarters are overhauled.

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Prepare a solution as follows:—
Slake five pounds of lime in a sufficient quantity of water—about one pailful. Use a deep firkin and stir the bubbling liquid with a long stick during the process. Dissolve three pounds of flour of sulphur in water, adding enough afterward to make ten gallons in all. Pour into a boiler, add the slaked lime and boil for four hours, stirring from time to time. Apply hot to the walls of the henry, to the nesting-boxes and the floor, using a small spraying pump. It may be applied with a whitewash brush, but in that case, a double quantity should be used. The quantity suggested should be sufficient to cover two hundred square feet of surface. The solution is an amber color when applied and dries almost white. When dry the perches are replaced, and the nests are filled with fresh straw, among which a few leaves of tobacco should be scattered.

The dust baths should contain fine, clean sand, and a little powdered tobacco or sulphur may be mixed into it as a preventive.

A species of vermin known as the gape worm often affects young chicks, causing them to make a peculiar gaping movement in the effort to dislodge the worm from the throat. If not removed, the trouble will lower the vitality of the chicks. Moisten a feather in oil of turpentine or kerosene and insert it into the throat, twisting it slightly to loosen the worms. The gape worm originates in damp, dirty ground and is picked up by the chicks that run thereon. To eradicate it, the soil should be sweetened by broadcasting it with lime. It should be turned with a plow and limed again. Sprinkling with a five per cent. solution of carbolic acid is also very useful.

Having obtained a sanitary condition, the next aim is to maintain it. Daily remove the droppings from the floor and put them into a covered box outside. Sprinkle over the floor, clean, fine ashes or sand. Examine the poultry frequently, and if vermin are found, repeat the local treatment and fumigate the building.

The hiding places which crevices and rough surfaces afford are very favorable to poultry vermin. Perch poles unstripped of bark should not be tolerated. If possible, have the inside woodwork smooth. Admit as much sunlight as possible by means of large windows and see that the floor of the henry is free from dampness. An earth floor should be five or six inches higher than the outside ground and should be underlaid with crushed stone or cinders. A board floor must be tight and should incline slightly from beneath the roosts toward the sunlit front. The roof of the building should be a watershed—never flat. A dry, sunny, airy poultry house will help greatly to prevent the question of vermin from presenting itself. In the construction of nests, coarse wire such as is used for coal sieves, makes a strong light support for the bottom. The passage of air through this wire bottom keeps the nesting material dry.
The Magnificent Country Estate of the Late George Crocker Is Now for Sale

DARLINGTON is situated in the charming hill country of Northern New Jersey, comprises about eleven hundred acres, and offers a rare combination of mountain, wood and stream, with broad expanse of fertile field and residential park. On the north and east lies the well-known Havemeyer Estate; beyond it, the village of Suffern, and a little farther on, Tuxedo. Good roads radiate in all directions, and the property is easily accessible by motor or by the Erie Main Line (Ramsey station, 3 miles; Suffern, 5 miles).

While nature has been very lavish here, the late owner spared neither expense nor time in improving and beautifying the surroundings, crowning the whole by the erection of one of the most noteworthy private residences in America. The residence, modeled largely after a famous English manor house of the Elizabethan period, was completed in 1908. It stands on a lofty ridge overlooking a large part of the estate and commands an extended outlook, including the picturesque Ramapo valley and mountains.

Interiors Remarkable for Beauty and Splendid Proportions

The richly carved woodwork is chiefly of English oak, Circassian walnut and California redwood. Caen stone and marbles are also used in profusion, and decorations are the work of artists of high repute. The most impressive feature of the interior is the magnificent Great Hall, two stories in height with oak-carved gallery and walls of Caen stone. The fittings of this great room are unusually stately and suitable, including a large built-in pipe organ, extraordinary rugs, hangings and furniture. Here and in other rooms are numberless art treasures in bronze, silver, porcelain, wood, ivory and needlework. There are paintings by great masters, tapestries and embroideries with histories and of rare value, and a remarkable collection of Chinese porcelains. Throughout the house are many pieces of antique furniture and costly reproductions.

The Grounds are Spacious and Highly Ornate

The beautiful terrace front with its grassy slopes, broad stone stairways, and mirror pool; the extensive vine-covered pergolas and pavilions, which are integral portions of the Mansion; and the stately entrance front, about which are grouped a wealth of evergreens, box trees, Japanese maples, flowering plants and shrubs—cannot be adequately described or pictured. On the nearby wooded slopes and drives are many thousands of rhododendrons. Beyond the lawns are extensive formal gardens with large fountain pool, then the greenhouses of extraordinary size and completeness, filled with choice flowers and rare fruiting vines and trees. An abundance of pure water from an artificial mountain lake (a part of the estate) has been piped to every desirable part of the grounds and into every building, with ample pressure and equipment for fire protection. The lake is a well stocked trout preserve.

DARLINGTON is for sale, as it stands, complete in every detail. The offering not only includes the lands, Mansion, farm buildings, and many other structures, but practically the entire contents of all buildings, the large herd of Jersey cattle and other live stock the vehicles and other equipment essential to a large country estate. The property, pending its sale, is maintained in the perfect condition in which it was the late owner’s pleasure to keep it; every department in working order; the Mansion itself literally ready for immediate occupancy. A booklet, containing description by Barr Ferree and a number of exterior and interior views, will be mailed on request.

For further information, apply to E. F. Carpenter, Agent, Ramsey, N. J., or to the Executors of the Estate of George Crocker, 60 Wall St., New York City.

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Contents, July, 1910

Wilson Eyre, architect

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Photograph by Thomas W. Sears, landscape architect

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THE REMODELED FARMHOUSE HOME OF MR. CHARLES EBERT, GREENWICH, CONN. Theodore E. Blake, architect
Practically the whole of the main building is new, but its character and detail were governed by the old farmhouse, the wing at the left alone of which remains
By the edge of the Mianus River. The approach is at the extreme left where the highroad crosses the water

The Farmhouse Reclaimed

SOME OF THE PROBLEMS MET IN REMODELING THE OLD LANDMARKS THAT ARE TO BE FOUND NEAR MOST OF THE LARGER EASTERN CITIES

BY ALFRED MORTON GITHENS

Photographs by the author and H. H. S.

[This is the second of two articles by Mr. Githens. The first revealed the wonderful material for country or summer homes lying ready to our hands in the well built farmhouses of a century ago.—Editor.]

THERE is a fascination about an old house, but in just what consists the charm it is hard to tell. Not in the architecture only; houses in the same style and just as well designed are built every day. Is it in the setting, the choice of location, the suggestion of former gardens, an occasional box-tree or a white lilac of monstrous size? Perhaps in part; or is it rather in a sentimental appreciation of the old for the sake of its age—almost a reverence which leads us to see all that is good and gloss over the bad? Do we unconsciously feel that new work in an old style is an anachronism, an affectation, and therefore prefer the old itself, lest such a criticism be raised in our subconscious minds?

A restoration cleverly done we welcome as a proper revitalization of what should be perpetuated. Back of the golf club in Greenwich is one of the larger farmhouses (see frontispiece), restored so that all the old one can detect is the kitchen wing. Most subtle and difficult is the restoration or adding to an old house, but so alluring that one welcomes an opportunity, even if it is only in acceding to an editor's request and experimenting with a photograph. This square house, for instance, in a later style, built in the age of beaver hats and nankeen trousers; uninteresting in outline and nothing but a box, it needs something to change the rigid silhouette and lengthen it; wings, perhaps, with bedrooms on the second floor and each a single room below; north, a library toward the orchard, and south, a dining-room
opening on new imaginary gardens; a wider entrance gateway; hedges, shrubs and straight flower beds; a terrace at the floor level along the front, with formal bay-trees or Catalpa Bungii to break the even white. One is curious to see what the future owners will do with it, for the place happens to be for sale, with its forty acres in one of the better sections of Greenwich overlooking a broad stretch of country.

Just what an old place of this sort would need in repairs is difficult to say; sometimes an old house is habitable just as one finds it; generally there is no plumbing and one or more bathrooms must be arranged, and if the city supply is not near, a ram or windmill provided to pump water to a storage tank from one of the old wells. This means a range with a water-back and boiler for hot water, at a cost of perhaps three hundred dollars for each bathroom and somewhat more than that for the water supply.

A house now square and uninteresting, but with possibilities of development, as suggested on the page opposite

One of the solutions of a common problem. In old houses the second-story windows are near the floor, under the cornice, and must be enlarged to make the bedrooms livable

On an eastern hillsife overlooking the valley and stream. Below a garden and lawn might be developed as shown opposite

A heating system will probably be necessary—if it is a small house and ducts can be arranged, probably hot air; if larger, hot water, at somewhere near an average cost of seventy-five dollars a room. It is not always necessary prominently to expose the vertical pipes called the “risers” and “returns”; they can be arranged in closets, or in corners behind a projecting angle where they are seldom seen. In an old house they cannot be placed in partitions, for the old system of house framing placed a solid beam in each of the floor levels, and pipes cannot pass.

Electric wiring would cost seventy-five dollars or more, depending on the number of outlets and whether a “knob and tube” or a hollow pipe or “conduit” system is desired—the former the usual type, but the latter far better and safer. As to general repairs, no average can be made, for various houses cover all ranges of good or bad condition. New leaders and gutters they generally need; flooring sometimes laid over the old floors. Chimneys must be carefully inspected, for mortar is apt to have fallen out in places. The chimney used for the heater flue must be re-lined for at least half the height, past the second-floor beams. If a new wing were added, the heater chimney could be placed in it; in general it is more economical to place the bathroom, pantry and any rooms that require especial fitting there.

The other altered photograph—the lower one on page 13—presents a typical local farmhouse in one of the excellent sites they seem invariably to have chosen; this one on an eastern hillside at a turn in the road. A west wing might be added; the old terraced farmyard converted into a formal garden, with pergola or arbor at the edge overlooking the valley and stream below. One is eager to attack the briar patch along the road and rebuild the ragged stone wall or plant a hedge in place of it. Pruning here and there, sawing off dead limbs, clearing weed-patches and a fresh coat of paint on the house—these count out of all proportion to their cost.
The square house on the opposite page as it would appear if new wings were added and the approach developed.

The old terraced farmyard, planted as a garden, with a pergola along the edge of the hill.
The long sloping roof on the Mianus house has something of the quality familiar in the Dutch Colonial work.

There is one difficulty often met; the second-story windows under the eaves or cornice are too small. Sometimes, as in the house just mentioned, they are high and their sills may be cut down; sometimes they are near the floor and must be raised; a section of the cornice might be lifted and the roof up from it given a flatter pitch, or the cornice boldly broken and a gable built over each window as in the house illustrated in the middle of page 12. It is perhaps the most satisfactory of the several solutions, but the house must be long and low to stand it and too many gables must not be introduced. In the case cited the center window has been left as it was.

A nearer view of the house shown in the heading on page 11. The house is quite small but there is always the opportunity to add new wings in conformity with the old work.

The House with the Pine Tree at the edge of the Mianus Valley is of this type (see top of page 15), singularly beautiful in its architecture and well worth adding to. Another is opposite a reach of the Mianus where the river road crosses the stream. Like many of these old places, it is not near a station, but with a motor car one or two miles is hardly regarded, and the best of the old houses are gradually being taken up and converted with more or less success. This house is small and plain, but one must look far to find a site with such possibilities; sheltered from the northwest wind by gently sloping farm land, its lawn extends to the river edge, an invitation for someone to try his
hand at planning a garden on varied levels, at developing the approach or adding to the house. Another of the type has been curiously altered. An old farmhouse turned into a bungalow sounds absurd, yet it has been attempted (top of page 14); rough tree-trunks are used as columns and a veranda built almost around. It is rather attractive in certain ways, with its curious mulberry color that tones in with the pink apple blossoms. It is low, with sloping roofs, perhaps always an attraction. That is the quality of the old Dutch houses with their long curved roofs, a type non-existent in this part of Fairfield County, unless the Mianus house (top of page 14) is an example of it: a beautiful old house and pathetic withal, for Mianus village has engulfed it within wretched houses and it has fallen into an ignoble old age. Immense wisterias that covered the entire gable end were cut down last year, dear knows why! — when they think it worth while they will "make it up to them." One of them bought twenty bed-springs "dirt cheap" in Long Island and shipped them across the sound to mend gaps in his stone walls!

A Shrubbery Group of Wild Things

HOW THE PROBLEM OF HARMONIZING A NEW HOUSE WITH ITS SITE WAS SOLV'D BY NATIVE SHRUBS DUG UP FROM THE WOODS AND ROADSIDES

BY E. P. CAHOON

Photographs by N. R. Graves and others

When the new house in the suburbs was fairly finished and they had moved in, not a dollar was left over; in fact, the man who came to do some extra tinkering on the cistern had to be paid, for the time being, with a promise. Under these circumstances, there was nothing of course for shrubs. And perhaps it was just as well that it was so, for otherwise they never would have found what glories were all around them. It was summer, so of course, nothing could be planted until fall. Even then the expenditure of every cent of the family income had been planned for months to come.

That is how she came to say, "We'll dig up that Thornapple tree we used to see when we came out to watch the house grow." It was on a stretch of wild woodland on their way to the city, and had attracted their attention in the spring by its wealth of snowy, fragrant bloom. And that set them thinking of other lovely things they had seen, and set them marking these shrubs that they might distinguish the right ones in the fall when the bloom foliage would be lacking, and they should come to transplant them.

In their Sunday afternoon walks they soon found a fine pink Meadow Sweet, which is really a beautiful native Spirea (S. salicifolia). They marked it, and, at the same time, a high-bush Cranberry (Viburnum Opulus), with a little strip of red cloth, and two months later found the birds had fancied and had carried the strip away to add a bright note to their nest-dwellings! So next time the two marked the shrubs with a bit of shingle tied on with a wire.

"We'll plant all this end of the lot with wild things," said she, "and when we can afford it we'll plant the west end of the place with nursery stock," said he; and so it was...
The wild Aster can be dug up from the roadside and will thrive under cultivation.

The Black-eyed Susan is another flower that we would import if it did not grow plentifully in the fields.

The Black-eyed Susan is another flower that we would import if it did not grow plentifully in the fields. In the meantime the west end of the lot was plain lawn of different appearance.

They now began in earnest, and prepared the soil by working it into shape as if they were expecting a carload of things from a nursery. In the summer evenings they scraped up and drew to the garden a load of leaf-mould, and the mistress went with him to the woods as official overseer to be sure the boy scraped and collected only the fine, soft black substance from the top of the woodland earth—the true leaf-mould.

A little sand, which the plasterer had left, was mixed with this soil for the sake of drainage, and this load of leaf-mould with a small load of fertilizer from a barnyard nearby was well mixed into it by turning with a fork and spade. The ground then had to be left to warm and soften in the summer sun, with only a digging over each two or three weeks to turn the weeds under. In the fall it was in excellent condition.

At the edge of a swamp down the road, not far away, they found a Black Haw (Viburnum prunifolium), and near it, among the Hazel brush, a yellow Honeysuckle vine and these they likewise marked for taking up in the fall.

An Elderberry bush (Sambucus Canadensis) was trailing its black berries from a fence corner as they passed on one of their long tramps, and that, too, was promptly marked for transplanting. Coming home they saw at a little distance a thicket of wild Plums, so they went nearer to see if there were small trees among them. In addition to the plums there were three or four Cornel (Cornus Mas) bushes that bear such beautiful blue-black berries, each on a small crimson stem.

Sumach (Rhus Canadensis and Rhus cotinoides) was easy to get, and very desirable for its vivid color in the autumn; and finally some Prickly Ash (Xanthoxylum Americanum) showed its scarlet seeds from the bushes along a country road, and was tagged carefully for transplanting.

Bitter Sweet (Celastrus scandens) and Woodbine (Ameloposa quinquefolia) were not hard to find, for the mistress knew the limestone ledge was the kind of place the first would likely have for a home, and Woodbine (or Virginia Creeper) is likely to be found wherever a bit of woods has for a few years been left undisturbed.

A Gooseberry bush was the find of another tramp one day, and marked for transplanting. And truly, when it was in place and sent out its clear-cut... (Continued on page 56)
A stone wall along the highway changed the old inn into a country home. A driveway entrance leads around to the end of a wide porch overlooking the rear lawn.

The Sorrel Horse Inn Reborn

THE MAKING OF A DISTINCTIVE COUNTRY HOME NEAR RADNOR, PENNSYLVANIA, FROM AN INN THAT WAS USED BY OFFICERS OF THE CONTINENTAL ARMY DURING THE REVOLUTIONARY WAR

BY JARED STUYVESANT

Photographs by H. H. S.

In England a man about to build for himself a home will, as a rule, look eagerly over the property on which it is to stand, to see whether there is not some old building upon it that might serve as the basis of the new work. If it is possible for him to remodel and add to an existing structure, no matter how dilapidated its condition, he counts himself a fortunate man. The matter of economy does not enter into the question at all; the remodeled country seat may cost more in the end than a new house would, but the former will be far more likely to meet his ideas of what a home should be. With an entirely new house, the place may be brighter, cleaner, more sanitary, more conveniently planned, but with a remodeled old house there is an atmosphere about it that is absolutely foreign to new stone walls or unseasoned woodwork. It is a difficult thing to define, but it is no less certainly present about any place that has, in part at least, become softened by time and weather and made a more intimate part of the land itself. Anything that has been in existence for a considerable time is sacred to the Englishman—buildings, laws, customs. He has in him something akin to the Japanese ancestor worship, but the former is a feeling that we of the Western world can more readily understand and sympathize with.

And we in America are
A glimpse of the driveway entrance porch from the semi-formal garden. The photograph was taken too early in the spring to show the garden at its best.

Just beginning to develop this same feeling of reverence for that which has been honored by time. It begins to show itself in a new attitude towards old trees; a few years ago we would have cut down the century-old monarchs in order that our puny little dwelling might occupy the exact center of its plot, whereas now we would move the house rather than the trees. It shows itself in a reverence for old furniture, old books, old landmarks. All this is evidence that a very young people is gaining in wisdom and in years. The first mad rush is spent and we are slowing down to a speed that permits us to enjoy something of the landscape as we pass by.

The country home that is illustrated herewith is that of a man who was one of the first to reach this stage of our national development. A number of years ago, when most of us had our axes out chopping down the big trees that we might put up our brand-new clapboard cottages, Mr. George H. McFadden's eyes were opened to the fact that a very old and very dilapidated inn along the post road between Philadelphia and Lancaster had in it the possibilities of a charming country home. The fact that the old stone building stood directly alongside the public road dismayed him not at all. Of greater moment was the fact that the thick walls of weather-worn stone had acquired a quality that modern building ingenuity could not hope to match, the white-painted woodwork of the interior had a distinction in its simple dignity that architects despair of attaining, and the place stood serene under the shelter of trees that only a century could grow.

Then there was the atmosphere of historical associations about the old landmark. As far back as the time of the Revolutionary War the inn was well established and known the countryside around. When the Continental Army moved from Valley Forge to Chester, during the occupancy of Philadelphia by Lord Howe, the patriot officers had spent their evenings in the tap room of the Sorrel Horse Inn planning their movements for the coming days, and the upper bedrooms were filled to overflowing.

Very little had to be done, after all, to make the old inn conform to modern needs for a country home. The remodeling, which was done under the supervision of Messrs. G. W. and W. D. Hewitt, architects, consisted largely in the restoration of damaged woodwork and the installation of modern plumbing, heating and drainage systems.

A stone wall along the road side secured the desired privacy, while the rear, with a large porch, was given a more rational connection with the broad stretch of lawn under the old trees at the rear and

At the lower side of the great rear lawn stands the old spring house.

Most of the bedrooms have the outlook over the clover lawn opposite the post road front. The rear door to the hall appears at the right.
One end of the living-room with its window overlooking the garden. The mantel ornaments carry out the consistent scheme of Dutch Colonial furnishing.

The old tap room with its smoke-blackened beams and dark oak wainscot has been made the dining-room.
A view from the central hall looking down into the tiled dining-room. The conservatory lies beyond.

The conservatory lies beyond the west or living-room end.

The old tap room, several steps lower than the main floor of the house was very consistently made the dining-room. Its woven wooden floor was replaced with one of small dull red hand-made tiles, some of which bear a raised pattern. On the ceiling the heavy smoke-blackened beams of oak remain, standing out in bold relief against the white ceiling. From one end of this room a conservatory opens, its glass roof sweeping up in graceful curve from over the low outer benches to the stone wall of the service wing.

Up the steps from the dining-room, and across the central hall that runs from front to rear, lies the living-room, and back of it a reception room that is almost as large. The main approach to the estate being by way of the drive, one enters the house from the rear porch and finds the reception room nearest the door.

Throughout the house the furniture, wall coverings, hangings, framed prints and many quaint ornaments are so thoroughly consistent and harmonious as to make the whole interior one of the most distinctive in America.

It is well known that the eastern end of Pennsylvania was settled largely by the Dutch and the Germans. The furnishing of Barclay Farm, as Mr. McFadden's place is called, shows the most interesting blending of Colonial pieces with those of Dutch flavor. And this is carried out even to the quaint little china figures on table and mantel-shelf, the curious blue plates over the dining-room wainscot, and the old lanterns hanging from the tap room beams.

Mr. McFadden's estate is primarily a farm, that is known the country over for its herd of Ayrshire cattle. The house is considered merely as an adjunct to the farm, not the farm to it, and is occupied not merely as a summer home but more or less during the entire year.

Isn't there something more than an interesting home here? To me it presents a striking object lesson upon our opportunities in seeking out and using some of the picturesque old stone mills, or even barns, that lie ready to hand—that we may weave into our new home something of the atmosphere that time alone brings.
The spring and pillar box interrupting an old stone wall in a small English village.

A wall fountain as the central panel in a fore-court wall.

We have far too few public drinking fountains such as give an atmosphere to older countries.

An effectively located wall fountain and pool. F.C. Brown, architect.

This distinctive fountain and pool in Rochester was designed primarily for birds. Claude Bragdon, architect.

Few features are so well adapted for axial terminals in a formal garden.

A terra-cotta drinking fountain at the end of a rustic pergola on the Hutchinson estate, Lake Geneva, Wis.

The pool and its wall fountain source in the garden of Montalto near Florence, Italy.

SUGGESTIONS FOR WALL FOUNTAINS
Blending Architecture and Nature by Planting

THE IMPORTANCE OF CLIMBING VINES IN LANDSCAPE WORK, WHETHER FOR THE GREAT ESTATE OR THE TINIEST COTTAGE—THE RIGHT AND WRONG USE OF VINES

by Grace Tabor

Photographs by Nathan R. Graves and others.

[The ninth of a series of articles by Miss Tabor on the subject of landscape gardening as applied to the American home of moderate size. Proceeding articles in the series have appeared under the titles: "Utilizing Natural Features in Garden Making" (Oct., 1909); "Getting Into a Place" (Nov.); "Formal or Informal Gardens" (Dec.); "Screening, Revealing and Emphasizing Objects or Views" (Jan., 1910); "Boundary Lines and Boundary Plantings" (Feb.); "Planting Trees for Air, Light and Shade" (Mar.); "Planting Shrubs for Mass Effects" (Apr.); "The Part Flowers Play in Garden and Landscape" (May). Questions relating to further details and planting information will be gladly answered.—EDITOR]

It would scarcely appear at first glance that vines need occupy the attention of the landscape gardener for very long, or that they hold a place very peculiarly their own in landscape work. Yet they are possibly the one class of plants upon which we are dependent more than any other, in every circumstance, and whether the work to be done is very great and pretentious or very humble and modest. For vines—or to speak more accurately, climbers—are a paramount necessity at the very beginning.

Nativities, staid and dignified, objects, I take it, to being surprised. Witness how aloof she holds herself from any newly finished work of man, until even the most unimaginative feel her absence and are chilled. And of course the work of man must be a surprise! Perhaps it is even a presumption—certainly it is artificial and unnatural—and possibly her averted face is no more indeed, than a very justly deserved rebuke!

But, however that may be, if man, with understanding of Nature's peculiarities and acknowledgment of his own crudeness, will offer her the apology which is implied in an appeal to her for aid, she is graciousness itself. All her resources are immediately at his disposal and the exquisite fabrics of her looms are flung with careless grace here or hung with rich splendor there, according to the need. Airy draperies and heavy there are—enough kinds to suit the demands of every place and occasion; encourage her to spread them—that is all she needs.

In common parlance and dropping lofty metaphor—plant vines—that is appealing to her for aid. Plant them first of all and plant them plentifully around new buildings. And plant them as soon as the builders have gone, quite independent of whatever other work may be intended and quite independent of the garden design. Whether a place is large or small, formal or informal, matters not at all so far as this detail is concerned; the vital thing is that every building must have vines upon it to impart that sense of oneness with the earth which is the first essential. Until this is acquired the eye will not rest upon it with any sense of real satisfaction.

But vines themselves are formal and informal in their habits, quite the same as other plants; and they must therefore be chosen to suit the place which they are to occupy and the material which is to be their support. Then, too, they are quite different one from another in other ways, and the qualities which distinguish them in these other ways must guide very considerably in their planting.

In the first place, though we speak generally of "vines" and though all vines are climbing plants, all climbing plants are not by any means vines; and in the second place, all do not "climb" unassisted.

Climbers are defined as weak-stemmed, tall-growing plants which are incapable of rising from the earth without support. Of this very general class the true vines lift themselves; the others are simply prostrate unless lifted.

The means by which vines lift themselves are the determining factor as to their use, and these means are three in number. Some twine bodily around their support, some catch it with tendrils or twining leaf stalks, and some cling to it with aerial rootlets, or with numerous tiny sucker-like disks provided for the purpose.

The latter of course are the vines which furnish the dense, compact and beautiful wall coverings—the most formal growth that there is; the Ivies ascend in this way, also the "clarion-flowered" Trumpet Creeper. Morning-glories and Wistaria are twiners—note that they are more airy and careless in their growth—while the Grape in both its ornamental and its purely utilitarian forms, is an example of those still more careless growers which draw themselves to their support with coiling tendrils.

The so-called climbing Roses do not climb at all, but must be helped up and tied to their support; the Matrimony Vine, so often found in old gardens, is at a similar disadvantage, but this is usually planted where it may fall over a wall and in such a position needs only to be let alone. A variety of the familiar
Forsythia, which has slender, pendulous branches, is practically as much of a climber as either of these, though it is all too seldom used as such; this is suited to a similar location against a wall. And there are numerous hardy plants listed as prostrate shrubs which send out long runners quite the equal of many reputed climbers.

Of course, only the class of climbers which actually hold fast to a surface by disks or rootlets, are entirely independent of a trellis or support of some sort; but on the other hand, this very quality of close surface clinging makes its possessors unsuitable for use in many places. The grip of the tiny disks or rootlets carries the plant over and around an object until it is practically lost to view—and that is going a little too far. A shapely white column, for instance, is lovely when ornamented by a green tracery that shows against it—but clumsy when obscured by a thick, verdant blanket that destroys its outline. For, after all, though Nature is to be placated as far as possible, we cannot allow her to obliterate our abodes.

Generally speaking, all porch vines should be provided with a trellis to climb on—and right here let me say that the ornamental possibilities of various forms of trellis are rarely taken advantage of as I should like to see them, and as they very easily might be. There is a permanent beauty in a well designed and well constructed permanent support, that frankly takes its place and makes no attempt to hide when the plant which it supports does not conceal it, that deserves more consideration than it usually receives. Strings and chicken wire are not to be despised in their place, but the dignity of heavy-growing and profuse-blooming hardy climbers requires something worthier than these to support it—and this something should always be built. The architecture of a building will usually suggest the form and the design to be adopted, and some architects, indeed, include such suggestions in their elevation drawings for a house.

Vines over a porch, however, whether supported on a trellis or climbing directly on the uprights which sustain the roof, should always follow the lines of construction and should never cross the open spaces between columns or uprights, nor should they be allowed to fill these by hanging over them from above.

For the drapery of columns select one of the lighter, more graceful vines that does not obscure its support.
If you plant English Ivy on a stone wall or brick wall keep it trimmed back from the window openings and do not let it obscure the entire surface against a house is never a source of any particular pleasure to the dwellers therein, for the blossoms are borne where they cannot be seen excepting from without. It is well to bear this in mind in selecting and planting—not that it is a reason for not planting flowering climbers, but rather that it is a reason for planting two of them—one against the house, if you will, and one against a trellis or arbor or outbuilding, where it can be seen from the house.

It is a good rule to keep the green and leafy vines for the dwelling, however, because of their freedom from insects and the absence of litter in the shape of falling petals and flowers. Roses require spraying invariably, and other flower-bearing climbers are apt to—and it is a great nuisance to accomplish this where they are trained against a surface which may be stained by the spray.

Climbers are the one means whereby Nature's green may creep up and cover foundation walls where they rise from the ground—and that is the particular place where they need covering. The work of garden construction on any place is well begun when plants to furnish this cover are once established. The planting of shrubs later, at points along a foundation, is a matter to be decided by the plan of air and view. Vines clothing walls should likewise be trimmed sharply away around case-ments and other openings; indeed the effect is better if they are not allowed to cover an entire wall surface but are restrained at suitable points so that the wall itself is visible for perhaps a third of its area. The contrast between wall and foliage is usual-ly more pleasing than the unbroken expanse of green—and cornice lines, corners and angles here and there should always be left uncovered to reveal unmistakably the definite form and strong, sharp outline of a building.

The use of flowering climbers against a house is never a source of any particular pleasure to the dwellers therein, for the blossoms are borne where they cannot be seen excepting from without. It is well to bear this in mind in selecting and planting—not that it is a reason for not planting flowering climbers, but rather that it is a reason for planting two of them—one against the house, if you will, and one against a trellis or arbor or outbuilding, where it can be seen from the house.

If you plant English Ivy (Hedera helix) may be used where no sun will reach, if one wishes. The English Ivy is more formal in growth of the two and is therefore especially suited to buildings of a very formal nature or style, but its hardiness in this climate depends on its being protected from the warmth of the sun during cold weather—the sun kills it, not the cold—and this of course renders its general use on all sides of a structure out of the question.

On buildings other than dwellings several vines may sometimes be mingled with good effect, if the right kinds are chosen. With those which, like the Honeysuckle, are inclined to be bare of foliage near the ground this combination planting is indeed quite essential to a pleasing result. Clematis also needs the leafiness of some companion to make up for its own lack of foliage, especially low on the stems.

Combinations to insure all-summer bloom are easily worked out, while striking hedges made up of a tangle of two or three like Honeysuckle and Wistaria, supported by and mingling with the common wild rose of the fields and roadsides (Rosa lucida) or the even lovelier Michigan Rose (Rosa setigera) that form a practically im-penetrable barrier, will grow almost for the planting. They require more ground, to be sure, than an ordinary fence, but they are a garden in themselves, and the only care they need is the cutting away of enough of all three annually to prevent them from choking each other. The Honeysuckle will require the severest pruning usually, being a rampant grower.

There is a wonderful opportunity in specially designed lattice work as a support for vines in place of the chicken wire or string that is too often seen.

"Wyck," a famous old home in Germantown, where a trellis for vines covers the whole wall.

(Continued on page 54)
If the lily-pond must be an artificial one, try to preserve the semblance of nature by concealing the cement edge with rushes and the many available ornamental grasses.

Making a Water-Garden

HOW EVERYONE MAY HAVE A LILY-POND IN HIS OWN YARD—WHAT TO GROW IN IT—SOLVING THE WATER SUPPLY AND MOSQUITO PROBLEMS

BY MARY H. NORTHEND

Photographs by the author, J. H. McFarland Co. and others

ALL mankind loves a garden, but comparatively few of us realize the charm of water-gardens, because they are so rare. Their beauty needs only to be seen in order to be appreciated. Then why are they not more commonly seen? Three reasons have been given me by three different persons:—First, ignorance of their construction; second, an exaggerated idea of their cost; third, fear that the more or less stagnant water would breed mosquitoes!

Then why are they not more commonly seen?

As to the last objection, its futility causes one to smile. Put a few goldfish into your pool, and they will take care of the mosquitoes. Moreover, freeing the pool of mosquitoes will be to them a joy and not a duty, for the young larve are their favorite food. Sunfish will perform this office just as well as goldfish can, and, if less beautiful, they are also less expensive and more hardy. Do not, however, make the mistake of putting both kinds in at the same time, or your dainty little goldfish will fall an immediate prey to their stronger and more voracious neighbors.

Now as to the construction of a water-garden, the scheme is really very simple. Fortunate is the person who has a small stream running through the premises, part of which can be diverted from its original channel, and coaxed to form a thing of beauty in some pleasant nook of the garden or lawn. With a natural brook, however small, to furnish the theme, we can produce numberless aquatic variations. There can be miniature cascades and moss-grown rocks, carefully shaded banks draped in Stonecrop and Maidenhair fern, a mossy log spanning the stream at one spot and a vine-clad rustic bridge at another.

Between the bridges the water may widen out into shallow pools, carefully planned in their details, but so very natural in their cumulative effect! Around the edges of these pools we set our roots for a bog garden. In the pools we have only to start roots of our native white Pond Lily or the pink Pond Lily that comes from Cape Cod. Both are perfectly hardy. Planted in a natural basin, such as I have described, they will take care of themselves in winter as in summer, and can need no possible attention from us, unless it be to thin the plants if they increase and fill the pool.

Goldfish, sunfish or minnows will improve such a stream. You can even keep young trout, if you choose. But in any event, whatever your fish may be, to guard against loss you must screen with fine wire netting the passageway by which the water enters your land, and also that by which it leaves it.

Now you may say that you have no natural stream that can be persuaded to cross your grounds; that if you had, you would at least give this experiment a fair trial. Are you sure that
A natural water supply is not necessary; rains and a hose will keep a small pool fresh, and the occasional overflow will benefit the lawn or the edging of bog plants there is no unfailing spring or pond, situated on ground a little higher than your house-lot, from which a pipe can be laid to your place at small expense?

One of my pleasant memories is of such a case. The pipe runs from a pond in the hills to the north of the premises, and enters the grounds through a retaining wall of roughly-shaped boulders laid in cement. The iron head of an ugly gnome is fitted into this wall, and the outlet of the pipe is at the gnome’s hideous mouth. The water falls into a shallow basin of perfectly clear water, in which may be seen stones of varied and beautiful colors, kept clean by frequent scrubblings with a hand-brush. Goldfish sport about, but there is no vegetation in this pool. The limpid clearness of the water, with the beauty of the fish and the ornamental stones, furnish sufficient attraction.

Vines are trained against the rock wall, and about the basin just described, lies a bog garden, filled with trailing cranberries, starry white Arrowhead, quaint Pitcher Plant and Sundew.

The overflow from this basin directly under the spout is guided, by means of a visible channel paved with cement in which cobblestones lie imbedded, to a second basin at a somewhat lower level. Here we find a real water-garden, comprising three kinds of lilies and the curious Floating Heart, with decorative rushes. A second bog garden forms a finish for the edge, and the waste water leaves the grounds by means of a covered tile drain connecting with the sewer.

A friend of mine who can control no water supply except his garden hose, has for two years past cultivated a satisfactory and very inexpensive water-garden. He was able to do the work himself, at odd times, and looked upon it as a recreation. He first dug a shallow basin, elliptical in shape and with gently sloping sides. Its depth at the edge was two feet, but the middle was fully six inches deeper than the edge. This basin he lined with a coating of cement, fully an inch thick, using the good old formula of two parts of sand to one of cement, and made it watertight. Then he bought a few butter firkins, sawed off the staves about the topmost hoops, and wired them, to make them stronger. In the tubs thus formed he placed a very rich compost of scarpings from a cow-yard, mixed with garden loam. In one tub he planted roots of Water Hyacinths; in two others, roots of white Water Lilies; and in one, pink Water Lilies of the variety mentioned before. He then filled up his artificial pond by means of his garden hose, and put in two dozen goldfish.

Not content with this success, he then dug all about his newly made pond a trench six inches deep and fully two feet wide. He cemented this in just the same manner described, and filled it with very rich loam mixed with black meadow muck, until it was level with the surface of the lawn. The overflow from his mimic pond keeps this bog garden saturated, and in it all manner of semi-aquatic plants are thriving finely. He enjoys this bog garden best for the reason that it is never so full of beauty as to hold no more. From every fishing excursion he brings back new specimens to add to the collection already flourishing there. So he has Jack-in-the-Pulpit, Arethusa, Calopogon, Sundew, Buckbean, Painted Cup, Marshmallow, Watercress, Blood-...
root, Hepatica, Swamp Violets, Crow-foot and the Cardinal Flower, besides Arrowhead, Pitcher-plants and Cranberry vines.

You will notice that no outlet is provided save by overflow and evaporation. For a small pond on a lawn these are sufficient, if one gives his basin good attention. The goldfish take care of any troublesome larvae from the insect world, and the hotter the sun shines, the better the vegetation thrives. Every hard rain causes the basin to overflow and thus freshens the water, and in time of drouth and great evaporation the same effect may be brought about twice a day by means of the garden hose morning and evening.

Of course he winters his tubs of lily roots in the cellar, and patches up his cement lining for the main basin every spring, to be sure that it is watertight for the season.

The house owner who desires a more permanent tank must construct one that is also more expensive. The two conditions which he has to meet are that the basin shall be absolutely watertight, and that it shall be proof against frost. Concrete, combined with brick or stone, is undoubtedly the most satisfactory material to withstand the ravages of time and weather. A basin constructed with a solid concrete bottom and walls of brick, finished with cement, and flaring outward sufficiently to allow the expansion of the water within when it freezes, is to be strongly recommended. If the work is carefully done, such a pool will last for years, and it is sure to prove in the end no less economical than a cheaper ones which necessarily needs repairs more frequently.

The central feature of a formal garden, depending on rains for its water supply. The drain pipe carries off the surplus

The regulation depth for a lily-pool is two feet. Of this space, one-half is occupied by a layer of marsh earth, well enriched, and covered with a light top dressing of clean, sharp white sand. A few submerged plants such as the Anacharis Canadensis gigantea, serve a useful purpose in purifying the water.

Judging from its beauty and the facility with which it adapts itself to varying climates and conditions, the most satisfactory plant for setting out in the pool is the Nymphaea, or floating Pond Lily. Especially hardy and well adapted for water-gardening is the Nymphaea odorata, or common sweet-scented white Water Lily, which is native to ponds, shallow borders of lakes and the edges of placid streams all through the eastern half of the United States. Once well established, it will thrive almost anywhere, and its fragrant blossoms and glossy pads are a constant delight to the eye from June to September.

Included among the hardy Nymphaeas are several varieties of colored Lilies which afford a charming contrast when planted in combination with the white species. One of the very earliest kinds is the Miliacea rosea, a lovely rose-colored Water Lily, which often makes its appearance long before the Nymphaea odorata has begun to put forth buds. The Miliacea chromatella is among the most satisfactory of all yellow Water Lilies and is also an early and persistent bloomer. Both are strong growers and so hardy as to require very little protection even during the cold winter months. Except in climates where there is danger of a pond freezing to the bottom, any of the Nymphaeas named may be safely left uncovered. North of New Jersey it is usually a wise precaution to drain the water from the lily-pool in the summer.
autumn and cover the plants with a thick mulch of dry leaves or straw. Over all should be arranged a water-shed of boards to keep the basin dry and thus prevent the roots of the plants from freezing. If such a protection is afforded them until the frost is well out of the ground in the spring, *Nymphaea* may be grown in any part of the country with little danger of loss.

Another Lily, which has been found admirably adapted for planting in America, is the *Lotus*, or *Nelumbium*. From China and Japan this sacred flower, which is so inseparably intertwined with the art and mythology of the ancient Egyptians, is imported to this country to ornament pool and water-garden.

For the indoor water-garden a sheet-iron tank, well protected from rusting by paint, is best. Water Chinquapin. Throughout July and August this plant bears magnificent pale yellow blossoms, closely resembling the

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**Landscape Gardening With Bush-Hook and Pick**

BY H. W. HILLYER

YEAR ago last autumn I came into possession of a piece of land of about fourteen acres, which is situated largely on a bluff overlooking a broad portion of the Connecticut valley. At the foot of the bluff is a bit of marshy land through which trickles a brooklet fed by springs. From this marshy spot the land sweeps up through the garden to the house site on a high knoll and back into the wooded dell from which the brooklet flows.

The public road, which gives access to the bluff, and borders one side of the land, leads up through a glen and by the side of a brook under a dark hemlock grove. From this road a zigzag cart-path leads up by a steep grade to a place not far from the edge of the bluff and near to its highest point.

In time past, the top of the bluff and the steep slopes below have been covered with a growth of good timber, but a few years ago everything useful for lumber, ties or fence-posts was cleared away, and it is now covered with bushes and coppice growth from the old stumps, and a few old trees too gnarled to be worth cutting. Its varied soils, contours and elevations, and its aspects south, west and north, also give conditions suitable for the growth of a great variety of lesser plants. These blooming in succession from the time of the skunk-cabbage near the brooklet to the time of the goldenrod and asters in the meadow, rival in interest its shrubs and trees, its rocks and distant views. There are on this tract at least thirty varieties of trees, mostly common native trees, but no less suitable and beautiful on that account. Largely they are sprout growths in clumps and groves, with a few old trees too full of limbs and knots to please the woodman, but for that reason all the more full of character and beauty.

Most of my time and labor have been spent in caring for a neighboring piece of land on which are growing a young orchard and the crops planted between the trees. But from time to time I have walked over this woodland tract, noting its present beauties and thinking of the means for revealing them and making them more accessible to myself and others. I also believe in the commercial value of beauty, and feel that to develop this place will increase its value by many times the value of the labor expended. As it is within reach by trolley and automobile of several good-size and prosperous towns, it will be desirable as a site for summer residences or bungalows.

A part of this tract also is planted with a young orchard, but a part of it is too steep and rough and stony for planting, and in fact, too valuable for its beauty to be used for planting. I had learned to use the bush-hook in clearing out the fence corners in the orchard and the pick in cutting a practical roadway to the barn. In my Sunday walks I saw how these tools might be used to good effect in this woodland. At odd moments and at times when the crops did not need my personal attention, I have done a little sketching with bush-hook and pick, expecting that nature will complete the picture.

My predecessor and present assistant in landscape gardening, an old white horse, has maintained several obscure paths along the easiest grades to the places of most interest to him—the old apple tree, the clearing where sweet grasses grow near the edge of the bluff, and round about through the bushes to

(Continued on page 46.)
THE NEED FOR DURABLE MATERIALS, STRONG DESIGN AND BRIGHT COLORS IN PILLOWS FOR THE OUTDOOR LIVING-ROOM

by Louise Shrimpton

Porch Pillows

The old-fashioned rag carpet weaving adapted for a porch pillow

Select conventionalized flower patterns rather than naturalistic ones like an ordinary room; a brilliant outdoor light is a very different proposition, when considering color schemes, from the shaded effects obtained indoors; the adjoining lawn or garden, with its flower beds and shrubs, is seen in connection with the porch, and the two should be planned together. Everyone has seen the porch where this precaution has not been taken, where not only porch railings but sofa pillows and cushions are of a magenta hue, while close by are growing scarlet geraniums. This is an extreme case, but the porch is frequently fitted up in style and color to harmonize with the hall or living-room of the house, and no consideration is given the subtle relationship that might exist between porch and garden. A careful study of harmony and contrast in flower beds is thought a necessity by successful planners of modern gardens. To go a step further, and to include in the garden color scheme the furnishings of the porch, usually built to overlook the garden, is the logical conclusion of an artistic scheme.

In choosing colors it is found that a luminous outdoor atmosphere softens certain colors that would be glaring indoors, while others become much more prominent on a porch than in an indoor room. The best method of selection is to test good-size color samples for pillows and cushions, as well as for wood finishes, on the porch where they are to be used, keeping in mind the colors of flower groups planned for the garden, and subordinating the porch scheme, making it a background effect rather than a color climax. In selecting shades of green, especial care must be used, as it is easy to pick out in a shop a green that is agreeable enough indoors, but glaringly inharmonious when seen outdoors, near the modified greens of grass and shrubs.

While occasionally deficient in color values, modern porch furnishings are almost always simple in type. The word simplicity has been exploited of late years until it is connected in some minds with a Spartan austerity of line and color in architectural detail and in house furnishings. However much some people may protest against this idea, clinging to as much luxury as they can afford in their houses, everyone admits that luxurious furnishings are out of place on a porch, where a free and easy out-of-door life is enjoyed during the warmer months. Comfort is demanded in porch furnishings, and especially in chairs and settles. Either woven furniture is used, with thin pad-like seat and back cushions; or Mission furniture, with its straight lines and sombre coloring relieved by a summer outfit of removable cushions; or if the house under consideration is Colonial in style, quaint Colonial chairs and high-backed settles, of the type once used in old farmhouses and cottages, are employed, either genuine antiques or modern reproductions, fitted out with cushions to soften any angularities of shape.

Pillows and cushions may readily be made at home, and the time and thought devoted to them are amply repaid by the increased comfort of the porch. In choosing material for covers, stuffs are selected that will stand sunlight or a few drops of rain without fading or spotting, and linens, cottons, or woollens that have a homespun appearance are usually employed. The covers are of uniform material and color, with perhaps one or two of contrasting tone to give needed accents. If of washable material, two sets of removable covers are made, for greater convenience in laundering. White linens or cottons are especially delightful in tone when flecked by sunlight or in cool shadow, and English linens, that are printed by hand in all-over patterns of delicate coloring, are charming in effect. Importers' samples of these linens can sometimes be bought at reduced prices at linen sales. Hesper cloth, a material that imitates a coarse linen weave, makes good pillow covers, and other dress goods are often used. Plain materials are sometimes decorated at home with hand-printed designs, by using the wood blocks now sold in Japanese shops. English cottons, with quaint patterns woven in the goods, are attractive as covers, though (Continued on page 48.)
A private driveway on an estate in Glencoe, Ill. Jens Jensen, landscape architect. In flat, dry locations careful "crowning," without gutters, is all that is necessary.

Road Making on the Country Place

THE HOW AND THE WHY OF ROAD MAKING AND ROAD MAINTENANCE—NEW METHODS MADE NECESSARY WITH THE COMING OF THE AUTOMOBILE

BY T. E. WHITTLESEY

Photographs by Henry Fuerman and others

Two generations ago a Scotch engineer, MacAdam by name, taught the British to build their roads with a "dry cellar and a tight roof," and his name in consequence has ever since been a part of the nomenclature of the science he founded. For sixty years MacAdam's roads represented practically the last ideal of highway builders, and even now most of our roads are built to his specifications, with a foundation of broken stone surfaced with fine stone chips and cemented together to a firm and smooth surface by the bonding power of sifting dust, wet down and rolled in.

For the private driveway a less width and a thinner wearing surface will be required than for the public highway. Eight feet is sufficient width if the driveway is short, or twelve feet where it is necessary to provide for the passing of ordinary vehicles. As to the depth of the macadam, six inches is usually considered a minimum for a highway, but four inches would suffice for a private driveway.

Drainage is always the first essential to be provided, yet it is far too frequently left out of the amateur road maker's calculations. If the road is to be built upon a level dry footing, shallow side gutters will, if kept clear of sand and leaves, usually suffice to drain the crowned driveway. If the location is a damp one or on a side hill, these gutters should be dug four or five feet deep and filled with coarse stone, a layer of hay or brush and a top dressing of dirt. The fibrous layer is to keep the earth from settling in among the stones and stopping the drain. If it becomes necessary to carry a drain across the road, do it by means of a concrete or sewer-pipe culvert, never with a surface gutter.

Everyone knows that a well made road should be "crowned," with its cross-section having a flat curve that drops about three-quarters of an inch to the foot from center to gutters. This crown is maintained by the use of a road scraper or a "King drag"—consisting of a pair of heavy planks that are drawn by chains fastened to

Oak Avenue, River Forest, Ill., an example of modern tarvaried macadam
a wagon tree. One pair of the ends of these parallel planks lag behind the opposite ones, giving the scraper an angle of some forty degrees with the wagon tree. The drag is drawn along the side of the road with the lagging end towards the center, tending to throw the loose dirt towards the crown.

Sandy roads are improved by a top dressing of earth, and in some Western localities straw is also thrown down on it to make a more compact surface. With roads built largely of loam or clay, on the other hand, the addition of sand is an improvement.

With macadam roads, which are always more desirable, a well graded and substantial foundation of an earth road, such as described, is essential. Trap rock is a universal favorite for the macadam surfacing, with granites and limestones next approaching it in value. For a four-inch depth of macadam, the lower layer may be of stones ranging from three-quarters of an inch to two inches in diameter, rolled down preferably by a very heavy roller to a depth of two inches. For the second layer, stone from an inch to an inch and a half in diameter is used, rolled to a depth of one inch, the roller working along the sides first and the middle last. A top layer of half-inch stone and dust is then put on dry, being rolled and well wet down successively until it completes the total four-inch depth. In a twelve-foot driveway this macadamizing will cost from $10 to $15 per rod, which, of course, must be added to the cost of the earth foundation.

One of the great road problems of modern times has been brought with the automobile. MacAdam was building for a traffic of vehicles weighing a ton or less and moving no faster than ten miles an hour. Let a 3000-pound motor car whirl over his carefully built driveway at thirty miles an hour, and a great cloud of his precious bonding dust goes swirling into the air and over the neighboring shrubbery.

Investigating more closely into the problem, he would learn that the driving-wheels of the car register a greater mileage on the odometer than the front ones do. The rear tires, despite their broad clinging contact and the heavy weight they carry, are constantly slipping. An emery wheel could hardly be more effective in grinding and pulverizing the brittle macadam surface. The old Scotchman himself would be quick to confess that his surfaces were not designed to resist such strains.

So progressive highway builders of to-day have thrown away much of MacAdam's teaching and have rewritten the whole science of road construction into conformity with modern demands. No longer does the builder of long driveways or public roads cement his surfaces with wet stone dust—the dust would be gone in a month. Neither does he make his surfaces hard, for a hard surface opposes just the dry brittle resistance to the abrasive wheel that it needs in order to produce powder. Coal Tar, that wonderful mother of so many commercial articles, rang-

(Continued on page 52.)
It has frequently been said that every bit of architecture in America is patterned after the work of another land.
another land; there is absolutely nothing in this American farmhouse type that is not distinctly our own.
Perennials That Should Be Better Known

FLOWERS FOR THE HARDY GARDEN THAT FOR SOME STRANGE REASON OR ANOTHER HAVE TOO LONG BEEN OVERLOOKED — LEOPARD’S BANE, GEUM, BLUE SALVIA AND OTHERS

BY H. S. ADAMS

Photographs by the author and F. A. Walter

Growers of flowers for the sheer pleasure of the thing are, as a rule, singularly unresponsive to not a few of the most alluring offers of the enterprising makers of catalogues. They are forever prating about wanting “new things,” but they are not game when it comes to trying to pick winners of themselves. Half the time, when they see something new—that is new to them, though it may have been catalogued for a generation, or more—they take it out in seeing and don’t even ask the name for further reference. This is one of the greatest of mistakes, for it may be that only the measly sum of fifteen cents stands between them and the acquisition of that very plant for their own gardens. The result of all this lack of gardening gumption is that a very considerable number of really admirable hardy perennials are by no means so well known as they should be.

For example, there is the Leopard’s Bane—Doronicum, if you like the Latin name better. How many persons who grow flowers in gardens can hold up their hands and say they know that plant? Not many, I wager. I rarely come across it anywhere and I can name a town that never saw it at all until last year. Yet it is one of the most charming of the spring perennials—the more so as it provides a good, clear yellow note just when it is particularly welcome. Doronicum Caucasicum is the type; but there are named varieties, ranging from lemon to orange. The Leopard’s Bane is particularly desirable for massing in the border or the larger pockets of a rockery, in either case in a naturalistic effect. The showy, rayed blossoms, sometimes more than three inches in diameter, rise gracefully from a bed of handsome, heart-shaped leaves to a height of two feet or so. May is its month, but some varieties run over into June.

Hands up again. Who knows the blue, or false, Indigo—Baptisia australis? Just about the same few. Early last summer, when the Leopard’s Bane had about gone by, I saw a large, symmetrical, well established plant of this showy native. It was more than three feet high and above the bluish-green compound leaves were quantities of the racemes of blue flowers, resembling somewhat the lupine, though larger. And all that beauty, of genuine distinctiveness, represented an investment of just fifteen cents not many years before. Somebody, instead of crying, “Oh, dear, I never could hope to grow anything like that!” had seen a similar plant somewhere and had immediately set about taking time by the forelock.

Quite as neglected is the Globe Flower, or Trollius, which gives the early hardy garden an even finer yellow note than the Leopard’s Bane. Like that, the Globe Flower is admirable in a small massing of clumps. Personally I prefer the deep orange Asiatic type, but the light yellow of Europe is perhaps quite as fine in its way. Globe Flowers will stand partial shade, and, whether there or in the sunshine, few garden flowers are more striking. It should be remembered when planting them that the foliage becomes unsightly after the first blooming; there is sometimes a lighter crop of blossoms in autumn.

Then who knows the Geum? There’s a little plant that ought to be more welcome in the home garden. I think I would use it in the border, if only for the tufts of hairy leaves that in my garden are virtually evergreen. Scarlet and orange, and shades wavering between the two, are characteristic colors of Geum, so the plant is worth considering where a touch of such tones is needed. The note can never be strong; as the blossoms, on stalks a foot or more long, are scarcely larger than buttercups and not over-numerous. There are two types, one with rounded leaves and the other with long ones, forming a complete rosette. Scattered along or near the edge of the border, they are quite effective the season through. I have known one of the orange varieties to bloom as early as April and as late as November, but the summer months are their flowering season.

And who knows much about the lovely Saxifrages from
across the water? There are the broad-leaved ones (Megasea type) that provide a bold, though very low, foliage effect for the edge of the border, or for the rockery, not to mention larger clusters of spring flowers. The purplish, pink-flower S. cordifolia, var. purpurea, is as good as any of the half dozen varieties in the market. A white variety, S. squarrosa, blooms in June, later than the others. The Megasea Saxifrages will do well anywhere, but the alpine kinds prefer partial shade and good drainage and are well adapted to the rockery. Of the latter, the genuine London Pride variety (S. umbrosa) will prove a charming acquaintance.

Another neglected early border flower, and among the most beautiful of all, is the Primula in some of its rarer forms. The Cashmere Primrose (Primula Cachemiriana) is unique in contrasting lilac flowers and whitish green leaves, the combination being particularly agreeable. The later Japanese Primrose (P. sieboldii) has white, pink and lilac flowers with light green foliage, and in its way is quite as beautiful. Then there is the remarkable blue Primrose (P. acaulis carnea). All three are perfectly hardy, and there need be no difficulty in wintering a fourth type of Primrose (P. auricula). The last-named blossoms freely the second year from seed and the range of coloring is nothing short of astonishing to anyone who is familiar with the Auriculas of England.

Then there is a Larkspur that ought to be in more gardens. This is the Chinese type. Its comparatively low growth, unconventional branching habit, finely cut foliage and loose, graceful panicles of flowers make it particularly desirable for the front part of a border, where the tall larkspurs are out of the question. Two of its blue shades are unsurpassed by its more pretentious relatives, and there is a pure white that goes exceedingly well with the yellow flowers.

Now that the Bleeding Heart, beloved of old gardens, is coming back to its own, why not have the plumeuy kind (Diecetra formosa) also? On a small scale—it is only about a foot high—it has all the merits of the other, with the additional advantage that it blooms from spring to the end of summer and does not lose its foliage, which is handsome enough in itself to warrant a place in the garden for this plant.

And, all things considered, where is there a yellow perennial of more intrinsic beauty than the low, drooping St. John's Wort (Hypericum Moserianum)? A well established plant in the border will give a wealth of golden flowers, like little single roses, in the summer. As it is of shrubby habit, it lends itself well to the edge of a shrubbery border.

Salvia, to most who grow flowers, means the best material for painting the home grounds, or garden, red. But there are three good blue salvias that are hardy; also a white one, the S. argentea, of the beautiful silvery foliage. Of the blues, S. pratensis should be far better known. It is not always blue, however. Sometimes the lower lip is white and the upper one purple, and occasionally there will be a distinct lilac tone.

The False Dragon-head (Physostegia Virginiana) I rarely see in the home garden. Yet for a tall perennial of midsummer it is uncommonly meritorious. Sometimes it is called obedient plant. Between the delicate pink and the white there is little choice and few perennials spread so fast.

The Pentstemons or Beard-tongue, too, are seen less frequently than would be the case if more knew of them. The blue Pentstemon (P. ovatus) forms splendid upright clumps and, in this respect, is a refreshing contrast to the coral (P. barbatus Torreyii), which is admirable of color but very sprawly.

For my closing plea I add one of the bluest of blue flowers, that came to me nameless but has since been identified as Leadwort (Plumbago larpentae or, more properly Ceratostigina plumbaginoides). Its small flowers open, in little clusters, in the summer and early autumn, making the matted reddish foliage bright with bloom. The plant excels for a carpeting effect.
Lich Gates as a Practical Suggestion

BY RUSSELL FISHER

In this day of the increasing popularity of entrance gateways, to garden and grounds, there is a very practical and helpful suggestion in the old Lich gates of England. This form of entrance to a churchyard originated thirteen hundred years ago, fell out of use for a time, but seems again to be coming into its own. In England, previous to the Revolution, it was the custom for the friends of the deceased to carry the body to the churchyard, waiting at the entrance until the arrival of the officiating clergyman. For this reason the entrance gate came to be roofed over, and it nearly always sheltered a lich stone on which the bier was laid while the funeral procession halted.

Lich gates were usually built of wood, on a stone base, so there are few, if any, in existence that date back four centuries. There is much in the picturesque mass and sturdy dignified construction of these passing monuments that should serve as an inspiration for garden entrances of to-day.
Window-seats for the Summer

Many houses are built these days with windows of such a size that low hot-water or steam radiators are placed under them. Plan to have boxes made to cover them which can be set up in the summer time, and which can be replaced by inexpensive window-seats. They can simply be lifted from over the radiators before the furnace fire is lighted in the fall. These are especially desirable to use in bony windows, halls, etc., and if not wanted for seats they make excellent shelf space for plants.

C. K. F.

Stimulating Dahlias

If your Dahlias do not thrive, punch a hole in the side of pound coffee cans, near the bottom; fill with fertilizer from barn or chicken-house and sink one in the earth beside each plant. Fill the cans with water every day, which will both feed and water the roots of the plants, and you will find yourself richly rewarded with blooms.

Maude E. S. Hymers.

To Protect Porch Swings From Rain

As most of the swings, or bed-hammocks, used upon open porches are made of material which is greatly damaged by rain, and as they are usually too heavy to be taken indoors upon the approach of every storm, the simple device of "block and tackle" may be employed to great advantage for their protection. The rough drawing given below shows how the tackle should be rigged. In this drawing the supporting chains have been left out so as to avoid confusion.

![Diagram of block-and-tackle for hoisting porch swing](image)

The supporting hook (A) in the ceiling of the porch is one end of a 1/4-inch clothes-line or sash-cord. Then with a short piece of the same cord passed through the eyelets, (b and c) in the supporting end of the swing, a small awning pulley, or block, may be closely lashed to the outside of the swing. The free end of the line should then be passed through this block, a second pulley of the same size (c) lashed to the supporting hook (A), and the free end of the cord passed through this second pulley. The same arrangement of pulleys and cord should be made on the other end of the swing, except that the ceiling pulley (f) should be double, having two wheels in it instead of one, so that the cord from the pulley at the other end of the swing may pass through it, thus bringing both cords down at the same end. A cleat (g) fastened to the wall completes the job.

W. A. P.

A Transplanting Screen

When necessary to transplant flowers late in the season or when the sun is very hot, take the largest old umbrella obtainable, open and suspend it over the middle of the bed. Adjust the hose so that a fine spray keeps the umbrella moist, and your plants will not even wilt.

M. E. S. H.

Ventilating the Cellar

I try to ventilate our cellar frequently, knowing how necessary this is to the health of the family. I did not think, however, that sufficient air came through the windows. Our door was of the customary folding type outside, with another door at the foot. This of course prevented my putting a swinging net door at the bottom. I made, however, a screen out of 3/8 inch by 1/2 inch pine which just fitted in the opening when the door was wide open. Two turn-buttons secured it, one on either side. The cost was small for wire and wood, and the result—a much better aired cellar.

C. K. F.

How to Soften Putty

Occasionally it is necessary to take out a window-pane or the unbroken parts of a large pane of glass that has been damaged. If putty is used to hold the glass in place it may be softened by mixing caustic alkali or carbonate of potash with an equal part of freshly-burnt lime, which has been previously sprinkled with water, causing it to break up. Mix the two with water until a paste is formed which may be spread on the putty. If one application fails repeat it. To prevent the paste from drying too quickly mix it with less water and add instead some soft-soap.

T. E. W.

A Home-made High-chair

Four rubber-tipped door bumpers, screwed to the legs of an ordinary chair increased its height, to the greater comfort of our little guest, and with the lightest expense to ourselves.

M. E. S. H.

Renovating Rag Rugs

My cottage rugs, woven of white carpet rags with a twisted border of pink, had faded to an ugly dullness. I mixed stencil colors to the original shade of pink, and went over the border, brushing it in well, and the rugs look as well as before.

M. E. S. H.

Training Frames

Perhaps some of House & Garden's readers would be interested in a little bamboo arrangement I devised for training roses and vines and other plants cylindrically on the lawn and in the flower garden. I took pieces of bamboo fish-poles and pushed them equidistant from a triangle center into the sod and earth and brought the tops together, fastening them securely with copper wire. Then I trained climbing roses and other plants of similar growth around this frame, as indicated in the accompanying sketch. The result was most pleasing.

D. R. M.

Old bamboo fish-pole sections were used upon which to train a climbing rose in a corner of the lawn.
There is a valuable lesson in the way the Philadelphia architects use stonework. In some of the suburbs it is practically the cheapest wall material, and most effective with broad white joints.

The floor plan is of the central hall type, with service wing back of the dining-room.

An outdoor stone fireplace is one of the features of Mr. Hearne's house. This part of the porch is enclosed for winter use.

Thirteen closets and three baths on the second floor is an equipment to be envied.

At the rear of the central hall a few steps lead down to a coat room and lavatory.

A built-in sideboard flanked by a door and a china-closet makes an attractive end of the dining-room.

THE HOME OF MR. W. W. HEARNE, WAYNE, PA.  
David Knickerbacker Boyd, architect
Mr. Bull's house is a free adaptation of Dutch Colonial motives. One of the most charming details is the narrow trellis running around the face of the dormer windows, to support vines growing in the window-boxes.

A wide porch adjoins the living-room end, its roof carrying across the end the line of the "Germantown hood."

The first floor plan. Space is gained by having but the one staircase.

A fine broad vista is secured across the whole front of the house by keeping the openings wide into the hall with a window at either end of this axis.

The second floor plan. A surprisingly small hall is needed with a central stair-well.

The living-room finish is extremely simple, of dark stained cypress in mantel, ceiling beams and bookcases.

A curtain wall of brick and frame, between the heavy stone piers, gives the house a feature that is distinctively unique.

THE HOME OF MR. JEROME C. BULL, TUCKAHOE, N.Y. Aymar Embury, II, architect.
Blue and White Bedroom
Curtains and Spreads

Japanese toweling, which comes in strips (ten towels to the strip), costing from eighty cents to a dollar and a half per strip, makes an attractive material for curtains and spreads in a blue-and-white bedroom. This toweling may be had in white ground with blue patterns, or blue ground with white patterns. Some of the prettiest material is that with grass-like pattern in deep blue against a white ground, or the sort with blue butterflies on white ground edged with a light blue border in a key-pattern. This toweling may be mounted on dark blue denim, linen or cheese-cloth to give it proper hanging thickness for curtains. I made a lovely spread for my bed by fastening a number of strips of denim together (in the fashion of Bawdads), with strips of these towels down each side and across the bottom.

For my closet I made a towel laundry-bag of the same material, and also used these towels for making a dressing-table cover.

E. Cameron

Enamed Silver Toast-Racks

One of the latest things in table ware is the silver toast-rack enameled in ivory color. These are being shown in one of the Fifth Avenue shops.

Table-Glass for the Country

This season’s glassware offers many alluring patterns to the housewife seeking distinctive table-glass for her country home. There are shown Colonial shapes, reproducing the glass of Colonial times in every quality from pressed to cut. A very lovely set of sixty pieces is being shown by a New York dealer for $5.60, and is just the thing for the table of the Colonial cottage. The newest things in iridescent table-glass are quite proper for country cottage use, and many new patterns are now on the market at very low prices. Lemonade pitchers and tumblers in iridescent glass are especially attractive, and also the individual carafe-and-glass sets for chamber use.

Chinese Embroideries for Decorations

Now that Chinese embroideries have been imported almost everywhere, and are beginning to rival Japanese work in popularity, many uses for them in household decoration are presenting themselves. The lovely embroidered skirts worn by Chinese women are so designed and cut as to allow their being used as lambrequins above Chinese silk curtains selected to match the dominant body color of the material. A very lovely pair of windows in a small parlor were decorated in this way. Two yellow silk Chinese skirts, embroidered in black and in blue, were selected of the same shades, and under the window, lambrequins were formed by taking the sides of each skirt and connecting them with a deep valance of yellow Chinese silk bordered with a three-fourths inch strip of blue above a three-fourths inch strip of black. The yellow Chinese silk curtains hung below these lambrequins were likewise finished with a strip of black and a strip of blue along the edges of the curtains and along the bottom, which came just below the sill of the windows.

Round and square pieces of Chinese embroideries are sold in the shops for mats. The square and oblong shapes in the large sizes make very attractive coverings when put appliquéd on sofa pillows. They are also very appropriate when made up into small cushions for the backs of chairs. It is interesting and useful to know that the strips of Chinese embroidery offered for sale may be bleached by your cleaner and dyed any other color. Thus by bleaching and re-dying the blue embroidery of the mats mentioned can be transformed into yellow pieces or those of any other color.

A modern reproduction of the old Colonial block papers in grays, white and cream, for hall use.
**Decalcomania Transfers**

The old-fashioned process of transfer pictures (decalcomania) has survived to an excellent present day use, as evolved by certain ingenious designers of artistic furniture. White enamel bedroom sets, and painted furniture of almost every sort, can often be made more beautiful by the application of small Dresden flower-pattern decalcomania transfers to the chair-backs, and other furniture parts. Care should be taken in decoration of this sort not to overdo it in any way. For country homes there are many other uses to which carefully chosen decalcomania patterns can be put, decorating white enameled trays, wooden candlesticks, cupboard doors, and especially in playroom decorations. These transfers are easily procured and are very inexpensive.

The materials needed are the decalcomanias, a transfer cement and a rubber roller such as is used for rolling down photographs. The varnish-like transfer cement is applied thinly to the transfer pattern, being allowed to dry for ten or fifteen minutes, or until it becomes tacky. Then the transfer is placed in the position desired on a smoothly finished surface and rolled down. After rolling, wet the paper and roll again. After removing the paper the surplus varnish around the transferred pattern and the gum deposits from the paper should be cleaned away with a sponge saturated with benzine. Then go over the transfer again with a soft dry cloth to take off any surplus benzine from the pattern. Allow the piece to stand for at least two or three hours before coating finally with varnish.

**The Pantry Draining Board**

If possible specify your butler’s pantry sink board to be made in one piece. I know it is difficult to get material wide enough, but where two boards are joined in places where water is sure to wet them they are almost certain to spread apart, and then dirt, etc., gets into the crack, and is very difficult to get out. The ordinary maid simply will not take the trouble to do so, so an eye-sore is the result. It is an excellent plan not to finish this board with varnish, but simply to leave it bare, so that it can be carefully washed at frequent intervals. Where the sink fits underneath it there should be plenty of putty along the joints to prevent the water from slopping out between board and sink when the dishes are being washed.

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**To Save Radiator Space**

Every inch of floor space is required as a rule in halls, and especially in bathrooms, and a great help towards making this possible is to be found in the “wall radiators,” which can be purchased these days and which are suspended from the wall instead of on the floor as is usual with one of the ordinary kind. Of course they are of a different shape, but they are symmetrical and should have an extensive use in places where floor space is at a premium.

**For Hanging Burlap**

An excellent paste for hanging burlap, which of course has enough weight to need a strong adhesive, should consist of 1 lb. of good glue dissolved in 2 gals. of water, into which put enough paste powder to make it stiff. Then add to the still warm paste 2 tablespoonfuls of turpentine or Canada balsam, and stir well. The paste powder consists of 84 parts of wheat flour or starch, 8 parts of caustic soda and 8 parts of sulphate of ammonia. All parts must be weighed.

**German Plant Baskets**

The flower and fruit baskets, shown in the illustrations, are the latest things of the sort from Europe, and may now be procured in this country. They are of light metal, enameled in white and come in many sizes and patterns. They are very lovely for holding potted plants, for fruit, as jardiniere covers, etc., and lend a crisp note to a room’s decoration. The square forms (about the size of a strawberry-box), are especially attractive when several are placed on a window-sill and filled with English Daisies, ferns or other plants.

**Cleaning Japanese Doilies**

The delicate white painted Japanese fibre table doilies, which have become one of the novelties of the year, confront the housewife with the problem of cleaning them, as they cannot be washed and ironed. However, they may be dry cleaned, as the pigment used in their decoration permits this process.

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A decalcomania pattern measuring 8 x 8 in. showing blue flowers with green leaves. The patterns cost $3 a dozen

This pattern in violets would make an attractive one for white enameled furniture in a bedroom. $1.50 a dozen

A design of poppies in natural colors measures 37/8 x 127/8 in. and costs $1.50 a dozen

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July In the Garden

This is a good time to study up the subject of varieties of Dahlias and Peonies, although planting them will be a later operation. It is always well to have a little foreknowledge of a subject handy against the time of having to use it. Indeed every lover of plants should go about the garden with note-book in hand for jotting down memoranda for next season's planting use. There will be many lovely varieties new, perhaps, to him in his neighbors' gardens, which he will forget all about if he does not have recourse to some such method of a permanent reminder of what he would like to have in his own garden another season.

As soon as some of the very early crops - lettuce, radishes and the like are out of the way, clear off and fork up the soil that bedded them, and lighten it, if the earth has become heavy, with leaf-mold and sand, covering the new bed with a two-inch layer of sifted soil. Seeds of hardy Poppies and other perennials, and biennials may then be sown. As soon as the plants reach the early budding stage they must be thinned out to give each remaining seedling plenty of room for growth. Then when frost-time approaches the plants may be covered with a mulch of coarse stable litter.

Japanese Hop, Morning Glory, Poppies, Portulaca, Calendula and Nicotiana are annuals that will resow themselves, a fact that should be borne in mind when beginning to plan for fall garden operations.

One way of keeping moist the soil around growing plants during times of drought is to spread freshly cut lawn grass around the base of each plant.

As fast as you find suckers forming on fruit trees remove them at once.

If you cut all the faded blossoms from your Pansy bed and give the plants liquid manure every week they will continue to produce lovely flowers all summer.

Be on the watch for ripening wildflower seeds. They may be planted in light, rich loamy earth later.

Keep Sweet Peas, Marigolds and other flowering annuals picked, for their plants will soon cease to bloom if allowed to go to seed.

You may have dwarf Asters for late bloom in window boxes for the autumn if seed of these are sown now.

Harvest early vegetables and rework and replant soil for late crops.

Plant Artichokes during the middle of the month.

Keep your flowering plants such as Chrysanthemums, Cosmos and Dahlias to a compact bushy growth by "pinching."

Petunias may now be lifted and transplanted to fill borders along informal paths.

Evergreen Porte Cochère Screen

We have an oval grass bed extending directly from the wall of our porte-cochère into the driveway. We should like some suggestion for shrubbery there.

L. S.

Try grouping plants of Thuja occidentalis, var. globosa around a specimen of Retinispora squarrosa in the center. It will make an effective permanent setting against the outer side of the porte-cochère.

Porch Vines for North Exposure

It is sometimes difficult to find vines that thrive when planted in a northern exposure to cover porch pillars. Therefore the following species are recommended as solving the problem of a suitable porch plant in such positions: English Ivy (Hedera Helix), Hop (Humulus Lupulus), Thorn (Crataegus Lelondi), Honeysuckle (Lonicera japonica var. Halliana), and also (Adlumia cirrhosa), and Clematis (Clematis Virginiana).

A brick stable yard enclosure has been made attractive as here shown by wall-gardening.
This shows what planting will do. It is the only garden spot for miles around near Maricopa in the Arizona desert.

Wall-Planting

Many gardens, especially those in the country, are often near, or bounded on at least one side by stone walls. Attractive wall-planting has, therefore, become an important consideration in gardening, especially with amateurs. There are many devices by which wall-gardening is facilitated, such as the fastening of "pockets," pots, etc., against the side of walls, in-setting alcove-like boxes, and again planting in crevices. Sunny walls may be made beautiful with Lobelia, Ivy-leaved Pelargonium, Petunias, Heliotrope and Tropaeolum Lobii, to mention a few sun-loving plants. In watering any plants especially exposed to the sun, use lukewarm water instead of chilling them with cold douches. Shaded walls will be the place for ferns, Begonias, Saxifrage (S. sarmentosa), trailing Campanula (fragilis garganica), Lysimachia Nummularia, etc., while at least two roses, the lovely "Gloire de Dijon" and the "William Allen Richardson" will thrive on the shaded wall, east or west, if not exposed to high and cold winds. It is worth while turning your attention to the matter of plants for your wall-gardens, for the subject is more than a passing fad, and wall-gardening ought everywhere to be encouraged.

Plant-Leaves Turning Brown

Last season we had more or less trouble in our garden with Phlox and certain other plants, the leaves of which turned brown and began dying from the base of the plants up, although the blossoms looked fairly well. I could not seem to find out what was the trouble and this year I would like to know what to do in time to prevent a recurrence of this sort.

Undoubtedly there is something wrong with the soil in which the plants you describe are grown. Try sprinkling a little lime around the roots, prickling it into the soil slightly. Should this fail plants may be watered now and then with a solution of one ounce of sulphate of iron to a gallon of water.

Garden Labels

A neat home garden is made much more interesting when the various plants, especially those that may be uncommon, or new in variety, are labelled with the common name, the botanical name and the variety. Labels for this purpose may be obtained from any dealer in garden supplies. They are to be had in a variety of forms, both wood and metal, for stake-driving, or for attaching loose. One of the most satisfactory forms of labels is that of the stake-label, a label attached to a thin wooden or metal rod, permitting the plant-name to be read without having to stoop over to see it.

S Dahlias produce their best blossoms in August it is well, if buds appear in July, to pinch them off when starting. This will enable the Dahlia plants to perfect their blossoms later.

Border Plants for a Lake Shore

What plants do you suggest for beautifying the border of a little lake on which our country home ground touches? I have planted Iris, the blue variety, and would like to experiment further this season and next.

M. L. R.

Sweet Flag (Acorus Calamus), and the variegated form (A. gramineus var. variegatus) will be good additions for foliage. Then the rose-colored Milkwheat (Asclepias incarnata), Purple Loosestrife (Lythrum Salicaria), Yellow Flag (Iris Pseudacorus), Swamp Pink (Helonias bullata), Swamp Mallow (Hibiscus Moscheutos), Swamp Aster (A. pycnanthodes), are suggested for color, and also the low-growing Marsh Marigold (Caltha palustris). These plants may be obtained from nurseries that make a specialty of aquatic stock for all situations.

Beds of Portulaca withstand sun and drought and may be of indifferent soil.

Portulaca for Dry Gardens

The gem-like brilliancy of the little flowers of the Portulaca is not surpassed by any other annual of low growth. Unfortunately, popular as it was in the gardens of our great-grandmothers, we seldom see Portulaca in the gardens of today. And yet there is scarcely a better dry-weather plant for flat bedding, carpeting, and to fill out gaps in walls and for rockwork in general. Its foliage is succulent and a soft green, while the red, white, yellow, and pink flowers, like miniature Wild Roses, produce a wealth of gorgeous bloom. It is a good plant to sow in July, for its seed does not germinate until hot weather. Indeed, ignorance of this fact has often led garden beginners to believe it was not coming up at all. It can be transplanted in full flower.

This is the way an up-to-date vegetable garden should look, no matter how small a plot is given to it. The kitchen-garden should always be as neat as the flower-garden.
The Process of Layering

THE beginner quite naturally looks upon seed as the origin of plant life—and of course is. But Nature does not limit herself to seed alone for plant propagation; indeed she behaves with some things as if she expected almost every effort in the struggle for existence to be thwarted. These are the things which we commonly speak of as spreading from the roots or from suckers and stolons; and it is this determination of spreading from the roots or from suckers or runners, which creep out and root to form new plants. The grape or berry canes root at the nodes of the stems without any especial appendage from which roots descend.

The operation depends on the tendency of plants to produce roots from what is called the "cambium zone," or layer, of their stems—that is, the layer of tender tissue between their bark and the wood, along which the nutritious juices flow. And as all roots are produced by stems ordinarily—not stems by roots—this tendency is not in the least remarkable, though it may seem so from our habit of putting the cart before the horse and thinking of the roots as giving rise to stems. Given half a chance most stems will strike root—laying is the "half a chance."

Anywhere along a stem a root may appear, but the most favorable place to invite such appearance is at the nodes, just as at this point growth of a branch above ground may be most confidently expected.

TWO BLADES WHERE ONE GREW

Young branches are chosen usually because they are more pliable and easily bent down and they may be removed from the parent plant when they have rooted, without affecting it. The season of greatest activity is most favorable to the speedy rooting of layered stems, so of course spring or early summer is to be chosen for the work.

There are, generally speaking, four methods or forms of layering, though some differences in detail bring the number to double this—but they are all modifications of or developments of the one idea, which is to cover a node in a stem with earth.

Roots tend eternally away from the light and towards moisture, hence they must have earth to bury themselves, where the one is excluded and the other conserved. The little pile of earth over a stem is all the encouragement they need and the activity commences usually at once.

To "layer" a vine or more or less prostrate growing shrub, lay a branch or cane of the previous season's growth—unless otherwise specified—down along a shallow trench and cover it at intervals of four or five inches, over a node, leaving a node or two between each covered space so that shoots may rise as well as roots descends. When these shoots have made a good start fill in the uncovered spaces up to and around them, until they have the appearance of separate little plants growing from the ground, but do not sever them from the parent plant until late fall or in the spring. The time of course depends on when the branch is laid down and also upon the plant's ability to root quickly. Some things must be left undisturbed much longer than others.

Serpentine layering is advocated by many, as it is supposed to induce a more even flow of sap and therefore a correspondingly even distribution of roots along the layered stem. It is the same as the simple layering just described except that the stem is bent above the ground at the uncovered spaces, while the portions to be covered are curved down beneath it, the "serpentine" form being repeated to the end of the branch where the tip finally is turned down into the earth. The tendency of sap is to flow to the end of branches and make there the strongest growth, it is not unlikely that there is an advantage in thus intercepting it by curves, though some do not think it worth while. Quick growing vines seem to respond to it very satisfactorily, however; and it is worth trying on the season's growth of a Clematis or Wistaria.

A single plant of Honeysuckle, or almost any hardy vine, may be carried the length of a wall or fence by simply burying each season's longest branches either in the serpentine layer or the simple form, and going on each season from where the last left off. In such a situation the plants springing from the layered sections do need to be severed as they are planted for they are already in the situation where they are wanted.

LAYERING SHRUBS AND TREES

With shrubs or trees branches must of course be bent down to reach the earth. Usually they are held in place by a forked stick driven firmly over them; then the end of the branch is turned up abruptly so that the tip stands erect out of the ground where it is held by tying it to a stake. The bark will be ruptured by the sharp bend underground, and this is usually enough of an obstruction in the flow of nutriment to induce roots to put forth in search of more; but lest it should not be, a cleft may be made in the branch near a node, from below up and not through more than a third of the total thickness. Sometimes a ring of bark is removed entirely around the stem, but this is not necessary ordinarily. It is well to do it, however, with plants having exceptionally hard, thick bark.

(Continued on page 51.)
The above photograph shows Cropsey Avenue, Brooklyn, where the first experimental tarvia work in Greater New York was done several years ago.

The results were so satisfactory that the authorities have been using more and more Tarvia each year, culminating in the huge 1910 order for 500,000 gallons.

Tarvia solves the vexing problems of road maintenance on suburb, state and county roads where the development of property does not justify brick, sheet asphalt or wood block pavement, yet where the traffic is too heavy for ordinary macadam.

Formerly there has been no middle ground, and the macadam was either maintained at great expense or allowed to rapidly disintegrate.

Tarvia solves the problem.

It gives to macadam a slight plasticity so that it does not break up even under automobile traffic.

The surface is clean, smooth, durable and dustless. Tarvia greatly extends the life of the macadam and reduces maintenance costs so materially that frequently the entire expense of the treatment is saved.

Our illustrated booklet just issued, entitled "Good Roads—How to Build, Preserve and Make Them Dustless," will be mailed free on request to nearest office.

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Chicago  Cleveland  Pittsburg  Minneapolis

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When planning bathroom equipment, send for our booklet, "Modern Plumbing," which shows the most advanced fixtures in Imperial and Vitreous Porcelain and Porcelain Enamed Iron Ware. There are 24 illustrations of model bathrooms ranging in cost from $85 to $3,000. Full description of each fixture is given, with general information regarding decoration and tiling. Sent on receipt of four cents to cover postage.

THE J. L. MOTT IRON WORKS

BRANCHES


TO MAKE SURE THAT YOU ARE GETTING GENUINE MOTT WARE, LOOK FOR THE MOTT LABEL ON EACH PIECE.

A Butler's Pantry Door

should swing both ways; should close gently and without noise and stop at once at the centre without vibrating. The only way to accomplish this is to use the "BARDSLEY" CHECKING HINGE. It goes in the floor under the door and there are no ugly projections on the door.

JOSEPH BARDISLY

147-151 Baxter Street New York City

Landscape Gardening with Bush-Hook and Pick

(Continued from page 28.)

the larger pasture and spring below. He now aids in keeping the paths open and the bushes near them within modest bounds and gives a spot of light to many of our landscape pictures. Some of his paths have now been widened by removing intruding bushes and the less worthy young trees. At the end of the cart-path, a turn-around for teams was made by cutting through a mass of Golden-rod and Sumach, leaving, however, an effective border of gold and crimson. From here a path was made meandering to follow lines of least resistance out to the edge of the bluff, from which a broad view of village and valley can be seen. At a turn in the path a small White Birch log was thrown down. Anyone using the path must pay attention to his footing and for a moment forgets to look ahead. When the obstruction is passed, he looks up and has a pleasant surprise in the picture of the valley church-spire and valley, now seen under the old Hemlocks at the edge of the bluff and framed in by the bushes at the sides of the pathway.

In picking flowers, one way of making an effective bouquet is to gather into the hand, picking one color by itself and then another. In this way one gets effective masses, but the different colors are not sharply separated and blend more or less, giving the bouquet unity in spite of the variety of color it contains. On the same principle, this piece of woodland is being developed. In one place, there was a grove of Pines, some old and full of character, some young and developing a soft beauty of their own out in full sunshine, and others spindling and crowded, while all were obscured by growths of Cedars and other saplings of no especial value. Enough of these last were removed to reveal the Pines as a unit and enough of the Pine saplings cut out to give the others a better chance for growth. The outlying Pines prevent any suggestion of a solid block of trees and lead off to blend the Pine grove with the Cedars and Junipers, which are characteristic trees of a neighboring region.

In another place, Oaks in a family group showed their glittering foliage, dark green in summer, and red-brown in autumn. They were obscured by clumps of small Birches. The bush-hook soon made poles and brush of these, and now the Oaks can in part develop branches clear to the ground and will show as a warm spot in the autumn landscape and make a background from certain points of view for the white stems of the larger Birches, which form a grove near-by.

Stakes were needed to aid in the planting of the fruit trees in the orchard, and the smooth round stems of the Birches were very attractive for the purpose. Instead, however, of making a clean sweep of whole clumps, the smaller sprouts were
taken from each clump, and from the rest the dead twigs were quickly removed with the bush-hook as high as it would reach. The stems, which were before nearly concealed by the twigs and small sprouts, were in that way brought out in full whiteness to contrast sharply with the Oaks and Hemlocks not far away.

At one place there is near the cliff a fairly level bench of land, which was covered with bushes and Cedars mixed with a few larger trees. Above the bench is the steep slope on which the Pines are growing. The lower level bench has now been cleared of nearly all of its tree growth, giving a place for picnics or later, perhaps, for tennis-court and garden. In this way the Pines on the slope are revealed and a comfortable and spacious resting place provided for those roaming over the tract.

On the upper terraces are two old Hemlocks whose branches drooping to the ground made an arbor, shady at all times, but with no outlook and somewhat breathless. Cutting out a hanging branch and a few small trees let in the air and gave a narrow outlook upon the level bench below and out to the distant valley and white farmhouse still farther down.

The point on the edge of the bluff, which juts out farthest into the valley and from which the broadest view can be obtained, was entirely covered with a growth of small Poplars of very little value. A few hours’ work with the bush-hook reduced them to brush and sticks for the fireplace and revealed a panorama extending from north through west to south, and commanding village, valley, distant hills and a mountain in a neighboring state. A few hours more of work with bush-hook and pick developed an easy descent from this clearing to the terrace below and opened a vista framing in a picture of a near-by mountain showing itself over the Hemlocks by the brook.

In the lower part of the tract and nearer home, some things have been done in the way of improvement. The woodland paths leading from the pasture to the spring are pleasant places but not easy to reach from the house. To reach them it was necessary to leap the brooklet and then go somewhat roundabout. In the edge of the woods in the dell there was an old stone wall of round boulders. By moving a cartload or two of these and hauling a little clay, a curved dam, or causeway, was built across the stream. The ferns have already taken possession of parts of this and blended it with the woodland. One can now cross with dry feet and in a dignified manner to reach the paths beyond. The dam is bordered on one side by the little pool above it, and one may have the unusual pleasure of seeing wild Cinnamon Fern, Red Oak, Golden Willows, Arrowhead and other bog plants close at hand while keeping his shoes dry. One may also hope sometime to see wild Azalia and Cardinal-Flower growing here in congenial soil and looking at home, although transplanted from

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A neighbor's meadow. Cutting out a few intruding bushes in the old paths improved them greatly, and newly made paths now lead from the pool through the region where the great masses of Maidenhair and interrupted fern luxuriate under the rocks on the north side of the hill, to the spring and the great grape-vine near the fence. The Spice-bush is so beautiful a shrub that it should be more largely used. In early spring its gray twigs and branches cover themselves with a yellow haze of blossoms, followed by glossy dark green leaves and berries which turn to bright scarlet. The whole bush, bark, leaves and berries is pungent with a spicy odor. A long path bordered with them is very attractive, and it would seem as if they might serve a useful purpose in planting, especially as they grow well under the edge of a tree planting.

One of the great pleasures in taking possession of a place like this is the continual succession of discoveries which may be made: the Laurel on the hillside, a Fir or Larch, which has seeded in from a neighboring "place," or the fact that the Columbines on the cliff are connected with those we know down near the bars by a straggling ragged ribbon of others all down the rugged hillside, where we never go except when our sluggish Sunday blood needs a little stirring. The little Beech tree discovered down near the path may be our pride some day if we will give it room and sun, and the White Pine, which looks so well in spring, that we call it a treasure as it shows fresh and green against the gray of the edge of the woods, must be attended to, if we do not wish it smothered by the brush that makes its location a question in summer.

Working in these ways, we hope to make the labor of a few spare hours or leisure days with these humble tools, develop into greater unity and effectiveness, the beauties which nature has so freely given and add to the financial value more than enough to offset the little time taken from the labors of the farm and orchard.
the dish-cloths are decorated with peasant embroidery and their real vocation is unsuspected. Arras cloth is harmonious and agreeable in coloring but must be kept out of the sun if used for pillows, as it fades in a bright light. Appliqué decoration is suitable for this material, sometimes called Craftsman or Handcraft canvas. Monk's cloth, with its loose weave and heavy texture, is effective, and is decorated by weaving brightly colored tapes in and out through its meshes to form a primitive Indian-like design.

For seat cushions, to be used on porch steps, woven raffia is a dust proof covering. The ends of the grass are left to form a fringe at the edges. The old-fashioned rag carpet method of making old goods into new is often adopted for pillow covers, but new goods are usually employed. While the weaving is done by a professional worker, the cutting and sewing of strips is done at home.

Simple decorations, easily executed, are most satisfactory for porch use. If flower designs are used, they should be of extremely conventional character, as realistic forms may come into close competition with nature, to their disadvantage. The materials used are inexpensive. Mercerized cotton is employed for embroideries. Appliqué is done with scraps of material, and the use of Japanese stencils or wood blocks means only a trifling outlay.

As helps to the comfort of the modern porch, and adjuncts to a garden scheme, cushions and pillows play a small but important part in the outdoor life of the American family.

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.)


The object of this magnificently illustrated volume is to depict the many-sided character of old and modern gardenage, and to indicate the possibilities that lie before possessors and planners of gardens.


Professor Hopkins's book is written primarily for American landowners, who must either think and plan for the preservation of their land or allow its present condition of waste to go on indefinitely, and secondarily for other students of agriculture and economics, whether in the lecture-room and science laboratory.
This great book

of plans, elevations, specifications and estimates of Ideal Homes should be in the hands of every prospective home builder or home owner. The homes shown in this book are actual examples of homes already built, and the estimates of cost are taken from the exact figures and show just what you can do today with whatever appropriation you have allowed, from a $1,600 bungalow to a $10,000 house. This book besides offering many valuable suggestions and giving you a tangible basis from which to make your plans and arrange your appropriation, will be the means of saving you a good many dollars.

This great magazine
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In reply to your letter of the 10th instant, I have sent you a live one of Thistle-ine. I believe it is the most effective and least expensive method known of destroying all noxious weeds. Some time after spraying with the Thistle-ine, the weeds will show signs of withering. Carefully remove the dead plants. The treatment will not hurt any other plants. The life of the Thistle-ine will last from one year to the life of the Thistle-ine itself. It will not hurt any other plants. The life of the Thistle-ine will last from one year to the life of the Thistle-ine itself. It will not hurt any other plants. The life of the Thistle-ine will last from one year to the life of the Thistle-ine itself.

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This is the story of three children who go swimming, picknicking, berrying, sailing, motor-boatting, breakfasting out-of-doors, and on all such jolly romps, on which occasions they see the birds and learn their habits with the help their elders give them. It is a good way to present nature-study to a child.


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Here is a new book of "Gallops" stories by David Gray, and like the author's previous book, they touch on sport of various kinds. Mr. Gray's characters are delightful creations.

The Process of Layering
(Continued from page 44)

Stool or mound layers require a little longer time, as they must have due preparation. The shrub from which new plants are to be produced is pruned back severely in the spring—"headed in" to nothing but short stubs, to induce a free growth of sprouts. When these strong young shoots are well grown—usually by the middle of summer—a mound of earth is piled entirely over the old plant and brought up some distance on the stems of the young shoots. This induces them to root freely, and by another spring they are ready to be dug up, separated and planted as individuals.

Air layering is simply an adaptation of the process to branches which, for one reason or another, cannot be bent down to the ground. It consists in applying earth to a stem that has been cleft as already described, or girdled, by means of a divided pot holding earth clasped around it and held in place by binding. Sphagnum moss is wrapped around the whole to retain moisture, and the pot is supported in its unnatural position by a stand of stakes, if the work is being done out-of-doors. Inside in a conservatory or greenhouse, where the air is constantly moist, a paper pot enclosing the sphagnum alone may be used.

Tip layering is exactly what the name implies—the laying down of a tip alone which, bent to the earth, is buried for a

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Just send your name and address together with the name and address of your local plumber and we will forward by express prepaid one Richmond Suds-Maker. Use it ten days—then if you think you can spare it, return it at our expense. This is your chance to learn about the greatest convenience, money and time saver you can install in your kitchen. Write today. THE McCORMICK-HOWELL CO. 205 Terminal Building New York, N. Y.

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which we will gladly send to any one thinking of building, remodeling or decorating. Address Wood Mantel Manufacturers' Association H. T. Bennett, Secretary Room 1225, State Life Bldg., INDIANAPOLIS, IND.

Road Making on the Country Place

(Continued from page 31)

ing from pitch and creosote to disinfectants, paints and beautiful dyes, furnishes a dense black bitumen which is weather-proof, adhesive and cheap. When the engineer has spread down his broken stone and rolled it into true contour, he heats the viscid tar till it becomes a fluid and flushes a heavy coat of it over the stone. Before it cools and hardens the top layer of fine stone chips is spread and rolled into the pitchy bed. The tar cools and the stone is thus gripped firmly in a viscid matrix. The plasticity of this matrix permits this surface to yield slightly instead of pulverizing. It looks like sheet asphalt and is dustless in the same sense that asphalt is. Its plastic softness is revealed by the difference in sound when a horse is driven over it. The sharp metallic ring of the hoofs on ordinary macadam is deadened to a velvety thud on the tar-impregnated surface.

Simple as it is, this process of making automobile-proof roads was learned only by long and costly experiment dating from work that began at Nice ten years ago. The French engineers worked it out to a point where they had abandoned all other forms of dust prevention and developed a new industry with special machinery for tar spreading before the American engineers took it up in 1904. To Montclair, New Jersey, falls the honor of having first developed the process thoroughly in this country. Other towns and cities followed suit, and there are now many localities, especially suburbs of large cities, where the dust problem is especially vexing, that have adopted the policy of build-

In writing to advertisers please mention HOUSE AND GARDEN.
Making a Water-Garden

(Continued from page 28)

The coming of the new type of road means much to residents along the great automobile highways. Many a pretty suburban cottage has depreciated in value on account of the increasing dust nuisance. Many a lawn that was once the pride of its owner has been neglected because it was no longer possible to get satisfaction from it. Far from being a benefit, the presence of an old-fashioned macadam thoroughfare has been in the past few years a costly nuisance to many a property owner. The new type of road will go far to restore original values and at the same time it will dispose of much of the present prejudice against the automobile.

The common white Pond Lily in form and varying from five to ten inches in diameter. Like the Egyptian Lotus this variety is a rapid grower and throws out stocky horizontal rhizomes which have a tendency to circle around the edge of a pool, crowding the Vymphaea and other floating Lilies into the center and effectually concealing them from view by means of their tall foliage. For this reason it is always advisable to plant Lotus in a pool by itself, or at least to take the precaution of walling off a portion of the pond where it may grow without interfering with other aquatic plants.

Among the more tender species of Lily, nothing is lovelier than the Zanzibars. These are surprisingly easy of culture and their beauty amply compensates one for the winter care which they require. Since they cannot be allowed to remain out-of-doors after the frost comes, it is best to plant them in tubs, allowing three or four plants to one tub for the first season and later dividing them as they mature. If arranged in this way the Lilies can be readily lifted from the water in the autumn and removed to a warm cellar to be stored until spring. Zanzibariensis rosea is a pink Lily of delicate coloring and delightful fragrance, while Zanzibariensis azure produces magnificent sky-blue blossoms. Although usually small the first season, these Lilies frequently measure from six to ten inches in diameter when the plants have reached maturity.

The queen of all Water Lilies is undoubtedly the magnificent Victoria regia, which is a native of the rivers and streams of Brazil. This wonderful plant produces gigantic blossoms of unsurpassed splendor when left unmolested in its South American haunts, but it does not take kindly to our colder northern climate. It is a hopeless task to undertake growing this tropical beauty in an outdoor pool, for without artificial heat beneath the tank it will seldom thrive. Furthermore, even under favorable circumstances, it is a costly experiment which the amateur will do well

intended for the owner of a home already built or now building, to prove that the use of tile in a bathroom is not only attractive but also necessary. Tile is the sanitary and inexpensive covering for the walls and floor of the bathroom. This book "Tile for the Bathroom," will be sent free.

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to leave to a more experienced florist, while he devotes his own time and energies to the more hardy varieties of Water Lilies.

---

**Blending Architecture and Nature by Planting**

(Continued from page 24)

Finally, it is worthy of note that, while vines are indispensable to the great place no matter how much other planting it may boast, they are also the one thing which the tiniest scrap of land will support—they are the material par excellence which will furnish the greatest possible results in the least possible space. Roothold is practically all the ground that they require, consequently the most restricted area may accommodate one or two. No wall or fence, even in the heart of the largest city, need ever be bare of some sort of restful green. They are the one thing adapted to every place with positively no restrictions.

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**Southern Garden Notes for July**

**By A. B. McKay**

Professor of Horticulture, Agricultural College, Mississippi

A 5 February is the Southern season for starting quite a list of vegetables for spring and early summer harvest, so July may be regarded as the "turn of the year," or the time when the Southern gardener must busy himself with preparing the soil and planting for fall and early winter gathering.

Before the advent of July early plantings of such vegetables as onions, turnips, English peas, cabbage, Irish potatoes and, perhaps, bush beans and sweet corn, have been harvested, and the soil occupied by these crops has been prepared for other plantings.

With weather conditions during midsummer differing widely from those prevailing during February and March, methods of planting and treating garden crops started in July must, in many cases, differ materially from those practiced with these same crops planted in early spring. The warmest, dryest soil was selected for the spring crop of potatoes; and, to facilitate prompt drainage and a higher soil temperature, planting was done in slightly elevated rows. A cool, well-drained, moist soil, such as is found in alluvial valleys, is best for the fall crop. To prepare even the best soil for this second crop it is necessary to plow, harrow, re-plow and re-harrow several times before planting in order to get the best mechanical condition for the conservation of moisture. So important is this matter of thorough preparation of soil for the fall crop of potatoes, and most other vegetables planted during midsummer, that it is better, when necessary, to defer planting several weeks. Should it become necessary to plant potatoes as late as August...
1st to the 10th (the best crop of potatoes the writer ever grew was planted August 15th and harvested November 15th), it is well to sprout the seed potatoes, if the eyes have not started well, before planting. This is done by spreading the potatoes in a cool, shady place and keeping covered with moist earth or other like material for two or three weeks. Plant on a level or, if in well drained land, in furrows, firming the soil well over the seed potatoes. The soil thus prepared and planted, little remains to be done until harvest.

Cabbage seed drilled in rows where crop is to be grown in the latter part of July should begin to head early in October. No better time than the latter half of July to plant melons, cucumbers, squash, table corn, okra, and practicaly the whole list of short-lived vegetables such as beans and turnips.

With fertile soil properly prepared and plenty of water judiciously applied, our fall and early winter garden, in point of variety, quality and yield, often equals and, sometimes excels, that of spring and summer. During the rainy period, which usually comes in July and lasts from ten days to two weeks, no opportunity should be lost to put garden soil in ideal condition for the crops which are to occupy it for the balance of the season. Lose this opportunity and it may be best to abandon the garden until the time to begin operations for the succeeding spring.

Shingle Roofs

In laying shingles there are a few points to be observed. Use galvanized iron nails and always use two nails to a shingle—three in cases of wide shingles. Break joints by at least one inch—more if possible, and do not make a joint over a nailhead. Lay no whole shingles wider than eight inches. If wider, split or mark deeply with the hatchet so as to break joints and also to eliminate the danger of chance breakage; then nail as two shingles. It is better to bend the shingle first to see if it develops a weak edge only—shingles shrink and expand as long as there is any life left in the wood. If shingles are damp when aid they should be laid fairly close; if dry, the joints should be slightly open to allow for swelling when wet. A dry shingle laid tight will swell and buckle when wet, and such things are not good for a roof.

C. E. H.

Palatable Poison

If powdered sugar is added to borax the roaches you wish to destroy will more readily feed on it. Do not add too much of the sugar. A small amount is all that is necessary.

C. K. F.

Hicks Trees for August Planting

Every one of the evergreen family can be transplanted with success during last of July and through August. In doing such planting now, your other trees are in full foliage so you can tell exactly where the Spruce, Pines, Hemlocks, Firs, Cedars, or Arbor Vitae can be placed to best advantage, either for effects or as screens.

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WHEN the amateur gardener strolls among his Roses he will, perhaps, wonder that Nature should order so many gaunt bare stems under the blessing of luxuriant blossoming. As a matter of fact (and of course anyone who knows anything about Roses at all knows that), Nature has ordered nothing of the sort. It is man's doing, with his propensity for grafting Roses on other plant-stems, a necessity it is true, but one which his ingenuity, in turn, will require to be meet to cover up the bareness that one may feel called upon to complain of. Now the Honeysuckle solves the problem in certain gardens. It is often safe as a vine to clamber upon the base stems of such lovely Roses as the "Frau Karl Druschki." For such purpose Loniceria fuchsioides is one of the best Honeysuckles. It should be kept in bounds by pruning, and an
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169 Duane Street NEW YORK

Fertilizer for Ferns.

ONE of the best fertilizers for the Maidenhair Fern and for other
ferns is nitrate of soda dissolved in the water that is fed to them. If your ferns
are small or weak do not make the pro-
portion of nitrate more than one-quarter
of ounce to the gallon, but large plants
and those of vigorous growth should be
watered with a solution in proportion of
one-half an ounce of nitrate to the gallon.

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of ounce to the gallon, but large plants
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watered with a solution in proportion of
one-half an ounce of nitrate to the gallon.

Apply this fertilizer not oftener than once
every ten days. Soot and salt are also
useful. Some gardeners declare that the
soot water fertilizer imparts a rich dark
green hue to the fronds.

Plants for Wire Baskets.

The hanging baskets of wire, made for
porch use, may be lined with moss
and filled with an earth composed of a
mixture of loam, leaf-mould, a little well
rotted stable manure and sand, the whole
being made fairly firm. In this soil one
may plant small Begonias, Fuchsias, trail-
ing Lobelias, Ferns, Ivy-leaved Gerani-
um, and Tradescantia, besides other vine-
like plants.

Pepper Plants for Use and Ornament

BY GEORGIA TORREY DRENNAN

CURIOUS, but true it is, that while a
certain genus of plants will scatter
its growth in all lands, there will be some
species that will grow nowhere but in
some one locality. For instance, there is
a member of the Capsicum family that
grows nowhere in the world but on a
strip of land beginning somewhat north of
New Orleans, extending through the Rio
Grande section of Texas and beyond the
City of Mexico. It is closely allied to the
Cayenne or Capsicum minimum. It is
called "chili patin" by the Mexicans. Un-
like the Cayenne pepper, which the French
call "piment," and the Americans, "Bird's-
eye pepper," the chili patin is so fiery
that no one can eat it but Mexicans. They
feed on pepper from childhood to old age.
The healthful properties are such that its
use is considered to prolong life. It gives
powerful aid to digestion. No plant pro-
duces a seed-berry that burns like the chili
patin. The pods are round, about the size
of a pea, and dazzling scarlet, with blos-
sons as white as snow. The green pods,
the red pods and the white blossoms, at
certain times of the year, are all on the

abundant blossoming and proper low
growth may be assured if the tops are
stopped and lateral growths well spurred.
The tall tree-stemmed Roses will seem
less bare in the garden if the lovely
Wichuraiana Roses, "Elsie Robichon,
"Alberic Barbier" and others are used as
a covering, and the PENSTEMON also lends it-
self excellently to this end.

Fertilizer for Ferns.

ONE of the best fertilizers for the Maidenhair Fern and for other
ferns is nitrate of soda dissolved in the water that is fed to them. If your ferns
are small or weak do not make the pro-
portion of nitrate more than one-quarter
of ounce to the gallon, but large plants
and those of vigorous growth should be
watered with a solution in proportion of
one-half an ounce of nitrate to the gallon.

Apply this fertilizer not oftener than once
every ten days. Soot and salt are also
useful. Some gardeners declare that the
soot water fertilizer imparts a rich dark
green hue to the fronds.

Plants for Wire Baskets.

The hanging baskets of wire, made for
porch use, may be lined with moss
and filled with an earth composed of a
mixture of loam, leaf-mould, a little well
rotted stable manure and sand, the whole
being made fairly firm. In this soil one
may plant small Begonias, Fuchsias, trail-
ing Lobelias, Ferns, Ivy-leaved Gerani-
um, and Tradescantia, besides other vine-
like plants.

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der of summer, and in the windows in winter. The Peppers can be gathered any day for a variety of purposes, both for utility and ornament.

Another very ornamental and also useful Pepper is the Celestial or Strawberry. It differs from every other pepper. The pods are shoulderred and shaped like a large strawberry, and when first formed are creamy white. As they increase in size the color changes to buff, then orange, and lastly to a strawberry-red. It is common to see one or two of these plants in flower gardens in New Orleans. They are as showy at a little distance as the Hibiscus. Strawberry Pepper grows about four feet, and bears profusely. The properties are more mild than Cayenne, nevertheless it is a true pepper and burns.

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The problem of soil fertility conservation is one of the most important considerations of the time. Not alone is it a matter for the farmer's attention, but quite as much a subject in which every country dweller, whether he owns or rents his acreage, should be intensely interested. In this connection extensive experiments have shown that the strength of various manures (stable and barnyard), is directly dependent upon the manner of their storage. Manure that has been piled on the bare ground or in wooden pens loses a quarter of its fertilizing properties by reason of the leaching, as it is called, caused by heavy rains, trampling of the stock, and also, later, by reason of fermentation as "firing," brought about by the lack of sufficient moisture. The modern method of constructing concrete pits for the storage of manure has much to commend it. A load of manure thus properly preserved is often worth fully two loads of manure carted from old storage heaps.

Antique Collecting in Vacation Time

BY MARVIN COLE

The collector of antiques who finds himself in a new country place for his vacation, is like a traveler in a new land abroad—once the beaten paths are left behind all sorts of delightful vistas are apt to be opened to him. The old notion that every inch of the country has been ransacked by city dealers who have left nothing but desolation behind is dissipated by the facts in the case. No matter how often the professional collector pounces down upon the community there is always a crop of new old things springing up, and real ones, too. Of course an elephant on a prairie is a difficult thing to overlook if you should happen to find things turned upside down and come across one. Just so with vast mahogany cupboards, sofas twelve feet long, four-posters large
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