The evening gown is of the new blue-pink shade, for the tones of a few years back are returning to us. The front of the skirt is striped with white lace lappeting, which has the pattern outlined with cord. The rest of the full skirt is drawn back in front as though the sides had been turned inside out. The bodice describes a point back and front, and opens on either side, with a revers graduating to a point towards the waist and forming a wide roll collar at the back. The front is made of white embroidered lace, as are the cuffs and collar-band, and the two sides of the bodice are kept together by a broad pink band. The top of the sleeve is draped with a crossing band caught up in the centre.

There is a novelty or two in the cut of smart underlinen which are worth knowing. It is frequently cut *à l'Empire* with very short waists, or after the Incroyable style with V-shaped collars and jabots, most becoming to stout figures. Coloured silk handkerchiefs, embroidered at the edge and made to match the gowns, are worn often in the evening and are dressy.

Beaver is used on many woollen gowns this year, edging side panels and forming vests. Furriers have of late brought out a fur tippet with a beaver vest combined, which is just the thing for wearing with open jackets, giving them the necessary warmth and protecting the vital organs of the body. In draping gowns, when they are draped, which is but little, a new mode of starting from the base and working upwards has been introduced. This is chiefly applied to the fronts of dresses, where triple folds are started down on the left side, and crossing the front, terminate at the waist on the left.

The hats are very flat and very quaint, but are raised by the trimming. Tomato-coloured velvet is employed for many of them, and one of the favourite shapes shelters the face well with a projecting brim, which shades to a mere nothing at the back. Stiff wings are now more often placed at the back than in the front. Zouave jackets of any kind of embroidery, or sometimes of lace, appear on the bodices, and the embroidery or the lace is introduced in the accompanying hat, for toques are worn often, and most comfortable wear they always prove. The new velvet calf, which is leather with all the smooth surface of velvet, is applied to the crowns of hats. This in a light brown has been converted into stylish toques with poppy-coloured trimming. Bonnets are infinitesimal, and the shapes distinctly new. They often have arched fronts and peaked corners. Brims turn upward, or project forward. The Marie Stuart form has come in again on a new basis. Plush bonnets have bands of figured frisé chenille, and felts are much worn. The double crown is a French idea, which finds a home here, and the crimped crowns are gathered as it were beneath a central button, just as Hood described the German students' caps in "Up the Rhine."

Ostrich-feather coronets are worn on the best bonnets, and a great deal of jet is laid on; cardinal and tomato velvet cloth is much embroidered for bonnets. The heaviest jet coronets are mounted on a metal foundation after the form of those worn at the time when Josephine's was the dominant female influence.

The tarpaulin hats trimmed with black tulle seem inconsistent, for the material is best suited to nautical wear. Sailor hats have, however, been brought out tightly covered with cashmere, and also with cloth to match the dress. The grizzly hat is a capital invention for hard wear; it is a sort of felt with upstanding hairs, uncrushable, and unharmed by rain.

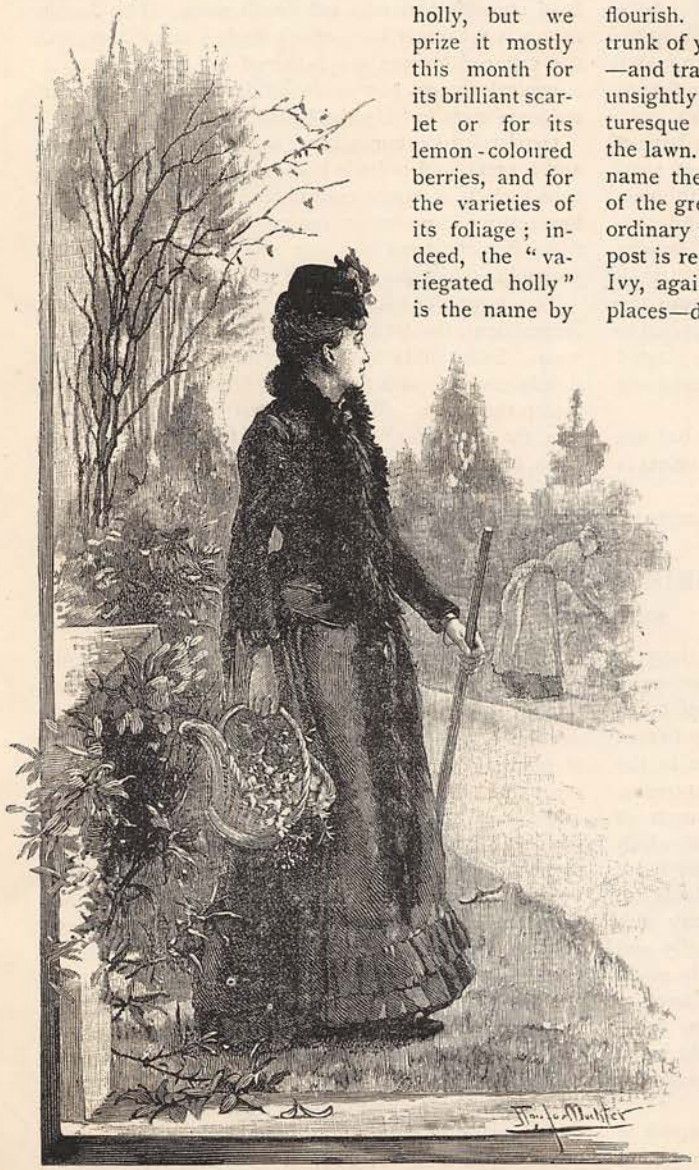
THE GARDEN IN DECEMBER.

EVERGREENS.

IF there is one month in the year more than another in which lovers of horticulture delight to turn their attention to the subject of evergreens, it is this month of December, in which the vast majority of our garden plants are never green. The tenacity with which we cling to our holly and mistletoe just now is only equal to the tenacity with which another hardy old evergreen—the ivy—clings to the venerable old trunk of the oak that can remember Elizabeth, the Henrys, and the Edwards.

Not unsuitably, then, shall we select this month in which to give a few hints as to the cultivation of our more popular and favourite evergreens. And naturally, with Christmas in anticipation, the holly must come first on our list. And with regard to the formation of a shrubbery in general, let us give here one caution against the disastrous but too frequent habit of planting too closely. Our object should only be this: that when a shrub or tree has attained its full and natural size it should be seen to the best advantage possible; but if in the formation of a new garden or shrubbery our plants are put in too closely together, before they are much more than half their full size they are running into one another, destroying one another, spoiling all the effect of our garden; and finally, perhaps at an unfortunate time of the year, we are compelled to take some up, and in so doing perhaps sacrifice them altogether. Hollies, again, should never have the shears near them; a careless gardener will sometimes clip them, but this should never be allowed: only the knife should be used, and that some time during February. Some little difference of opinion appears to exist as to the best time for moving hollies. Popularly we all of us know that the

autumn months are most recommended as those in which shrubberies should be formed or any changes made in the garden, and this is perhaps, generally speaking, correct; but it has been thought that spring, or about the middle of April, is the time best adapted for the removal or planting of the holly; and it is universally admitted that the best time for the removal of any plant is the period when it is most at rest. Now, the holly sheds its leaves in the early summer, making its growth also about the same time—that is, in May and June. It would, therefore, be most at rest in the early part of April, and its foliage some ten months old. Now, by moving the holly about that time you accelerate the fall of its leaf, and in some two months afterwards it is covered with new wood. None of us value the little insignificant bloom of the holly, but we prize it mostly this month for its brilliant scarlet or for its lemon-coloured berries, and for the varieties of its foliage; indeed, the "variegated holly" is the name by which we distinguish a popular member of its family. The holly likes a light and dry soil, so that, in planting it, it is a good plan to mix some sand with the broken-up earth. It lives to a great age, Pliny, indeed, mentioning one hundreds of years old.



GATHERING THE SPOILS.

Another popular evergreen just now also greatly in favour for church and domestic decoration is the ivy, and "a rare old plant is the ivy green." One good old-fashioned use of the ivy is to train it on our lawn to conceal the bald patches of bare soil immediately surrounding the base of trees, on which we find nothing else will grow. Sometimes we put a seat all round a large tree, but still there is the surrounding patch or circle of earth—a muddy puddle in wet weather, and a dreary, dusty waste in a drought. Now ivy is, perhaps, the only known plant that will survive under these circumstances—indeed, it will actually flourish. Plant your ivy at some distance from the trunk of your tree—indeed, upon the green grass itself—and train it to grow towards the tree; very soon the unsightly barren soil will be covered, and a very picturesque contrast it is with the surrounding green of the lawn. Now, here again we shall not attempt to name the variety of hardy evergreen ivy climbers, or of the greenhouse and stove shrubs of the same. The ordinary ivy likes a deep rich soil, and a lighter compost is required for the rarer or more tender species. Ivy, again, is of great use to us for concealing ugly places—dead trees, walls, &c. But some care should be taken as to how far it should be allowed to run along a roof. Its power of penetration is almost irresistible. It will easily lift up your tiles and slates on the roof, and thus admit wet. The writer only too well remembers having nearly to re-roof an old country house kitchen, over which some ivy had run, and which eventually had to be removed entirely.

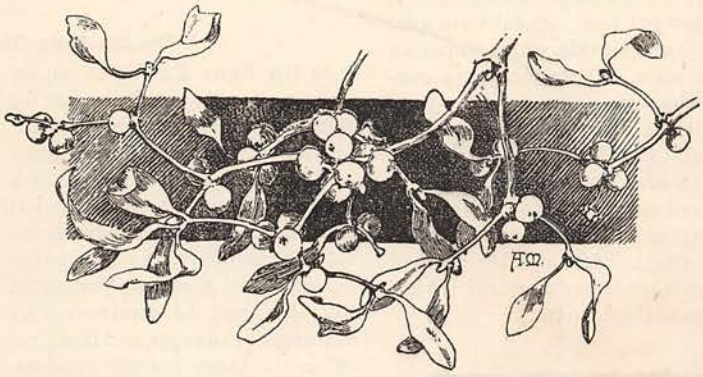
In thorough contrast again with the holly are the yew and the pine. Now, as the *pinus* tribe in general is utterly beyond all management by pruning, attention should be paid to its *ultimate* growth when you choose any variety of it for planting, as also to the space you will be able to afford it. And another caution we must here note when speaking of the planting of shrubs and trees that afterwards attain a large or tall growth, and that is we must take care when planting them that they will not hide afterwards any other shrubs or plants that we are interested in. For this reason we generally, then, plant our pines at the very outside border of our land. We can only afford to notice very generally a few other evergreens, without enlarging much upon the properties of any. The common laurel and the Portugal laurel are both fast growers, and when it has attained any age the Portugal laurel will not very well admit of

removal. Box, again, we are all of us familiar with; it can be clipped into any shape, is very hardy, and can readily be moved; but as a border round our gardens we ought to remember that it affords a wonderful shelter—especially when thick and shrubby—for all those garden pests, such as slugs and snails, and other vermin. Indeed, upon careful examination of your border box, you will find that it almost affords the advantage of a trap for garden vermin, which can thus be the more readily despatched.

In the flower garden, beds—if no bulbs or spring flowers are in—may be well trenched; or where on account of your bulbs you cannot do this, plunge between your bulbs a few pots of bright evergreens, such as hardy heaths, aucuba, berberis, and others. This enlivens your garden. A little protection may be necessary in severe frost to tulips or any delicate subjects under ground.

In the greenhouse be on your guard as much or more against damp than against cold. No row of plants should be too crowded. In the rose garden see that the standards are well secured to their sticks, because of the gales.

In the kitchen garden wheel manure in frosty and hard weather, preparatory to a good trenching a little later on.

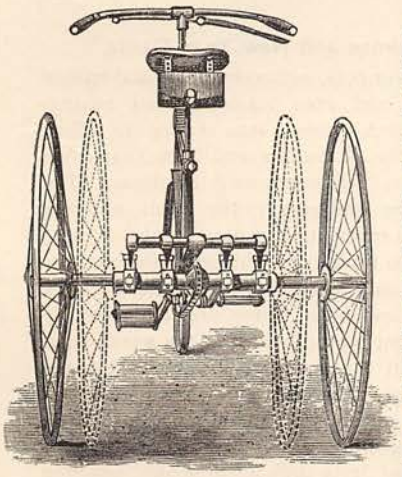


THE GATHERER:

AN ILLUSTRATED RECORD OF INVENTION, DISCOVERY, LITERATURE, AND SCIENCE.

Correspondents are requested, when applying to the Editor for the names and addresses of the persons from whom further particulars respecting the articles in the GATHERER may be obtained, to forward a stamped and addressed envelope for reply, and in the case of inventors submitting specimens for notice, to prepay the carriage. The Editor cannot in any case guarantee absolute certainty of information, nor can he pledge himself to notice every article or work submitted.

A Telescopic Tricycle.



The tricycle which we illustrate in our woodcut is provided with a telescopic axle, which allows the two hind wheels to approach each other, thus enabling the user to take his machine easily through a narrow doorway. To this end each half of the axle can be screwed up into an outer tube, to any desirable extent. The positions of the wheels are fixed by a catch. The dotted lines show the machine brought into a narrow compass.

Celluvert.

This new material resembles a stiff, highly glazed cardboard, and it can be filed, planed, or otherwise shaped like wood. It can be made either rigid or flexible, and obtained in sheets, tubes, or rods. Being but slightly affected by acids or alkalies, and having besides a great tensile strength, and a high resistance to electricity, it is likely to prove useful in a variety of ways, when it becomes better known.

London to Paris by Telephone.

At a recent meeting of the British Association for the Advancement of Science, Mr. W. H. Preece, F.R.S., gave an interesting account of some experiments which had been made by the Post Office with a view to establish telephonic communication between London and Paris. News is now sent by telephone between Paris, Brussels, and Marseilles. There is no theoretical reason why one should not be able to speak across the Channel, for the submarine cable from Dover to Calais is only 21 miles long, and induction is therefore not powerful enough to destroy the vocal currents. The entire distance is 275 miles by wire,

own time and strength to the silly curiosity of a tuft-hunting crowd.

The White House—or, more properly speaking, the Executive Mansion, for that is its proper title—the home over which the President's wife, for the time being, is called upon to preside, is a beautiful, large, roomy mansion. It is very pleasantly situated in the midst of charming grounds extending from Pennsylvania Avenue on the north to the Potomac on the south. Though large and roomy, as we have said, it is not very commodious, considering how many of the rooms, including the celebrated east room, are devoted to public uses, and, indeed, are open to the public for hours daily, being, consequently, unavailable to the President's family. Some rooms on the second floor in the east wing—five, if I remember rightly—are utilised as Executive offices, Cabinet room, &c.; so, as a matter of fact, that portion of the mansion which may be regarded as the President's private residence includes little more than the west half of the second floor.

People who are familiar with the White House realise its inadequate accommodation, while, on the other hand, Americans generally pooh-pooh the idea that an American citizen is not amply provided for with a mansion containing two dozen rooms, quite forgetting that, for all practical purposes, one-half of the number are devoted to the use of the public, or occupied as Executive offices. During the *régime* of President Arthur, who was a man of fine taste, the decorations and furniture of the mansion were for the most part renewed, and very greatly improved; and to-day the entire house, inside and out, presents what our American cousins designate as a truly "elegant" appearance.

In one respect the mistress of the White House is, doubtless, an object of envy to her sisters the country over. Attached to the west end of the house, and opening off the private stairway, are spacious and well-tended conservatories, whence floral treasures

MRS. CLEVELAND.
(From a photograph by C. M. Bell, Washington.)

and exotic shrubs find their way constantly to the parlours and dining-room of the mansion. The marine band also are always at her disposal on the occasion of public entertainments, and, besides providing excellent music, present a very fine appearance in their handsome uniform, of which the, to me, most noticeable feature was that the coat was red, though in both branches of the United States service the uniform colour is blue.

SOME EARLY SPRING FLOWERS.

(THE GARDEN IN JANUARY.)

AFTER all, there are perhaps few flowers that delight us so much as those whose bloom we associate with the early spring and sometimes even with the depth of winter, in which we now are. Flowers at all times are a thing of beauty and a joy for ever; yet in July we look for them everywhere: in our gardens and windows, and on our table, and indeed their absence would then astonish us more than their presence. But it is not so in January, for upon entering a supper-room—it may be at one of our Christmas gatherings—a few flowers that are made the most of in the centre of the table at once call forth general admiration, not, perhaps, so much because they are flowers with which probably everyone in the room is familiar, but because it is *January*, and for the time it looks as if we had succeeded in driving away winter altogether.

Now among our early spring flowers must certainly be named the cineraria; and when we have what is popularly known as "a forward garden"—which very often means little more than one well cared for—our cineraria will be showing for bloom by the middle of this month, if not actually in flower. A few words, then, as to their general culture and treatment will be

very opportune. And following the usual method, we will notice the two ways of rearing them, that is by seed and by cuttings.

First, then, as to the seedlings. Now the cineraria likes a rich, light, and porous soil, and equal proportions of peat, loam, and thoroughly decomposed manure will suit it admirably, with the usual addition, however, of a little sand. In the month of May, then, and in the ordinary shallow pan or pot, sow the seed, giving it only a light covering, but kept fairly moist. As soon as they are up, place them in a frame, or in any place where they can readily be shaded from a too powerful sun. When some three or four leaves have developed themselves, that is, when manipulation becomes practicable, set them out singly in sixty-sized pots, taking care to use an exactly similar compost as that you made use of when sowing the month previously. You can then place your pots either along a plank in a frame, or, as by the middle of June there will be ample room in the greenhouse, your seedlings can have a shelf devoted to them; but still, as we are now talking of *June* operations, any dry and airy situation in the open air will suit them, still using a plank to stand your pots upon and keeping your young seedlings fairly moist, but not soaked, with your watering-pot. Now as so many of our seedlings, in nearly every class of flower, turn out failures, it is not well to grow them large until you are able to form some estimate of their merits; and moreover any great number of seedlings which will want housing all through a winter, in addition to the cuttings and our favourite stock of plants, will certainly cramp us very much for room. If, however, you find that your seedlings, in July or thereabouts, are getting pot-bound, they should be shifted into the next-sized pots. In September the usual housing of course takes place, when see that not your cineraria only but all your plants stand on a thoroughly dry bottom. Any other foundation tends to throw up damp exhalations, which are frequently an evil more serious to avoid than frost. Finally, as the early spring comes on, you will readily judge what are worth keeping by the appearance of the bloom. Any that show very small bloom with narrow petals might as well be at once destroyed.

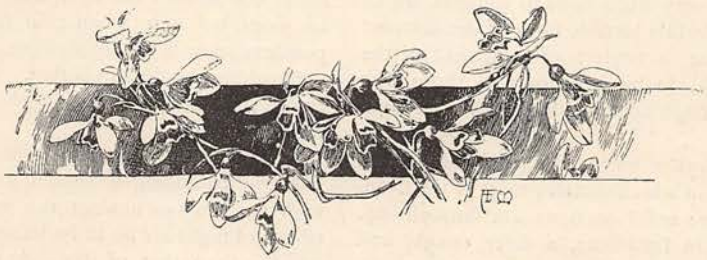
And next as to the propagation of our cineraria by cuttings. After the bloom has perfected itself, and, in fact, decayed away, cut down the stem of your plant, stir up the surface soil in the pot, and throw it away, replacing it, of course, with fresh but similar compost, filling up your pot quite to the very brim with the new soil; then after a gentle watering you can place the pots in a frame, or failing that, if it is favourable weather, find them a dry and sheltered spot in the open garden, always as before taking care that your pots stand not on the soil, or even on gravel, but on a plank or slate. In a few weeks' time you will notice some side shoots from your plant, some rooted and some with scarcely any root. These last are those that you must first make use of. Take them carefully off and strip them of the two or three bottom leaves, and afterwards plant them out in pots singly—or, if you have many of them, in pans—in compost identical with that in which the parent plant has been

RE-POTTING.

growing. Have, as usual, some sand for surface soil, and over the whole place a bell-glass, pressing its edge into the soil. Until your cuttings have struck, the glass should always be kept down, but wiped dry inside. Watering must, of course, be given. But better still than the bell-glass would be the use of a discarded frame, in which some little bottom heat yet remains: this will certainly hasten the striking of your cuttings in these pans. But the side shoots that already have roots to them you can at once pot off in the "sixty" pots, and they can be treated just as your seedlings that have been newly potted off. Their growth in a few weeks will at once indicate that they have struck.

Anyone who has paid even a limited attention to the culture of the cineraria, must have found out how terribly attractive they are to the green fly and the red spider. A good fumigation with tobacco is the only remedy for the green fly. The atmosphere of your greenhouse must as speedily as possible be transformed by tobacco-burning into the appearance of a London fog, and if you go the next morning into your greenhouse you will find the enemy lying quietly dead on the surface of the soil of each pot. Red spiders, however, are better disposed of by sulphur-dusting. A greenhouse that is kept free from damp will be the least liable to the attacks of the green fly. Of course, in the selection of cineraria, notice each year where the bloom is the finest, and only from those plants should you take cuttings or save the seed. Indiscriminate action in the garden always involves a loss.

Our general garden directions must have reference first to an uninteresting but most important subject, and that is manure. This, in fact, is the very food supply of our garden, and we shall neglect it at our peril. A prolonged January frost will give us plenty of opportunity for manure-wheeling. But it is more of the preservation of decayed matter in general, which serves as a most valuable manure, that we intended to speak: and, indeed, it could readily be made the subject of a paper by itself, so important a one is it. A large fire in the middle of the garden, giving forth unsavoury odours, is often destroying much that we ought to utilise for a manure. But more must be said of this on another occasion.



MY OLD FOE AGAIN.

BY A FAMILY DOCTOR.

UNHAPPILY for the inhabitants of these "Isles of the Mist," the names of chest complaints form a long and dismal roll in every book devoted to the study of medical science. In this brief paper I do not propose to mention even a tithe of these, but merely give hints, that may be useful in teaching my readers how to avoid some of those most prevalent during the winter months.

I must at present, however, leave Consumption out of count.

Chronic Bronchitis, sometimes called Winter Cough, naturally takes first rank, owing to the extreme frequency with which cases are met. Few there are, perhaps, who have passed the age of forty that do not suffer from the complaint occasionally, while in some it occurs winter after winter, or spring-time after spring-time. The most hopeless feature about these cases rests in the fact that, owing to thickening of the mucous membrane, each attack leaves the sufferer more subject to another.

The ordinary symptoms of chronic bronchitis are, unfortunately, only too well known—the hacking, rending, or the loose but troublesome cough, with large expectoration of mucus, the difficulty of breathing, especially on exertion or first thing in the morning, and the generally lowered state of health. Exercise, indeed, will often bring on the cough in fits, lasting long, weary, distressing minutes. Thus, through all the livelong winter the sufferer may be bad one week and better the next.

The difficulty of breathing may come on at night, and this fact makes the complaint doubly painful. How often do we not hear such patients exclaim—

"Oh, what a pained and weary night I have passed! Almost better I had not lain down at all."

They look jaded and weak in the morning, too, are seldom breakfast-eaters, or if they do manage to force something down, it is only after dallying with the matutinal cup of coffee or tea. Not being fitted for any great strain of exertion, their business life is, of course, greatly interfered with; they thus feel languid, and often wretched enough, in all conscience. The complaint may follow an acute attack, but it is more

"No, I don't think I should. I am, to all intents and purposes, a thoroughly matter-of-fact young person."

Poor Mabyn! How much happier she would then have been feeling had there been more truth in those words!

He walked beside her in silence for a few minutes. He hardly knew how to broach the subject so near to his heart. If he had loved her! Ah, it would have been so easy then. A word, a look, a pressure of the hand would have been enough to open the flood-gates of his eloquence

"Mabyn——" Then he paused.

"Yes, *Mr.* Dacre." Philip fancied she laid some slight stress on the prefix. Did she mean to reprove him for addressing her by her Christian name?

"Mabyn, do you remember that morning I came over to wish you good-bye before starting for Paris?"

"Perfectly, Mr. Dacre."

He glanced at her in astonishment. He could hardly believe it was Mabyn Littledale speaking, she was so composed, so coldly polite.

"Did you guess what I was about to say when Ralph interrupted us?"

"I don't think that is quite a fair question."

"You are right; it is not. I will substitute another. Mabyn, will you be my wife?"

END OF CHAPTER THE TWELFTH.

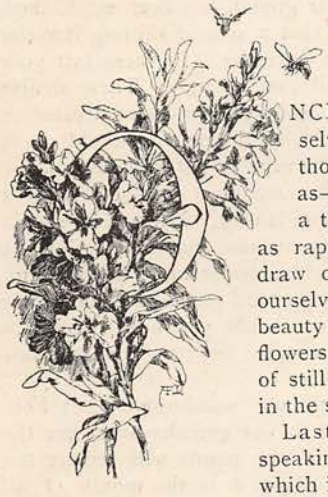
THE LOVE-TIME OF THE YEAR.

NO more the blast of winter blows
Athwart the dale the blindng snows;
Some signs of life astir there be,
The throstle sings on yonder tree;
And "Spring is coming! Spring is coming!"
Swells the music, glad and clear,
"Soon the wild bee will be humming
In the love-time of the year!"

Why stays Olivia, beauteous maid,
Her steps at dawn within the glade?
What makes her eyes more brightly shine,
A blush her cheeks incarnadine?
Hark! "Spring is coming! Spring is coming!"
Sings the throstle in her ear;
"Soon the wild bee will be humming,
Soon a lover will appear!"

JOHN H. DAVIES, M.A.

MORE EARLY SPRING FLOWERS.



ONCE again we find ourselves looking back upon those long winter nights as—for a time at least—a thing of the past, and as rapidly as the days now draw out do we also find ourselves engrossed by the beauty of our early spring flowers, that are the heralds of still lovelier ones to come in the summer.

Last month we were speaking of our cinerarias, which in this month of February ought to be in the perfection of their bloom in our greenhouse, and of the general culture of one or two other popular favourites at this time of the year we shall now have a few words to say. Now, there is a certain degree of pleasant fragrance arising from the cineraria, which can be discovered if you are standing close to it; but a mere spray of the wall-flower, concealed, it may be, by a host of others arranged on our table, is quite sufficient to scent a whole room, or even to perfume the length of our staircase. It is certainly, then, worth a little attention. And, indeed, its more professional name of *Cheiranthus*, or "hand-flower," would of itself seem to suggest it as the one spring flower of all others the most appropriate for use as a portable nosegay. How, therefore, it got to be known as a "*wall*-flower" it is difficult to say, more particularly as this is an epithet sometimes mirthfully applied to those members of our Christmas gatherings whose "bloom" is past.

But to come at once to our subject, we may remark at the outset that there are few plants so hardy as the wall-flower; we are speaking now chiefly of the *single* variety, which, though less rich and beautiful to the sight than the *double* variety, is far more hardy, and its perfume stronger. Of the single, then, we will speak first. The two well-known colours of the wall-flower are the blood-colour and the golden; the seed of this we sow on any ordinary bed in the month of April, while about the following midsummer our young seedlings may be planted out ten or twelve inches apart, and should a mild winter ensue they will bloom as early as the third week in February. But in a severe season it is as well to give them a little protection by means of, for example, an evergreen bough; for although we have many plants and shrubs that are generally acknowledged to be capable of standing an ordinary English winter, yet the same will sometimes

succumb when the winter is extraordinarily severe. It is best also to plant out your seedlings in the spots in which you intend them to bloom, since a *second* removal is sure to entail some slight check to the well-being of your plant. Sometimes, however, the second planting is difficult to avoid, more especially on our flower-beds, which by midsummer would certainly be occupied to their fullest extent. At all events, along large borders or carriage-drives it would be as well to plant your seedlings, and let them remain there from the first, as in this case there is, of course, plenty of room. Now from our *single* seedlings we are rarely able to obtain a *double* variety, and even if we did, there is no chance of still further improving upon it. Of these single and hardy kinds the best shaped and the best coloured are only to be got from the best plants; mark them, then, early "for seed," so as to prevent them being gathered for nosegays or decorations. Have the seed-pods laid by when ripe, and the seed on no account removed from the pod until the time for sowing has actually come. And this sowing-time you can readily vary in some degree, in proportion as you wish to have your plants forward or late. Indeed, the importance of successional sowing holds true for our flowers just as much as it does for our vegetables.

MAKING THE BEST OF THE FLOWERS.

But the beauty of the *double* wall-flower is universally admitted, and of that we must now speak. The single varieties we rarely propagate by slips or cuttings, but the double ones are always so raised, and here our frames and greenhouses, or our bell-glasses, will come into requisition. Now, after the double wall-flower has bloomed you will notice plenty of shoots all over the stem of your plant. When these have got about an inch and a half long strip them carefully off, and take the little leaves off the lower half-inch of these young shoots; plant them all immediately in a large pot or pan, using good loam and manure, or, indeed, any ordinary potting compost, and protect them by a bell-glass or set them in a frame. You will find that they will all strike. When you once notice that they have thoroughly struck, plant them out singly in "sixty"-sized pots; they will like plenty of air and some warm showers, but, like most of the vegetable and animal creation, they will strongly object to a north-east wind. When the roots have filled the pots—and here we might say generally that it never does for any plant to be what is called "pot-bound," that is to say, one that has a mass of fibrous roots covering the entire surface of the pot, and evidently asking as loudly as it can for more room—shift them into "forty-eight"-sized pots; and again later on, when a further growth has been established, you will similarly see that a second shifting into size No. 32 will become a necessity. In these last your plants will bloom well and strongly. These double varieties, then, of the wall-flower must be treated as frame plants, but the chief things that would check their progress would be want of water or any sudden accession of cold. But we must now notice their treatment after blooming is over. Each plant should be cut down afterwards into that shape that will make the new growth form a handsome and healthy plant. They can then stand on a hard ground or shady place in the open garden, or should you keep them in a frame, have them well watered and protected from any hot sun.

Thus much, then, for our wall-flowers; but February is a busy month in our greenhouse, where the large bulk of many of our plants will require the annual re-potting. In fact, it is the month of all others that we generally devote to going over our greenhouse stock and to re-potting. And in our fruit-garden pruning is one of those essential operations that will no longer admit of much delay. The gooseberries and currants, perhaps, may be put off to the last, but the wall-fruit in an early spring is sometimes by this time breaking into bloom. Never, then, postpone any necessary operation to a time when it is almost too late to begin; on the other hand, premature pruning is dangerous because of after-frost.

all the strings"; *cantabile*, "in a cantering style"; *accelerando*, "excelling"; *forzando* means "pressing forward"; *scherzando*, "in a swerving manner," or "skimming along"; while *tempo rubato* is translated "rubbing the time." *Volti subito* (turn over quickly) is rendered "high, but subdued"; by others, "getting gradually subsided," "in subjection," and "volatile." *A piacere* (at pleasure) is made to mean "piously," "bitingly," or "in step." Then we have the information that the notes of an *arpeggio* are "sounded successfully by a single part"; also that they are heard "simultaneously—*i.e.*, one after another"; while another says that they are "struck, not together, but simultaneously."

Coming to musical history, we are confronted with the astounding chronological statement that Schumann "was born 1794, died 1764." The attention of compilers of vital statistics is invited to this unique instance of a man dying thirty years before his birth. Schumann's music is described as "lively and graceful, but grand, very difficult indeed to execute." The same critic says of Weber that "his music is extremely lively and gay, also graceful and sweet." Another knowing one opines that "Weber's last waltz is very popular with the common herd, but it is the sort of popularity which will not last, being too noisy." We are left in doubt as to which is too noisy, the waltz or the popularity. "State briefly what you know of Dr. Boyce?" was a question recently set. "I do not happen to have heard of this gentleman," said one polite candidate; "life of Wagner instead." Then followed a full biographical account of the composer of "Parsifal," which the examiner had not time to read. Of Mendelssohn a colonial candidate tells us that "he was the founder of the Academy for Organists in London about the year 1852"; the reader need scarcely be reminded that Mendelssohn's life was prematurely cut short in 1847.

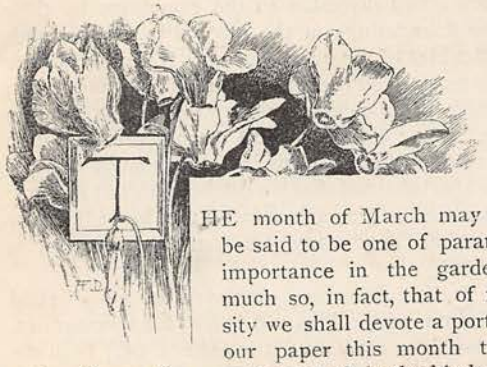
Mendelssohn is said by one to have founded the "Royal College of Organists," and another states that he was the "founder of Royal Academie and Schumann Trinity College."

In the December of last year Senior candidates were at the last-mentioned College asked, "Where and on what occasion was Mendelssohn's *Lobgesang* produced?" These are a few of the answers:—"At Leipsic, on the occasion of unveiling a statute (*sic*) to Gottenburg"; "It was produced at Douterdüff on the revieling of the fourth sentinary of Art Printing"; "It was produced at Berlin on the occasion of the unveiling of the statue of Bullenger"; "On the opening of St. Thomas's Hospital"; and lastly, the occasion is given as "The upholding of the statute (*sic*) at Battenburg." The English name of the *Lobgesang* is variously given as "Lovesong," "Songs without words," and "Lauda Sion."

Students of harmony will be glad to know that the Leading-note "should not be doubled, as it has the effect of too much sweetness"; also that Natural Modulation is "when it glides of one key into another. An extraneous modulation is when it leaps from one key to another." One more curiosity must end our selection; it is from the paper of an aspirant for Honours, who tells us that the movements "generally used" in a symphony are "Kyrie Eleison and Gloria in Excelsior."

The final word of our last quotation may well serve as the motto for those whose good work has been recognised and certified, as well as for those hapless ones whose slips have supplied the material for this brief article. The art and science of music is an inexhaustible study, and each peak scaled, although it raise us into a higher zone of purer air, yet opens to the artistic perception a vista of loftier heights beyond; so let the maxim of every student of divine Cecilia's art ever be—Excelsior! E. BURRITT LANE.

SPRING AND EARLY SUMMER FLOWERS.



THE month of March may justly be said to be one of paramount importance in the garden, so much so, in fact, that of necessity we shall devote a portion of our paper this month to the notice of some few operations, both in the kitchen and fruit and flower gardens, that at our peril we dare not neglect. Still, in accordance with our custom of late, the general culture of one or two flowers in particular will first engage our attention, so that in our gardening for each month some definite point may be gained and some increase of practical knowledge aimed at.

A few words, then, about another popular favourite flower, the cyclamen, so called from its circular or bulb-like root, and a member of the natural order *Primulaceæ*.

At the outset, then, we may remark that among the causes of ill-success in the growth of these beautiful flowers is the injudicious use of the watering-pot. All plants, of course, require water at certain specified times, just as we do ourselves when thirsty, but there are some so sensitive in this matter—as, for example, the cyclamen—that, on the one hand, they would be much injured by an over-supply of water when in the dormant state, or, on the other, by being allowed to get too dry during the season of their growth. Still there is, of course, no great diffi-

culty in their culture; and, indeed, anyone possessed of a frame and a pit or small greenhouse can readily raise the cyclamen. Protection from frost, but more particularly, as we have just hinted, protection from excessive rain, is an important factor in its growth.

Now, by far the best plan for growing the cyclamen is propagation by seed; indeed, many good authorities say it is the *only* method. Some again, a few years ago, used to recommend sowing immediately after the seed has ripened, but the more usual method of late years has been to sow towards the end of February, or indeed, early in the present month of March. The ordinary seed-pans of some four or five inches in depth will well answer your purpose; see particularly to your drainage: have in your pan or wide-mouthed pot a good inch of broken potsherds, and on this you may have a layer of rough peat moss, while your compost itself should consist of one-half of peat made rather fine, and the other half in equal proportions of thoroughly friable loam and silver sand. Fill up your seed-pot, then, to within about half an inch of its top: press it tightly down, and sow your seed, rather thinly than otherwise, upon the surface: sift some more compost over all: press down firmly, and give a moderate watering. A thin covering afterwards of a little loose moss will help to retain moisture, prevent evaporation, and lessen the necessity of frequent watering. Your pans should then be placed in your frame or pit, and kept thus protected until germination has thoroughly set in. In a strong sun some shading may be necessary, and in the fine weather most certainly must some air be given. Indeed, that terrible dread of fresh air, which some people seem to think is actually injurious both to their flowers and to themselves, is very often fatal in its results.

When two or three young leaves have developed themselves, pot off your seedlings in small pots of about three inches diameter, and in a compost of exactly a similar character to that which you sowed your seed in. Select your strongest little plants, and in taking them out of their original seed-pans, avoid damaging the roots as far as possible: particularly, also, avoid any injury to the leaves, which are attached, you will notice, to very slender and brittle stalks. In potting, press the soil firmly round the base of your plant, and afterwards give water, and replace it in its frame. As your young plants begin to root round the sides of the pot, more air and less shade will be needed; and as they grow more thoroughly hardened, the lights may be taken off the frame, saving during any time of heavy rain. Plants thus treated will make good ones for potting into larger pots, and for blooming in the following year. We might, however, further add that during the dormant season water must, to a very large extent, be withheld until the following spring, when, about March, they will want shifting into larger pots, round which, when the roots begin to grow, a little manure-water may be added. The manure-water, however, must be of a very diluted character, and only given to the plant when in full health, and when the period of blooming is setting in.

PRUNING: A MARCH TASK.

All these hints that we have given refer more particularly to the popular greenhouse species, the *Cyclamen persicum:* closely assimilated to this is the *Cyclamen repandum*, or the wavy-edged species. There are, however, many kinds sufficiently hardy to grow in the open flower garden, but for this purpose it is well to avoid those whose habit it is to bloom in the very early spring, as naturally the flower might likely enough be cut off by one of those late frosts that are sometimes more mischievous in the end of March than they are in January, when nearly everything is still quietly slumbering underground. Those, therefore, whose bloom is produced in summer and autumn

are much to be preferred for the open air, and for this purpose their culture will be under more favourable circumstances if you have not too hot a situation, nor one which is robbed of its moisture by any large tree. Then, again, a peat soil is most decidedly more favourable for the cyclamen in the open air.

Now, an important item in our gardening this month is that of pruning: it is, first of all, the great month of all others in which we cut our roses carefully back: a good deal of judgment is necessary in carrying this out. To begin with, all the long, weak, and spindly branches should first come off close to where they spring from, and for this reason: they are never likely to be of any service to you for growth or for bloom, and allowing them to remain on will only tend much to weaken the whole standard: and next, the strong shoots must be shortened back in accordance with the proportions of your tree.

CYCLAMEN.

Nor should a day longer be postponed any pruning of your currants and gooseberries: still, on the other hand, the danger of commencing the pruning *very* early in the year is that afterwards severe frosts may do damage; no pruning at all should indeed be done when any frost is about. Another heavy and most necessary operation this month is the making up of our cucumber frame. Of course, where hot stable manure is always at hand—and this is generally the case where gardening is on a large and expensive scale—a frame is always in working order, but in our ordinary and quiet domestic gardening we make up a frame early in the month, and we shall find it of enormous use, especially in its early stage, for forcing on endless seed-pans and pots, which we afterwards remove to our greenhouse. In fact, a good frame—and if there are two, all the better—enables us not only to keep up successional bloom in the garden, but our stock of vegetables can also be all started under its shelter, and eventually pricked out when removed from the greenhouse.

A FRIENDLY TALK ABOUT HYSTERIA.

BY A FAMILY DOCTOR.

"WHAT'S a cure for indigestion, doctor?" It was an odd sort of question, given in an odd off-hand way, and at an odd time. For Mr. N—— and I were riding together outside an omnibus, and the "'bus" had stopped to "pick up." I smiled, but made no reply. And after we had descended and were walking together I said quietly—

"Just, N——, as if indigestion didn't depend upon a hundred different causes, or rather sets of causes, and just as if there were not a dozen different sorts of indigestion!"

Now Hysteria, which I am going to treat of to-day, is almost, if not quite, as complex a subject. Nevertheless, I believe I can in one paper give many useful hints, and tell the reader some things he did not know before. Perhaps there is no ailment under the sun that is less generally understood than hysteria. It is one, too, for which the sufferer seldom receives a due meed of pity. The patient is said to be delicate and nervous; this can be readily forgiven her, but human nature can go no greater length, and when the adjective "whimsical" is added, it is usually with a slight shrug of the shoulders.

Now the reason why I claim pity for one afflicted with some form of hysterical ailment is this: albeit the disease be not real in the true sense of the word, it is not "put on"—to use a simple term. The patient is a true sufferer; she may certainly be deceiving others, but she has deceived herself in the first place. There is really no shamming about the matter—no feigning of illness which she does not really and truly believe exists, probably in a very aggravated and dangerous form. She is sensitive to a degree, easily hurt either in body or mind, while the very fact of the mind being turned inwards—if I may so phrase it—and permitted to meditate and dwell for a long time on certain fancied ailments, may account for the production of some real trouble in the ailing directions in process of time. A lady, for example, has hysterical heart disease, *i.e.*, she fancies she has heart disease, and that, with an almost acute desire to live, and be healthy and happy, she can neither exist long nor ever be well again. Every sensation, even the slightest, about the region of the chest emanates, she imagines, from this sick heart of hers. The prick of a

ANNUALS IN THE FLOWER GARDEN.

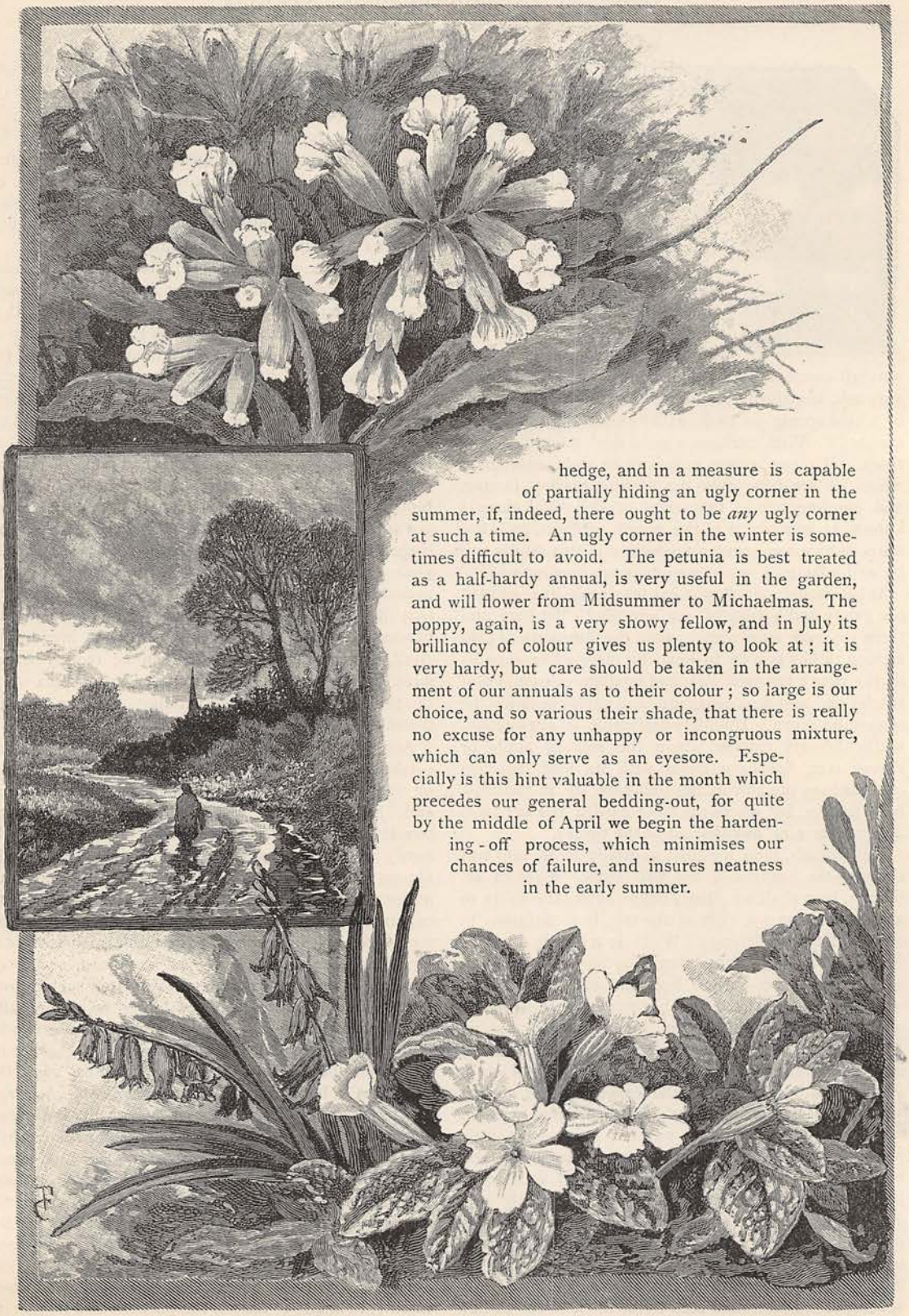
THE month of April, upon which we are just entering, may justly be called the month of garden resuscitation. But although the bitter winds of March are once more passed in the wild circus of time, still we must not congratulate ourselves as yet, as if we were altogether "out of the wood." An April frost is nothing out of the common, and we must be prepared for it in all our half-acre operations this month. But what, some may ask, has all this croaking about the possibilities of a cold spring got to do with "annuals in the flower-garden?" Well, perhaps a good deal more than you think. If there is one month more than another in which we are busy over the sowing, rearing, forcing, and planting out of that class of delightful flowers known as annuals, it is the month of April, so a few hints as to some popular favourites in this family will be well adapted to make up our paper this month.

What would our flower-gardens look like without the gaiety and variety of our annuals? Yet here and there we have seen some, where the formality of cold fashion thinks proper to have for barely five months in the year a few isosceles and equilateral triangles of scarlet and scentless geranium, and empty beds for the remaining seven. Infinitely preferable, in our opinion, is the homely cottage where the solitary apple or cherry tree, breaking down with its load, perhaps overshadows the sow in the well-kept sty in the little back garden, but where the front garden is a veritable nosegay for nine months out of the twelve.

Our annuals, then, we shall naturally divide into two classes—the hardy and the half-hardy. First of all, though, how shall we clearly define each class so as to avoid confusion not only of the two, but confusion in our practical gardening? What is a hardy annual? Hardy annuals are those that may be fearlessly sown in the open flower-garden from the middle of March or, at all events, from the beginning of the present month, when the soil has got dried by the winds, and a little genial spring weather and sunshine have set in. But for the chance of getting some early bloom it is quite worth while to try the experiment of sowing some few of the hardiest seeds even a fortnight earlier, when, should some severe weather intervene, a little protection could be given in the usual way, but if you have selected a sheltered situation, or if your seeds have not shown above ground, there is probably little doubt that you will succeed in obtaining some proportionately early bloom. Then, again, subsequently to the great sowing season which is now upon us in full swing, we can go on with some fortnightly sowing of hardy annual seed in the open flower garden quite up to the middle of July, and the *last* sown will afford us some flowers late into the autumn. Or taking the other side of the question, if you are wishing for a very early bloom, hardy annuals can be sown in February in a gentle hot-bed, and after they are up they can be moved to a cooler place or cold frame, and thus gradually hardened off to display their flowering beauties as soon as the season will admit of it. These, then, are hardy annuals.

Half-hardy annuals, on the other hand, are those that in *all* cases require *sowing in artificial warmth.* Only a moderate heat, however, is necessary, so that there is no need whatever to think that the possession of a tropical house all the year round is essential for the cultivation of half-hardy annuals. These seeds can be sown in pans or pots and placed in a garden frame, even where the heat is half gone. When your little plants are large enough for careful manipulation, "prick" them out into other pans of similar compost, but at a little distance from each other, and replace them in the same frame. When they have got still larger they had better be again shifted, putting three of them into "sixty"-sized pots. Do not expose your half-hardy annuals to the open air until the general bedding-out time has quite set in, but before that time they ought to share fully in the hardening-off process to which most greenhouse plants are during April subjected. Your plants can be readily transferred to the open border from the small pots when the transformation scene of bedding out takes place in the middle of May.

And now for a few instructions under each head—taking first the hardy annuals. *Iberis odorata*, or the white candytuft, flowers very freely in June and July, about a foot from the ground; the purple specimen, *Iberis umbellata*, is a particularly hardy one, flowering at the same time, and would almost stand a mild winter if sown the previous autumn. Then, again, we might notice the saffron-coloured escholtzia, which flowers about the same time—its habit is to spread; the Californian species is of a brighter yellow. We need not, however, be too concise in our description of favourites such as our hardy annuals; to name a few others is almost sufficient for our purpose. The convolvulus minor is well known; the convolvulus major, however, is half-hardy, and must be treated as such. Then we have the variety of colour afforded us by the *Delphinium*, *i.e.*, the larkspur, whether of the dwarf or the branching specimen. The nemophila, again, blue with a white centre, and the *Nemophila atomaria*, or spotted specimen, which is particularly hardy, is well known. But where shall we stop if we go into detail over hardy annuals? The ten-week stock, the slender lobelia, the fragrant Martynia, of a rich purple, are among those we think of that belong to the half-hardy tribe. Our old friend the hardy sweet pea can, when sown thickly, be made to answer the purpose of a temporary



hedge, and in a measure is capable of partially hiding an ugly corner in the summer, if, indeed, there ought to be *any* ugly corner at such a time. An ugly corner in the winter is sometimes difficult to avoid. The petunia is best treated as a half-hardy annual, is very useful in the garden, and will flower from Midsummer to Michaelmas. The poppy, again, is a very showy fellow, and in July its brilliancy of colour gives us plenty to look at; it is very hardy, but care should be taken in the arrangement of our annuals as to their colour; so large is our choice, and so various their shade, that there is really no excuse for any unhappy or incongruous mixture, which can only serve as an eyesore. Especially is this hint valuable in the month which precedes our general bedding-out, for quite by the middle of April we begin the hardening-off process, which minimises our chances of failure, and insures neatness in the early summer.

and writing material for the accommodation of newspaper correspondents, and telegraph wires lead to it, communicating with the main lines of telegraph throughout the country. The Press is a power indeed in the United States, and nowhere more so than at Washington, where Senators and Congressmen vie with each other in extending favours to the numerous correspondents representing the leading papers in the United States.

Both the Senate and the House of Representatives include among their respective officers a Chaplain, and both Houses are regularly opened with prayer; this daily prayer while Congress is in session being apparently the sole duty required from the reverend gentlemen who act as Chaplains. The Chaplain of the House, the Rev. Mr. Milburn, is blind, and is accompanied on all occasions by a daughter, among whose duties is that of reading to her father every morning the proceedings of the day previous in Congress, and on these proceedings the Chaplain is accustomed to base his daily petitions.

The privilege of admission to the floor of the House is limited to ex-members, secretaries of committees, each Standing Committee being entitled to such an officer, and to the pages and other officers and attendants. Ex-members are frequently employed by parties interested in the passage of special legislation, owing to their enjoyment of this privilege, which gives them access to the House, and consequently to the members, at all times.

Another and a still less reputable class of lobbyists frequently to be met with in the vicinity of both Houses are the women who make a business of lobbying, and who, it is to be feared, presume not a little upon the privileges of their sex to harass members of Congress with a persistence which would, in a man, be promptly and decisively rebuked.

The Senate Chamber does not differ materially in its arrangements from the House, except that, as befits its dignity, and the smaller number of members, the accommodations are more luxurious, the revolving cane chairs of members of the House being replaced in the Senate by large and comfortable arm-chairs. The Senate galleries accommodate only about half as many people as those in the House. Another perceptible difference is that the Senate may and does hold secret sessions, from which all but Senators and the officers of the Senate, not even excepting the highly favoured members of the Press, are rigidly excluded.

All bills for raising revenue must originate in the House of Representatives; and on the other hand, upon the Senate devolves the duty of ratifying appointments made by the President of the United States, and all treaties made by him require its approval.

Of the Senators, the most distinctive characteristic is probably their immense wealth. Very few of them are poor men, and these are mostly from the Southern States. Most of them are very rich men, many of them millionaires.

Another feature which strikes an Englishman as curious, is that night sessions of the House or Senate are extremely rare. Both Houses usually convene at noon and sit four or five hours—though, of course, at times the sessions are prolonged into the night, and sometimes the House has sat several days and nights without intermission.

A description of the Capitol, which that gifted and versatile Frenchman, "Max O'Rell," declares to be one of the most imposing and grandest buildings to be found in the world, would require a paper to itself.

*** All the illustrations to this paper, including the portraits, are engraved by special permission from photographs by Mr. C. M. Bell, Washington.

A MAY GARDEN.

LAST month we were discussing the beauties of our hardy and half-hardy annuals in the flower garden, but in this treacherous month of May, and before passing on to other or kindred subjects, something, perhaps, should be said, by way of supplement, relative to our annuals, occupying as they do such an important place in our garden.

Now, our tender annuals succeed very well with only one re-potting: that is to say, where you have room for it they can be transferred straight away from the seed-pan or pot in which they were originally sown to that in which you intend them to bloom, and this change—or "shift," as we call it—should be made early in May, and by the end of the season you will find that the roots have filled the pot.

And we must bear in mind that the distinction between a *permanent* green-house plant and an *annual* is this: that the annual, as implied by its name, as soon as it has attained its full size and growth, and in fact perfected itself, has fulfilled its mission, and it dies; whereas, for example, a camellia or a heath when its roots have filled a pot is merely pot-bound, and another shift into a larger-sized pot at once gives it a fresh start, and its lease of life is renewed. A single shifting, then, for our annuals ought to be sufficient.

This, again, being the month in which—however much we may differ in opinion as to the best method of summer arrangement of our garden—all our green-house stock and young cuttings are displayed to the best advantage in our open flower-beds for the season,

we had better give a few general directions as to the cultivation of the more popular favourites that now so actively engross us for bedding-out. For the most part, we commence with the hardiest of our flowers by about the second week in May: these we put out first, and among them are our calceolarias and verbenas; a word, then, as to their general treatment. Being a good deal hardier than very many of our bedding-out plants, when we take cuttings from them at the end of August, of some three inches in length, we can afford to gain room in our green-house by putting calceolarias and verbenas in some discarded cucumber-frame. And here again, if the spot occupied by our frame is one that we value, and we feel sure that we shall want to replenish it early in March—which is the month in which we make up our hot-beds—the frame itself can simply be moved to any at all sheltered spot in the garden, and the young cuttings put into the simple and unprepared soil itself in August. Or at most, the soil need only be gently stirred, and when the cuttings are put into the ground, use a little ordinary silver sand on the surface. The light need not be put on the frame until about sunset, though after Michaelmas, of course, the light must be *always* on, unless it be partially removed for a very short time during the best of the day, for the purpose of admitting fresh air. Should a severe winter afterwards set in, throw over the whole frame some tarpaulin, matting, or old carpet, removing it only during the best of the day, if the frost be intense or prolonged. For recollect that all you wish to do in this, the cultivation of your verbenas and calceolarias, is merely to keep them "going"—so to speak—until the following May.

Another great convenience and saving of time arising from this device is, that your hardy bedding-out plants that are thus wintering with their little roots in "mother earth" will probably require no watering at all during the winter, the natural moisture of the soil being most likely quite sufficient for them. Indeed, in this matter the writer is speaking from experience, having tried the experiment with perfect success during more than one winter: that is to say, the frame was removed from its usual place over the manure, and placed at the end of a cabbage bed—in fact, nearly under some apple-trees, and where a good high hedge protected it from the east wind. In April the young cuttings were so hardy and healthy, and hardly any had damped off during the winter, that when they came to be bedded out again early in May, they did not appear to be conscious of any change at all. On the other hand, you will find this month that if you impatiently transfer your geraniums and other bedding-out plants almost straight from the green-house to the open flower garden, the leaves, more particularly if any May frosts or east winds are about, will become blackened or discoloured. Yet you need not be very much alarmed at this, for although your general stock will look ugly for a time, and its growth be impeded, yet in a fortnight or thereabouts your plants will recover themselves.

Heliotropes, fuchsias, and perhaps petunias may be similarly treated, but more particularly the fuchsias.

This month, all climbing plants which run up the south side of your residence, such as, for example, the old China roses, passion-flowers, or bignonias, may very likely need some syringing with a good rose on the syringe; and in doing so, take care to syringe underneath the leaves as well as over them, and use some little force in the operation. April and May are terrible months for the green fly, and indeed for all insect and caterpillar troubles; and the last two or three weeks that your green-house is sheltering your stock of plants is often a critical time, partly from the overcrowding, and sometimes from the fly.

BEDDING OUT.

So said Florence, concluding a long and earnest conversation she had had with Rudolf, in which many things had been explained, many difficulties smoothed away, many secrets brought to light. At first, it is true, his pride had risen up against the proposed arrangement, but when Florence had gently asked if he intended to let his pride spoil her life as well as his own, he had been silenced, and had listened to her more calmly and reasonably.

In the light of the beautiful new love that had flooded his life, the past as well as the future looked changed. Love after all, not pride, should be the mainspring of action, and when Florence talked to him of her deep steadfast love for one who had been the tenderest of fathers to her, he felt that for her sake he could love his uncle too, and submit to be treated as a son.

"If only it were not despoiling you, Florence——" he began; but she laid her hand upon his lips.

"Whatever is yours is mine now, Rudolf, and whatever is mine is yours. We need not trouble ourselves over a matter so profoundly unimportant as legal ownership. We are to be as son and daughter to Uncle Oliver, to watch together over his declining years, to make life happy and peaceful for him to the very last. We have him, and we have one another; is not that enough? Rudolf, my Rudolf, I know you better, I think, than you know yourself. That is why I came so confidently to fetch you home."

Rudolf laid his hand on Florence's head. She fancied that his hand trembled a little.

"If only you knew how sweet that word sounds to me!" he said very quietly, rather as if he were afraid to trust his own voice. "To-day I believed that I should never know a home again—for I knew that no place could be a home to me without you, Florence."

And so Rudolf came home to Marchwood to take up his abode there as its future master. The stronger will had triumphed, and he was acknowledged as his uncle's heir.

What a joyous reception met him there from the children, what glad congratulations from his mother! and what a happy meeting later on with Violet, when no shadow rested upon her mind, and she saw what the design of Florence Tenant had been throughout, and mistrusted her no longer!

As for Vernon, after the first shock of disappointment had passed, he had the grace to be heartily ashamed of himself; and when he found that Eastlands was settled upon him, and that his mother would require his presence there to manage the property during her lifetime, he felt that he had more than he deserved, and resolved to grow up to something better than a life of mere scheming and idleness.

And before Mrs. Freer migrated to the new house Rudolf's strength had returned. Rest and happiness and freedom from care had restored him to his wonted vigour; and he and Florence were married amid the rejoicings of the whole community.

Now little pattering footsteps echo along the corridors of the quaint old house, and there is a babble of baby voices in the familiar rooms. Mr. Cadwallader is as proud of his "grandchildren," as he invariably calls them, as the most devoted of the race of grandparents could be; and they tyrannise over him in a fashion which plainly shows that they deserve the name of "Stanhope-Cadwallader" which they now bear. Little Oliver makes grandpapa a complete slave, and the liberties that Flossy takes are appalling to witness.

Strange to say, the old gentleman likes it amazingly, and sometimes, as he sits watching the fair young mother, with her beautiful children clinging about her, he says, with a roguish twinkle in his eye:

"Strange, what a trouble it was to settle who should be heir of Marchwood with such a simple solution of the puzzle under our hands! It all comes of bringing up a woman to think and act for herself. She is sure to turn round in opposition at last—and the worst of it is that the chances are she will triumph in the possession of the Stronger Will!"

THE END.

THE GARDEN IN JUNE.

IT is, perhaps, somewhat embarrassing in a month when everything in the garden is clamorous for attention at once, to know which is the best course to take. And this is just the case with us gardeners in June, when we certainly cannot afford to show partiality or favouritism in the garden; for what would happen to us if, say, our devotion to the roses allowed us altogether to neglect the strawberry runners, the thinning of the wall-fruit, the weeding of the early vegetable crops, and the mowing of the lawn? It may be well, then, this month, when a vigorous sap in the whole vegetable creation is making everything push on with giant strides, if, forsaking our custom of late which has been the study of some one particular plant or flower, we give a few hints in detail upon the main operations necessary in June in each department of the garden. We can better afford to discuss the merits of individual plants in the dead period of the year than we can now, but at all events we can afford to make June an exception to our rule.

Yet, in this month, something too may with advantage be said about the lawn—an item, perhaps, too

often passed over in the garden. Where it is large enough, its popularity from May to September is notorious enough, for in our times, when sport of all kinds seems to have turned the heads of the majority of us, tennis certainly lays claim to a very considerable share of our attention. The writer once knew a gentleman who had an old country house for disposal, which was on his hands for some time. The lawn in front of it was studded with a few flower-beds of the ordinary kind, but the standard roses upon it were in rather an exhausted state, and would have wanted renewing. This being the case, the space occupied by the old standards was, upon their removal, simply turfed over, when soon afterwards a gentleman in search of a house entered the garden, and on seeing the lawn exclaimed, "Tennis!" and in twenty-four hours more the property was disposed of. The net was put up, and the first match ever played upon the lawn was a "single" between the vendor and the buyer, won amid much excitement by the vendor. Hardly a story, perhaps our readers will say, for a *gardening* paper, since the roses had to make way for the net. Nevertheless, the lawn is a very necessary adjunct for a good garden, and be it remembered that twenty-four hours' work can at any time transform a tennis lawn into a flower garden by a little removal of the turf for some beds. "What is sauce for the goose is sauce for the gander," and if the roses had to give place to the net, so also at any time can the net give way to the flower-beds. Briefly, then, let us say that where a lawn is much worn from whatever cause, whether by tennis or by anything else, it has of late years been thought that to have it re-sown with good grass seed is better than having it re-turfed. Early in March is, perhaps, as good a time as any for sowing a lawn, but a windy day should not be chosen, as the seed is liable then to be blown away. Cover afterwards with a little finely sifted leaf-mould, but take care that no stones are thoughtlessly allowed to find their way on to the lawn. In very badly worn places, an old tennis net horizontally laid over the ground at a very slight elevation, will also afford an additional protection against the birds: then again, if the ground be at all wet, avoid walking on it just after it has been sown, as the seed would probably cling to the soles of the feet. Regular rolling and mowing with the machine is all that a lawn requires, but dandelion roots should be drawn like a tooth, and in time, with this careful attention, it should be all that can be desired.

THINNING OUT WALL-FRUIT.

In the fruit garden, we are careful in the months of May and June to get away the strawberry runners: this is of the *utmost* importance if we are to look for any proper crop of strawberries. Similarly, if they are blooming during a prolonged drought, and more particularly when the fruit is, as we say, just setting, the berry will perish if, in a *very* dry season, no water is given. On the other hand, experienced gardeners will tell you that in some parts of the country, when water is getting scarce, it is very hard to lavish so much on the strawberries, which, by the way, are never content with a little, if any is given to them at all. In a heavy fruiting season, thinning the wall-fruit is another operation that *cannot* be neglected. Use extreme caution in getting away those that you are removing: have no branch over-weighted, and be particularly careful not to damage either the stalk or the fruit of those that you allow to remain for ripening. The gooseberries and currants if troubled with the caterpillar must *instantly* be attended to. Do not be deceived into supposing, because the caterpillar only devours the leaves, that therefore the fruit is safe. If you do nothing you will find in the middle of July that the leaves are *all* gone, but that the fruit

is still green and hard. The usual remedies, then, must be applied forthwith. In a good season, we mean in the absence of caterpillars, sometimes when the foliage is thick, some may be thinned out a little, so as to allow the sun and air to get a little more readily to the fruit ; but then we are again unhappily confronted by the bird difficulty, when netting must be used, and here the old tennis nets are again of the utmost service. Similarly will they also be useful for the protection of our wall-fruit a little later on.

By the end of the third week in May, our bedding out, and all summer arrangement of the flower garden, should be over : yet, perhaps in the course of the month of June we may find a good many handsome and luxuriant plants still on the stands in our greenhouse. Many of these we can with advantage either plunge in our flower-beds, or we can decorate the sides of our gravel walks with them, and thus acquire an empty greenhouse, or one nearly so, when the opportunity can be best employed for any necessary painting, or if not, then any plants requiring special care or high temperature can, of course, be tended at a time when there is plenty of room for them.

In the kitchen garden, even as early as June, you will find that there are crops to be cleared, while it is hardly necessary to state that you will always find crops to be weeded or to be thinned. Indeed, the kitchen garden *alone* could occupy us in June, for there are peas and beans to stick, potatoes and celery to earth up, and successional crops to sow. A dressing of salt may be given to the asparagus-bed, while in the middle of the month the chief planting of broccoli may be made. Cut the herbs, too, just before they flower, and hang them up in a thoroughly dry room.

AËRIAL PHOTOGRAPHY.

BY WALTER E. WOODBURY.

AËRONAUTS and others have for some time past endeavoured to produce photographs from a balloon, and have met with very considerable success. Students of geodesy have long looked forward to the time when photographs could be made from which plans and maps could be constructed. But besides this, photographs taken from a height have many other uses. For war purposes they would be invaluable, showing the position and movements of the enemy. For explorers, too, they might be the means of preventing the loss of life, and for the advancement of scientific knowledge there is no end to their utility.

Probably in no branch of science have such rapid strides been made as in photography, extending its application to every branch of science, art, and education.

The difficulties which first beset the experimenter in aërial photography have been very much smoothed down by the introduction of the gelatine dry plates, with which photographs can be made in a fraction of a second ; and this is, as will be seen, very essential.

It would be difficult to say who was the first to make photographs from a balloon, but there is no doubt that M. Nadar, of Paris, has done more in this direction than anyone else. Some very satisfactory results were obtained by him by means of a camera attached to the side of the car.

But the idea of sending a camera alone up into the air was one that occupied the attention of scientists,

ELEMENTARY AËRIAL PHOTOGRAPHY.

"Perhaps she is. But I know her mother would be very glad she should marry, and Jim is five-and-twenty and old enough to take care of her. I can't say, my dear Betty," went on Mrs. Adair confidentially, "that she is the wife I should have chosen for him; but he is so desperately fond of her, and we are so anxious that he should take a wife with him when he goes back to India next year, that his father and I have decided not to raise any objections. She is a nice little thing, and I dare say will improve and steady down when she is married."

"I shouldn't have thought India was a very good place for a young wife to steady down in," Betty could not help remarking.

"Oh! Dickie has very good principles, and Jim will make her very happy," said the fond mother.

"I wonder if he will. It is my private belief that girls of eighteen don't know who will make them happy," persisted Betty.

"Oh! my dear child, you must not judge from yourself. You never were like other girls," said Mrs. Adair laughing. "Most girls of eighteen would be happy with any man they married, provided he were not a brute."

Betty said no more, but she clung to her own opinion. And watching Dickie narrowly she came to the conclusion that Jim did not make her happy at present. He made her restless, excited, pleased to feel her power over him, but he did not make her happy. Why he postponed speaking to her, Betty could not divine; she could only suppose that he felt so sure of his prize that he was in no hurry to secure it.

He was not jealous of Roger Haughton, though on pretence of seeing Dickie that gentleman was over at Wraysbrooke at least four days a week, and brought his old friend all manner of pretty presents from foreign lands. Dickie looked on Roger as being of another generation from herself, and accepted his attentions as those of an elder brother. Very elder-brotherly, too, were the little lectures he occasionally administered, which she took in good part, and with excellent effect.

She was a very bewitching little damsel in those days, and yet in one man's eyes not to be named in the same breath as unobtrusive Betty, who slipped out of half the tennis parties and flower-shows, rather avoided men's society, and was much addicted to solitary strolls and sketching.

For some days Roger Haughton had been endeavouring to get a few words alone with Betty, and at last one afternoon he succeeded in finding her solitary in the garden.

"Miss Darell," he began almost immediately, "you have a great deal of influence over Dickie. "Will you give her a few words of warning which I cannot give?"

"Certainly, if I can," answered Betty in surprise.

"Then warn her that Jim Adair is in earnest."

"I have done so, with the result that she never now comes near me except in the presence of a third person," replied Betty quietly.

"Do you think she cares for him?"

"No; but I think his people and hers will persuade her that she does, poor child."

Roger's face was very grave and stern. "I have known Dickie for years, and I cannot look on and see her sacrificed for money," he said. "I cannot save her alone. Will you help me?"

"To think that we should ever make a friendly compact together!" thought Betty, as she answered quietly, "If I can."

END OF CHAPTER THE SIXTH.

THE GARDEN IN JULY.

WHEN our garden is all a blaze of beauty—which it certainly ought to be in July—and not only so, but when the strawberries and currants are redder than the roses, and the cherries are ruddier still: when, too, the scarlet runners are having a colour match with one or two stray poppies that have found their way into the kitchen garden, we are a little at a loss, in all this brilliant 'danger-signal" beauty which surrounds us on every side, to know what to attend to first. Still, though very naturally in July everything is clamouring for exclusive notice, we must be a little partial in our attentions, while on the other hand, *something* at least can be said as to our gardening duties in general adapted to the time of the year. To rush then at once *in medias res:* what a charming flower is the heliotrope—the "cherry-pie," as we used to call it in the days of our childhood: and a by no means inapt simile either, in so far, at least, as its fragrance is concerned. And perhaps it is its pungent cherry-pie aroma that makes it so popular a favourite, so we will say something more about it and its varieties. Its personal appearance is unquestionably not, however, in its favour—a very decided objection to its culture, as the fair sex will undoubtedly declare; still, we are fascinated by its modesty and by that wonderful scent which possesses quite a charm for our nasal organ. Not to mince matters then, the heliotrope is an untidy flower; growing as it does some two feet in height, it is a little too tall for any border that has a very sharply defined edge, and very often, if we do bed it out at the end of May in a fairly good

soil, it rambles about apparently in search of something to support it. Indeed, some gardeners say that it simply spoils any *design* in a flower-bed because of its being too tall to match the surroundings and too weak to hold itself up properly.

As to its culture, then: we will recommend that the *tops* of forward plants be struck in May: these you will find will bloom earlier and shorter than cuttings taken from side shoots. Afterwards put them in "forty-eight" sized pots, using for a compost two-thirds of loam and one-third of sand. They may when struck—or even immediately in a genial season—be stood out on boards in the open garden path, where they will get both sun and air. Water will be very essential for your young plants, particularly as the compost is somewhat poor: your plants will then be of stunted growth and show early for bloom; shortly afterwards they can in June be planted out in your flower-beds, but do not disturb the ball of earth; merely put it whole as it is carefully in the flower-bed, having each plant about six inches apart. When the head has bloomed it can be cut off, and then your whole plant must be carefully pegged down to the soil, just as we do when bedding out any plant that is at all disposed to grow high; by this means the side shoots will come up and rapidly fill the bed.

Or again, say that you have a pot of heliotrope grown in the ordinary way: you will observe that it has attained a height of perhaps two feet before the top, on which the bloom is coming, has quite fully developed, while all up its side are to be seen growing young shoots coming out at nearly every joint. Now, if you simply take the plant from its pot and place it almost *sideways* in a small hole that you make for it in your flower-bed, the whole length of the plant will of course be almost parallel with the surface of the soil. Then peg the whole length down, and you will soon find that every side shoot will push up some few inches and show for bloom.

Another pleasing way of growing your heliotrope is to fill a small circular bed with it in any part of the lawn in the following manner:—Have your bed cone-shaped—that is to say, a foot or so higher in the centre than it is at its edge. Then take your collection of heliotrope from the pots and plant them out in a circle, beginning some six inches from the edge for your *first* circle, and so on again in a *second* circle, the second circle being of course some eight or nine inches nearer the centre, and carry on your circles if necessary till you come at last to the centre. Every side shoot as it lies along the surface of your bed will quickly come into bloom, and the whole will have a very good and pretty effect.

A few varieties of the heliotrope might here be named with advantage; there is, for example, the *Heliotropium peruvianum*, generally known as Voltaire's heliotrope. This is half hardy, requires a rich loamy soil, and can be freely propagated by cuttings; the foliage is decidedly tinged with purple, the bloom very fragrant, and also of a deep clear purple. Next, we may name the *Heliotropium incanum*, the hoary-leaved specimen: it is of a half-shrubby kind, with wrinkled leaves and white flowers, but its scent is not so pleasant as that of the *Heliotropium peruvianum*. Another specimen, the *Heliotropium corymbosum*, is a stove evergreen shrub which has lilac flowers, while a large number of other sorts are white.

We can now do little more than hint at some of the many leading garden operations that overtake us this month. The strawberry harvest is engrossing us by the second week of the month, and all the old precautions must be borne in mind as to gathering when dry, slug-hunting in the evening, giving water in a drought, and

BEDDING-OUT.

so on. Then, again, the gooseberries, currants, and raspberries are also at the same time occupying us, and by exercising a little observation we shall find that all need by no manner of means be gathered, while the removal of a first crop greatly facilitates the ripening and swelling of those we allow to remain on. A good number of white currants may be allowed to hang on for a while, or they should perhaps be netted, particularly in a dry season, because of the birds; some few gooseberries also should be permitted to remain to swell to the size of the typical August gooseberry.

Then the flower-beds will need a constant examination, and faded flowers should be removed, and their place supplied by some hardy annuals which we have always recommended to have at hand in pots ready to supply blank places.

The dahlias, again, will be rapidly coming on, as the following month they should be in their perfection; what they want now is occasional liquid manure, a watch kept against the earwig, and their stakes and supports all in good order.

The kitchen garden work, of course, this month is overwhelming; weeding, successional sowing, clearing off used-up beds, &c., giving us daily work. Indeed, this department alone could easily engross us the whole month.

WHAT TO WEAR IN JULY.

CHIT-CHAT ON DRESS: FROM OUR LONDON AND PARIS CORRESPONDENTS.

I.—FROM OUR LONDON CORRESPONDENT.

IN bright summer sunshine we are apt to discard mantles, and our initial sketch gives not only an easy mode of making a bodice, but one that would look extremely well out of doors. It could be made in any washing material, as well as in soft mousseline de laine, and in the many Oriental silks now in vogue. The range of colour for this class of material is greatly increased, and now there is a decided tendency to adopt much more brilliant colouring. The model from which this dress was taken was made in light heliotrope, with velvet trimmings of a darker tone.

There is really nothing new in it—indeed, it is altogether a revival of the styles of twenty years ago. It is a bodice made full back and front, ending at the waist, with the skirt sewn on to it; the union of the two is concealed by a narrow slightly pleated band of velvet, which fastens invisibly, by hooks, under the arm. The fulness is simply drawn towards the back and towards the front, for there are no side seams either to the back or the front, and the material is so cut that it adheres closely to the figure, save where this fulness seems to fall naturally. But the lining must fit most exactly, and be well boned. The only trimming is a soft closely pleated frill of chiffon muslin the exact tone. This is so managed that it turns down from

AT THE FLORIST'S.

THE GARDEN IN AUGUST.

WE may say that it is in the garden as it is in the skies: for just as the sunset of a glorious day is very often characterised by that most exquisite and fantastic variety of colour in the western sky, that makes us eager to find a friend to share quickly with us our admiration and delight before the tinted beauties of the scene have faded into the grey and sombre twilight, so is it that some of our gayest and most brilliantly painted flowers reserve their bloom for the wane of the summer. On the other hand, there are, of course, those who would maintain that an Easter sunrise, and the more unpretending and modest flowers with which we are familiar in the spring of the year, contrast favourably even with a rosy sunset and the gaudily coloured flowers of the early autumn. But, to a well-balanced mind, every season brings with it its own delights.

Just now, however, our province is to talk of some showy August flowers, and one there is which will at once occur to many of us as in bloom this month: we mean the passion-flower, so called, of course, from the fact that its bloom in some of its features reminds us of Calvary.

Now it is hardly necessary to say at the outset that every variety of the passion-flower is a climber, as also that the greater number require a considerable degree of artificial heat in order to attain anything like perfection of bloom. From this we may at once infer that the passion-flower is hardly adapted for growing in pots. One class, however, there is which may almost be called a hardy, or at all events a half-hardy, climber. This is the *Passiflora cærulea:* many of us must have noticed this trained to run over the south wall of a house in some sheltered situation. Just at this moment the writer has in his recollection an extensive wall expanse of an old country house in Bedfordshire, in which the following climbers seemed to struggle for the mastery:—the wistaria, with its flowers like clusters of grapes, that blooms profusely in May and a second time, but slightly only, in August; the magnolia, with its ponderous water-lily bloom, if we may so describe it; the jasmine, which scented the air and fascinated the bees; and, lastly, the passion-flower; of course all could not be grown over exactly the same spot, but at times they met, or some of them at least did. There are plenty of methods, then, by which we may make a wall look like a veritable flower-bed, which otherwise would resemble the side of a gaol.

Passiflora cærulea, then, will flower freely, and cover for us a good space of brick-work. Of course, a severe winter will try it, even in a sheltered spot, and the points of some of the shoots may be killed, but then a little protection and painstaking in a trying time of the year will obviate many difficulties. Everything done well gives trouble, but if we do not shrink from work, we get our reward in the end. This surely holds true universally.

Then again, whereas some specimens of the passion-flower are thoroughly stove plants, and want proportionate temperature and care in their cultivation, on the other hand the passion-flower can, if you elect to make the experiment, be trained to climb over a portion of the interior of the greenhouse. One objection, however, experience will tell us, to this method, is that the passion-flower is rather disposed to serve as an umbrella to other plants that are along the

TRAINING THE PASSION-FLOWER.

stands in the greenhouse; and, in fact, the same difficulty is found to exist where the experiment is tried of growing grapes and flowers in the same house. It *can* be done, and *has* been done, but you will find that green fly, and mildew, and stunted flowers, and sometimes blighted grapes will eventually determine you to find more room and turn one of the two out. Very appropriately we call a garden a nursery, and domestic experience tells us that if we put too many children in one bed, one of them will probably fall out and hurt himself, while sometimes they all "fall out," only in another sense of the word, and we quickly separate them.

The passion-flower likes a free soil of good peat and loam, and tolerably well enriched into the bargain.

Then there is another fairly half-hardy specimen of which we may speak, and that is the *P. incarnata:* this is a pink, flesh-coloured flower, and hence is so called. Again, the class that we must call stove plants is very large, and yet, after all, it must not be supposed that many of these require such heat as orchids, for example. Where, however, we intend to ripen fruit on them, a rather higher temperature will naturally be required, and this brings us to speak of the fruit-bearing class. This class is known by the name of the granadilla, and of these the best known is the *P. quadrangularis:* this has ovate foliage, the flowers being very fragrant, white outside and red inside, the fruit being oblong, some six inches in diameter, and, when quite ripe, of a greenish yellow. Another class — the *P. maliformis* — is the apple-fruited granadilla, with exquisite flowers, but of a more dingy yellow when the fruit is ripe. Two others may be here named—the *P. edulis* or purple-fruited kind; and, lastly, the *P. laurifolia*, that is the laurel-leaved or water-lemon class; of this last the fruit is about the size of an egg—yellow, and with white spots.

A leap from the consideration of the passion-flower to outdoor cucumbers is certainly one from the sublime to the ridiculous, but such things in the garden are no matter of surprise. Perhaps, of the two, the ridiculous outdoor cucumber is the more practical subject. And at a time when our cucumbers in frames are somewhat exhausting themselves, we sometimes turn our attention to the open-air specimen, or ridge cucumber; these we do not sow until the end of May or early in June, nor will they bear before August or September. They are, of course, stronger, thicker, and coarser than those that we rear under our glass, but some may prefer their flavour; at all events they will do for pickling.

And what are we to say as to the rest of all our necessary gardening labours for August? We can only here hint at what has to be done, and experience must fill up the outline. Important operations, then, are the taking of cuttings from our open flower-beds for the next year; this we must not think of postponing later than the third week of the month.

And next our new strawberry beds should be made from the runners, not later than the 12th. The wall-fruit will require a vigilant eye and protection from wasps, &c., and the early apple crop will also want attention; lastly, the onion-bed must be carefully got up, exposed to dry for a time, and then housed. Our paper opened with a fragrant item, and we certainly conclude with a savoury one.

MY STRANGE GIFT.

BY MARY FORD.

AT last we think the time has come when I may venture to write the story of the strange experiences which I underwent in my girlhood.

My husband considers them interesting from a medical point of view, while I hope they may be useful to such young persons as are disposed to wish for exceptional or abnormal powers.

I was a girl of eighteen, and my mother was dying of a fatal and agonising complaint. She was my only near relation, for I was an orphan, and had neither brother nor sister: my mother and I were all in all to each other.

I have no wish to harrow my readers' feelings with a description of what a young girl suffered in watching the progress of disease in such a case. I knew my mother's state was hopeless, but dread of my impending loss was, for the moment, swallowed up by the intolerable spectacle of her sufferings. It seemed as

	Age at Death.
Milton	66
Rousseau	66
Erasmus	69
Cervantes	69
Dryden	70
Petrarch	70
Linnæus	71
Locke	73
La Fontaine	74
Handel	75
Réaumur	75
Galileo	78
Swift	78
Roger Bacon	78
Corneille	78
Thucydides	80
Juvenal	80
Young	80
Kant	80
Plato	81
Buffon	81
Goethe	82
West	82
Franklin	84
Herschel	84
Anacreon	85
Newton	85
Voltaire	85
Halley	86
Sophocles	90
Michael Angelo	96
Titian	96
Herodias	100
Fontenelle	100
Georgias	107

It is strange, though by no means unaccountable, that physicians who practise are shorter-lived than almost any other of the professional classes. The solution of this has been offered by one of themselves, as follows :—" Physicians have the best opportunity of observing those prudential rules and precautions for preserving health which they lay down for others ; and there are fewer employments in which the powers both of the body and mind are exposed to so much consumption as this. Head and feet must be always exercised in common. But the greatest mortality prevails during the first ten years of their practice. And after that they become inured to the fatigue, and almost impervious to the noxious effluvia, infectious disorders, or even the heart-melting scenes of woe into which their professional duties call them." Still there are some who have attained to a great age. Amongst them may be mentioned the following :—

	Age at Death.
Boerhaave	70
Haller	70
Tissot	70
Gall	71
Darwin	72
Van Suirtən	72
Fallopius	72
Jenner	75
Heister	75
Cullen	78
Galen	79
Spallanzani	79
Harvey	81
Mead	81
Duhamel	82
Astrue	83
Hoffmann	83
Pinel	84
Swedenborg	85
Morgagni	89
Heberden	92
Reysch	93
Hippocrates	109

In closing this paper, one is tempted to add some practical suggestions as to how length of life may be attained. But—to avoid the risk of sermonising on the theme—what could be better for all classes of readers than simply to be reminded of the experience of that beautiful character, Old Adam, in *As You Like It*, who so feelingly said :—

> " Though look old, yet am I strong and lusty,
> For in my youth I never did apply
> Hot and rebellious liquors to my blood,
> Nor did I with unbashful forehead woo
> The means of weakness and debility ;
> *Therefore my age is as the lusty winter,*
> *Frosty but kindly.*"

Does not this contain the kernel of the whole matter?

THE GARDEN IN SEPTEMBER.

JUST as in the month of March we not infrequently have a week in which summer and winter shake hands, so also in the month of September, on which we are just entering, we have a like strange experience. In the early half of this same week we may perhaps find ourselves sweltering by the seaside, while the fruit on our garden walls is yet ungathered save by the wasps, while a few days later a great change sets in, and we are sitting for the first time, not by the seaside, but at home by the fireside.

Experience, however, has taught us not to wonder at these changes : of course they impede our work in the garden, and but for our greenhouse, or frames, or any hurried protection that we are able to give, we are at the mercy of the elements, and can only quietly wait until the storm has passed and a reaction sets in.

September, however, is a great harvest month, not only in the corn-fields, but in the fruit-garden, and as such, it certainly belongs more to summer than to winter. Something, then, with advantage may be said just now as to our general harvesting operations in the garden.

And, first, our peaches and nectarines are necessarily occupying a good deal of our attention at this time. And with all our care, we shall find that many, in a warm and ripening season, will fall to the ground during the night, and perhaps become the prey of slugs into the bargain : it is a good plan, then—where at least you are having a fine crop—to contrive a sort of network or gauze bag, sloping *from* the wall, so as to catch the fruit as it falls. It is, however, a thousand pities to gather wall-fruit too soon, and it can hardly hang too long on the tree ; then, again, much handling of the fruit before, or even after, it has been gathered is detrimental to it, while anything in the shape of that barbarous custom of gently pinching

the fruit to see if it yields to the touch is still more disastrous, and can only result in decay, as a little experience will readily show. Two good methods of ascertaining the condition of your wall-fruit are, first, by using the nose; and, secondly, by using the eyes: these cannot harm the fruit, while the fingers can. If, then, the aroma of the fruit is *very* fragrant, you may conclude it is nearly ripe, though bear in mind that fruit is more or less fragrant even before it is ripe; and next, if you notice that the stalk which supports the fruit is *slightly* disposed to drop it, or to part from the parent stem, you may conclude that the fruit will soon drop of itself, so that this fact, coupled with the fragrancy of the fruit, should justify you in gathering. And, lastly, gather *very* gently, and if you find the least resistance from the stalk, let the fruit remain on another day or two. And it is surely worth while to be a little particular over peaches, nectarines, &c., which, when fine, or in a scarce season, sometimes realise sixpence or eightpence a piece, and even more than that.

THE FRUIT HARVEST.

And a word must here be said as to our old trouble—the insects and the slugs. Upon the whole, it almost seems to answer best to leave an imperfect peach, or green fig, &c., expressly for the use of our winged enemies: you will notice that they generally single out *one* for their attack, and leave the rest alone; so never gather a bad or decayed specimen, but leave it for the flies and wasps. If only one or two friendly spiders could be induced to build their houses close to your wall-fruit, this might prove an advantage to the gardener and the spider. Another misfortune is that a bottle of sugar and beer hung up to attract the wasps also attracts the bees, and we do not care to weaken our hives by this process. We must, then, make up our minds to *some* loss; but perhaps it is, after all, not a very serious one.

And next, a very fair number of our apples ripen in September, while *all* of them are certainly ready by the middle of the following month. And may not one cause of the subsequent decay of apples and pears in our store-rooms be, not merely that they were gathered roughly or carelessly, or were bruised in the process, or stored away when wet or in a damp room, but that they were gathered immaturely and at an improper time? A good plan, then, is this month, when you see a fine crop coming on, to take an apple and open it, and if you find that the pips are decidedly turning colour, gather your tree within a week from that day; but if the pips are quite white, let all hang a little longer. Where your tree is a very large one, you will also notice that those seem the ripest and finest that have had most of the sun, and have faced south and west: these you might gather first, and leave the others for a time; the removal of some of the fruit, too, will always assist the ripening of any that is allowed to hang on, while in all cases you will find that the finest is at the top of the tree.

But if from their very plentifulness we are wont to treat apples roughly, and thus are foolishly willing to sacrifice so many, we should at least be a little more particular over our pears. These must certainly be treated more gently, or they will never keep at all. Gather them by hand, placing the finer sorts in a basket that is lined with something soft, say a little hay, and never have a large weight of pears in one basket—they are impatient of the least bruise, as you will quickly discover—and, finally, place them on the shelves of your fruit-room quite gently. A similar tenderness is, of course, necessary in handling figs. For Morello cherries, a net is the only thing that will keep off the birds. In a dry harvest season, or when water is scarce, the birds are certainly a terrible scourge in the fruit-garden; and on these occasions, who has not frequently put up whole coveys of thrushes, and black-birds, and sparrows innumerable? When this is the case, harvest the fruit forthwith.

In the course of time he hit the bull's-eye. Gail Borden originated the ever-useful pemmican—lean meat dried, pounded, and pressed into cakes. The value of his invention was thoroughly tested by Dr. Kane on his Arctic expedition ; and in the London Exhibition of 1852 he was awarded the Great Council medal. Yet a third American inventor had his attention called to a current need by advertisement. Andrew Campbell was a son of the soil, but too energetic and inquisitive to follow the plough. His guardians bound him apprentice to a carriage-maker ; but work was slack, there was small opportunity for learning the trade, and the lad took it upon himself to terminate the contract, and enter upon another elsewhere. He was already wondering how he should hit the bull's-eye. And he read one day a liberal offer for a printing press, to turn out five hundred copies per hour. Campbell's acquaintance with such machines was comparatively slight, but he set to work at once to learn and scheme and model. He framed a specimen press which promised to meet the indicated requirements. But on this occasion he was too late. The time for examination was past. The disappointment may have vexed him, but it did not lead to the abandonment of the enterprise. He toiled on at perfecting his plans. And in this way he scored success as the designer of the earliest known registering power printing press for colour-work.

It was a genuine and important want that Sir Humphry Davy supplied with his miners' safety lamp ; and Sir James Young Simpson with the marvellous anæsthetic, chloroform ; and Messrs. William Fothergill Cooke and Charles Wheatstone with the practical introduction of the electric telegraph ; and Julius Reuter with his news agency system ; and Mr. Isaac Pitman with his art of phonography—to group together as a concluding illustration a set of very various fresh departures. To see where there is room for a new material in manufacture, a new way to sell old wares, or a novel relief to labour, and to occupy the vacant spot, is generally to achieve success.

Meissonier, the French painter, used for one of his striking canvases a model of a prancing horse. The model was shaped by his own hands, and the work occupied the mornings of a whole month. The painter was careless of the cost in time and trouble, so that he could compass exactitude to the living animal. Of his compatriot, Detaille, it is said in Paris that "he has a camera in his eye," so patient and thorough is the artist's observation as he moves to and fro. The most painstaking study of scene or object precedes the labour of reproduction.

Lord Lyndhurst was counsel in a *cause célèbre* relating to the invention of the bobbin-net machine. He was resolved to hit the bull's-eye ; and his method was full familiarity with all his details prior to coming into court. The reading of papers, the hearing of witnesses, the explanations of his client were not enough. Technical knowledge would play a great part in the case, and this knowledge he would have. The determined advocate went down to Nottingham, stood at a loom, and invited instruction. He bent his whole energies to the mastery of a new employment, and he did not leave the mill until he had grasped the principle of the machine very thoroughly. At the trial he exhibited a beautiful little model, put his points clearly, and backed them up by working his miniature machine. And he won the verdict. Success was due to resolute making-ready betimes to win it.

The world still has its ambitious young marksmen. Many of them are clever. But if they are to hit the bull's-eye, they must not trust to fortune. This may either serve or fail them. It is wisest to seek a royal will, a quick eye, a patient power of preparation.

W. J. LACEY.

AUTUMN GARDENING.

WHEN we begin to speak of autumn gardening, we know at once that we are rapidly leaving summer behind us ; and for that reason we shall give here a few hints as to the cultivation of those flowers whose bloom delights us in the wane of the warmer months.

And perhaps one of the most showy and useful autumn flowers is one of which we have as yet said but little, and that is the aster. It has a very large family, as we shall presently see, though to attempt to enumerate all the different members of it would be next to impossible in our limited space. The aster, as we can at once perceive, is so called from its *star*-like appearance ; the natural order to which it belongs is that of the Compositæ—the same order of which the dahlia, and even our common daisy, are also members. There are, of course, a few greenhouse species of the aster, of which we may say something presently, but the vast majority of the family belong to the hardy herbaceous class, and we can rear them fearlessly in our ordinary garden soil. And we might here with advantage enumerate a few of the hardy sort that bloom in September and October. Of the old-fashioned class are, for example, the *Aster puniceus*, or red-stalked aster : its properties are oblong lanceolate leaves and branching

GIVING SUPPORT.

stem ; it bears numbers of blue composite flowers, and grows to a considerable height. The New England aster does not attain so great a height, and yields fine purple composite flowers ; the *Aster concolor* is an October bloomer, grows about a foot in height, and gives purple flowers ; while the *Aster diffusus*, also an October bloomer, attains, perhaps, the height of two feet, and gives white flowers. North America is the natural home of all these. A more modern kind for our open flower-beds is the *Victoria*. The general effect of an aster-bed is admirable, and for hand-picking at a time when many other flowers are beginning to fail us they are simply invaluable.

The greenhouse species can be raised by cuttings under a bell-glass—use plenty of sand, with peat and loam. Of this class we may name *Aster erubescens*, a red flower blooming in June ; *Exasperatus*, a white specimen flowering a little earlier ; as also does *Fruticulosus*, a blue one. Many others, of course, of both the hardy and the greenhouse kind, could be named.

The dahlia may certainly be called another autumn flower, though, indeed, by the middle of October its glories are beginning to disappear, as the first frost, for the most part, knocks them over. Briefly here we might give in outline the way in which we usually rear this gaudy flower. Perhaps in the third week of May we buy our young dahlia in a pot to which already the roots are so adhering that it is almost pot-bound. In our ordinary garden soil we then dig a small hole, into which we at once turn out our dahlia, driving in first of all a good stake, to which we shall secure it. We then give it a plentiful watering—in fact, we may say a soaking — and this watering must afterwards during the summer never be neglected, or our dahlia will assuredly fail. On the top of the stake we place an empty flower-pot, which will serve as an admirable trap for the earwig, which has ever, alas ! been accustomed to feast on the dahlia, and thus occasion a defective bloom. You will next find that, as your plant grows, most likely additional stakes will be needed for its support, the stem and stalks of the dahlia being singularly brittle. Watering, supporting by stakes, and watchfulness against the attacks of the earwig, are the chief necessities in the culture of this handsome flower. Its charm is in its variety and brilliancy of colours, but certainly not in its fragrance.

The chrysanthemum is another autumn flower on which we largely depend both this month and the next ; here, again, we shall not sing the praises of the fragrancy of the chrysanthemum. The soil best adapted to its growth is turfy loam and peat, or, if the turf has not thoroughly decayed into the loam, you had better add a little leaf-mould. As, however, this flower may be called essentially a November flower, we must say a little more about it next month.

After Michaelmas our greenhouse is well stocked for the winter, for here it is, for the most part, that we gardeners on a limited scale have to shelter our supply of cuttings for the following summer, our few exhibition flowers for the autumn, and even, it may be, the little grape-vine over our head. With this last we shall probably decide to do away altogether, for grapes and flowers seldom succeed for long together. It may do for a short time, but in a year or two we generally find that mildew sets in, and that grapes are lost and flowers are hindered and droop.

And indeed, even in the absence of the vine, considerable care is necessary in the greenhouse in the autumn. If it be a warm season, some of our cuttings are disposed, perhaps, to go ahead more than we like ; and if it be a rainy season, we are in fear of many damping off. Plenty of air is needful just now in our crowded house ; and during much rain a fire should be lit, and, with the aid of opened glass and door, every effort should be made to keep the house as dry as we can.

Our open flower-beds will, doubtless, be yet fairly gay for the time of year, and if we have been careful to maintain in the greenhouse a supply of successional bloom with which to fill up blanks in our beds, by plunging flowers in them we may continue to be gay even to the end of the month. Our apple and pear harvesting is, of course, in full swing just now, and will very soon be over but in the kitchen garden we are busy also harvesting our potatoes—an operation which ought never to be postponed later than the present month. Celery will need, too, just now a regular and careful earthing up; but all unoccupied spaces may well be filled with cabbage plants, as in a very few weeks they will be large enough for consumption as greens, at a time when other vegetables are growing scarce.

A DISCIPLE OF MESMER: A STORY OF HYPNOTISM.

BY HENRY FRITH.

CHAPTER THE FIRST.

A MYSTERIOUS PATIENT.

"A GENTLEMAN wishes to see you, sir," said the polite man-servant to his master in his study.

Dr. Bensing turned round, and putting down the volume that he was reading, said firmly, "Arnold, have not I told you never to disturb me after five o'clock?"

"Yes, sir; but this gentleman is a foreigner—a wealthy person, I should say; he was most particularly positive, and——"

"Pecuniarily persuasive, I dare say!" interrupted the physician. "Well, I will not permit any violation of even implied contracts. Show him into my consulting-room: I will see him. But, Arnold, you must not take bribes from my clients, remember."

"I declare, sir——"

"Don't," said the physician; "only remember my instructions."

The man-servant departed—only half convinced. His master walked to the window, musing.

"He will be one too many for me some day," he muttered. "I can hardly keep him in order now. His will is stronger than mine, and if he once obtains the upper hand I am 'a lost mutton.' Well, well; I wonder who this queer patient is who has persuaded Arnold to risk dismissal."

Dr. Bensing was, at that time, what is termed a "general practitioner," with a certain limit as to the "general!" He drove out at ten a.m. every day, except Sundays, when he usually walked—if he could —and he returned at five, when he would see no one, unless the case was extremely urgent. His assistant then attended the poorer patients, and the doctor rested until it was time to look in at any patient's bedside. This was his daily routine. In appearance he was genial, grey, and benevolent. He was rather under than over the middle height, walked with a swinging of the arms; and in all weathers, in all seasons, was dressed in a frock coat, a white waistcoat, and sported a flower in his button-hole.

He was a widower with one child, a daughter, named Irene: a very pretty girl of nineteen, most fascinating in manner, and of a firmness of character astonishing in one so young. Of the other inmates, only one need be mentioned. This was Arnold the footman—a person of polished exterior and good manners. His history was a curious one. The doctor had discovered him in a workhouse. Struck by his manner and bearing while under his care, the gentle physician took him into his service; and, so far as he was aware, Arnold had not proved unworthy. He was an ambitious, strong-willed man; evidently he had been well educated, and he already had picked up some knowledge of drugs. Of his distant past no one knew anything. He had considerable influence with the doctor, and very much admired Miss Bensing, who rather distrusted him. But the doctor could see nothing wrong in his *protégé*, and went his rounds cheerfully; although he had at times much ado to keep up appearances in accordance with the resplendent brass plate which announced him "physician and surgeon" to all in South Lambeth and social Stockwell.

remuneration, and success. The Germans should be an example to us.

3. *The Householder*, especially if he be a professional man with limited income and some leisure, may, by suitable introduction, obtain resident pupils, young ladies and gentlemen from Sweden, Germany, &c., who come over here for a year or two to consolidate their English. These generally pay fairly well (they are the sons and daughters of business men) and expect about two hours' tuition per day.

Thus he who knows one or two European languages has the joy of an inalienable possession, and a capital that no crisis, save death or disease, can take from him.

Such are some of the advantages : power, growth, sympathy, profit, with the discovery, perhaps, that words, even the best, are but hints and suggestions, and utterly inadequate to the expression of the whole truth, human or divine.

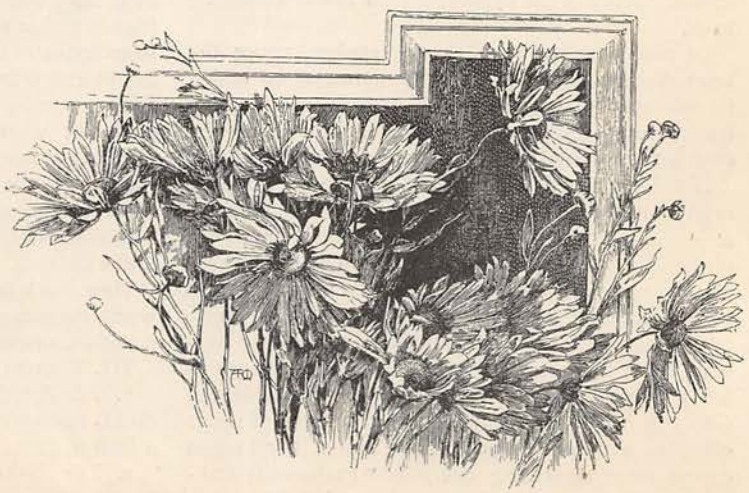
And once more we should ever return to our beloved English, feeling how priceless a heritage we have received from our forefathers, and how we, in turn, are bound to send it on to posterity, "with its wealth unimpoverished, and its dignity unimpaired."

MICHAEL T. EASTWOOD.

THE GARDEN IN NOVEMBER.

A MORNING stroll round the garden in November certainly does not possess for us those attractions that we find so easily in the month of May. The reason for this is not far to seek ; but, nevertheless, lovers of work have in all time found attractions in work itself, and in gardening particularly we know that not an hour's real labour is ever thrown away.

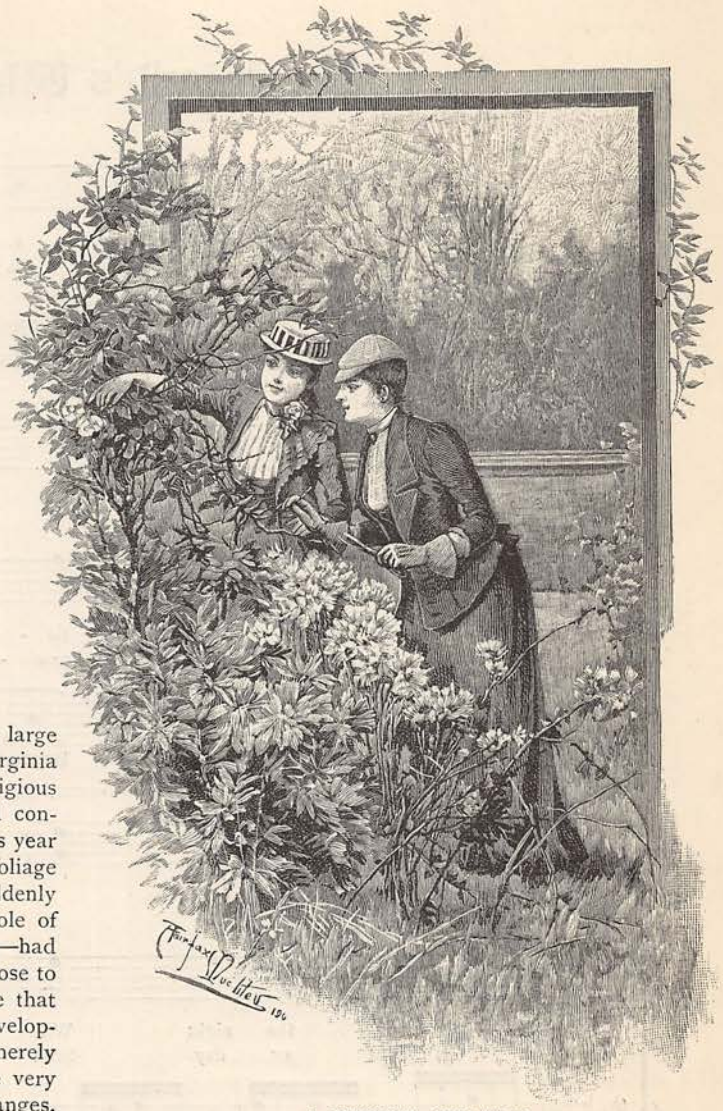
We are going to work then this month, and November gardening perhaps wants a little determination. Now by the end of October our standard roses have certainly finished their blooming, though in a prolonged mild season and in a sheltered situation many of us have often seen small buds trying to break into a sort of unnatural bloom even nearly up to the end of the year. In this, however, the rose seldom does more than partially succeed, while there is almost an entire absence of fragrance in a very late bloom. A few words first of all as to the autumnal treatment of our undying favourite will then be opportune. Now, when summer has quite fled, we shall notice that the heads of the standard roses have attained naturally a large growth : every shoot has got so long—and the leaves also are disposed to remain on for a time—that the whole appearance reminds us of a ship ; that is to say, the stock is the mast and the head is a sail ; an equinoctial gale springs up, and you are fortunate if your rose-tree does not break off short and become a wreck. If, then, there is no frost about, and your shoots are extraordinarily long, shorten them forthwith, and if you find too many of them, the weaker of them should be cut clean away to the bottom. By this means, of course, you—to carry out our simile—reef in your sail, and your tree is comparatively safe, as the wind has less power to catch your tree. And next the condition of the stakes and ties should be seen to ; their being well secured of course holds your tree well together, otherwise the whole will sway about helplessly. Any of the tender kinds of rose in standards will, of course, require still more protection in winter. Some gardeners take them bodily away, and lay them up in a shed or out-house, putting some light litter over the head ; while, on the other hand, others prefer to allow the tender standard to remain in its place, and protect it instead of removing it. In this case the wild branches should be still more trimmed in, and then some hay interwoven and twined about the head and carefully tied. But here it will be evident that rain, followed by frost, will give you a mass of ice for your hay head, and your tree would, of course, be killed. To avert this catastrophe, some light waterproof sort of calico should be placed over the whole, and your



CHRYSANTHEMUMS.

tree will survive ; but, owing to additional weight at the head, the stock should be still further secured to its stake. You need not, of course, be anxious for the safety of the stock itself if it be the ordinary briar from the woods, which we are aware is by nature able to stand the hardest winter.

And another November operation is the procuring of new stocks and setting them in their places, with the hope during the following July of budding them. Here is a good winter adventure for the stronger boys of the family in any neighbouring coppice or wood. Afterwards plant your stocks in rows, rather less than two feet apart, the rows being some three feet from each other ; all of course must be well secured, although there is hardly any head worth having to act the part of a sail ; and the planting should be made in open weather when frost is quite away. All important garden alterations, again, should be made in November ; still, some care should be employed as to the locality for any new shrub, and indeed for anything on a large and growing scale. Quite recently the writer had a singular mishap to a large but perhaps somewhat coarse-growing Virginia creeper. In former years its growth was prodigious and most vigorous, and indeed it required constantly keeping in check. The spring of this year came, and it promised to have as profuse a foliage as in former years, when in June last it suddenly and quite unexpectedly drooped, and the whole of it—for it nearly covered one side of the house—had to be removed. But it was found that very close to the surface of the soil was a large drain pipe that had gradually interfered with its proper development and caused its death. This is given merely as an illustration this month, when we are very often putting in shrubs and making garden changes, of the importance of the *locality* we choose. All may go well for a time or perhaps for a few years, and then, when it is too late, we discover our mistake.



A NOVEMBER OPERATION.

In our greenhouse, of course, one of the few remaining hopes for bloom is the chrysanthemum. These must have a little water to give some strength to the blooms. Those that are in the open should be cut down when they have finished flowering. Your garden, however, will be made a little gayer just now by plunging some chrysanthemum pots into the open beds.

Nor can we afford this month to pass over one operation, which, indeed, ought properly to have been carried out nearly a month ago, and that is the stocking our garden with spring bulbs in the shape of tulips and hyacinths ; some, too, we may like to pot and force on for earlier bloom. With the method of growing hyacinths in glasses of water probably most of us are familiar; the glasses should at first be in a dark place, and later on, when the roots have well grown, they can be brought to the light. The dahlias will doubtless before now have been taken up ; they should be stored away in dry sand or in a dry cellar, where neither damp, heat, nor frost can get to them. And sometimes, where we are pressed for room in our solitary greenhouse, we prefer to try the experiment of protecting out of doors some of our plants—such, for example, as our salvias, fuchsias, and verbenas. A good protection of litter, or a few hand and bell glasses, will well answer our purpose, while an additional garden frame is invaluable—and certainly many of these frames are not so expensive as a single greenhouse. In fact, ingenuity, combined with hard work, observation, and perseverance, will give us a fine and a profitable garden. Anyone can have a garden if half a dozen gardeners and as many greenhouses are employed, but a fruitful garden is a greater credit to a single pair of hands.