

GOVERNMENT OF INDIA

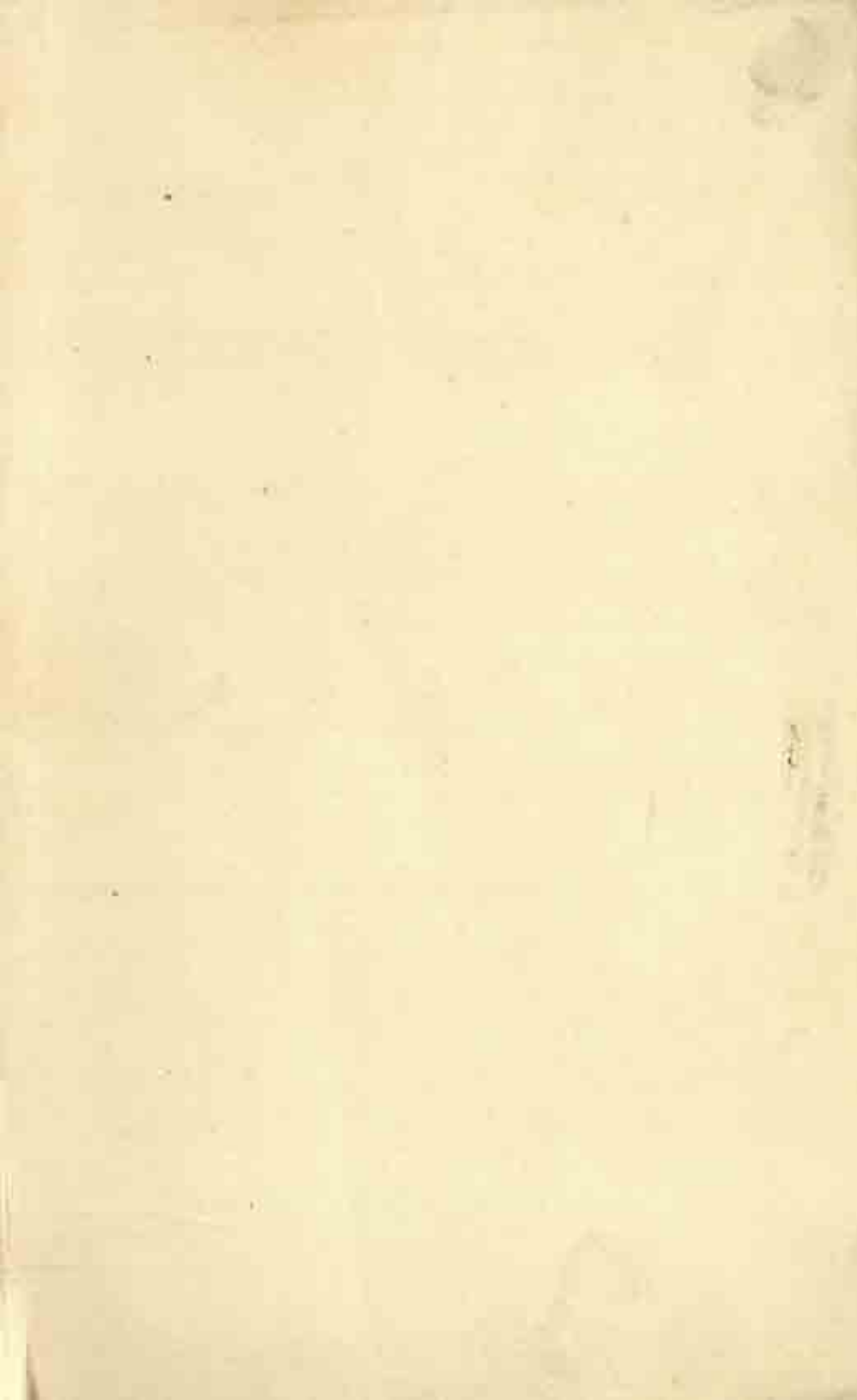
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PEARSON'S
ENCYCLOPÆDIA OF ROSES



Photo: R. A. Malby.

DOROTHY MCGREDY

A most delightful variety, in colour a glowing combination of sunflower yellow, crushed strawberry and vermillion. The medium-sized flowers are of excellent shape and very fragrant.

PEARSON'S ENCYCLOPÆDIA OF ROSES

12140

Edited by

GEORGE M. TAYLOR

*Author of "Roses, Their Cultivation and Management"
"British Garden Flowers", "British Vegetables and Herbs"
"Old-fashioned Flowers", "Liliums for Beginners", Etc.*



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LONDON

C. ARTHUR PEARSON, LIMITED
TOWER HOUSE, SOUTHAMPTON STREET
STRAND, W.C.2

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MADE AND PRINTED IN GREAT BRITAIN
BY JARROLD AND SONS, LTD., EMPIRE PRESS, NORWICH

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INTRODUCTION

PEARSON'S ENCYCLOPÆDIA OF ROSES has come to be accepted as a standard work on our best-loved flower. This new edition will give the work added authority and interest, since it has been edited by one of the most outstanding Rosarians in the country—George M. Taylor.

Mr. Taylor is particularly known for his fine work while for thirty years—until his retirement in 1940—he was in charge of the roses and other nursery stock with Dobbie & Co. He increased this well-known firm's production of roses from 10,000 to 300,000 a year.

He has raised many new kinds—the lovely Duchess of Atholl is one of his, as also is the equally charming Elizabeth of York. As an exhibitor he has won every award in the Rose world worth mentioning; as a judge he has officiated at all the best-known shows—Chelsea, Shrewsbury, Southport, Glasgow, Edinburgh and so on. He has also judged the Seedling Roses at the National Shows.

For several years Mr. Taylor has been on the Council of the National Rose Society and for the last thirty years he has contributed regularly to the Rose Annual.

In addition to his books, Mr. Taylor has written innumerable articles for the horticultural press and has given a number of wireless talks.

I am happy indeed to introduce this book to a still wider circle of readers who will, I know, enjoy reading every word of it while benefiting greatly from the wide knowledge it passes on.

S. A. MAYCOCK,
Editor, *The Smallholder*.

PEARSON'S ENCYCLOPÆDIA OF ROSES



THE HISTORY OF THE ROSE

THE Rose is found in all countries of the world, and is a native of all, with the exception of a portion of South America and the tropics. The cultivation of the Rose is as old as any branch of horticulture, and although it is hard to trace the age of any variety or to ascertain the introduction of the Queen of Flowers into any portion of the globe, yet ancient history gives abundant proof of the esteem in which it was held, and records of the past prove conclusively the great attention paid to its development.

Homer's allusions to the Rose in his "Iliad" and the "Odessey" are, without doubt, the earliest records, but far older must be the attention paid to this floral queen.

The Bible tells us of the Rose of Jericho and the Rose of Sharon, but these flowers have been discredited by modern writers, and facile pens have done much to prove the name Rose in these two instances to be incorrect. However, if we turn to the Book of Wisdom ii, 8, we find clear mention of the Rose in the words: "Let us crown ourselves with Rosebuds before they be withered."

Sappho, the Greek poetess, writing about 600 B.C., selects the Rose as the Queen of Flowers in the following lines:

"Would you appoint some flower to reign
In matchless beauty on the plain,
The Rose (Mankind will all agree),
The Rose the Queen of Flowers should be."

And Omar Khayyâm from the East sings:

"But fairest of them all, the Rosebud sweet,
With modest blush her skirt doth closely lace."

The immortal Shakespeare also pays tribute to the Rose in the words, "As sweet as damask Roses", and, "With sweet musk Roses and with Eglantine".

If the Greeks were ardent admirers of the Rose, no less were the Romans, who made great advances in its culture and created quite an industry by their demand for blooms and trees. Nero is credited by Suetonius, the Latin writer, with having spent four millions of sesterces in Roses for one feast, which in our money is equivalent to over £30,000—a severe tax on the Rose gardens of his day! But it is a testimony to the popularity of the Queen of Flowers. Indeed, not only was the Rose used as a means of decoration, but the floors of banqueting halls were strewn with petals.

The question might arise as to whether or no the majority of Roses used in ancient days were those culled from the hedgerow and the field, but I think, without doubt, they were cultivated varieties. Horace, who writes at length on horticulture, gives us interesting mention of the growing of Roses in beds, and I would take it that dwarf varieties were not unknown. Pliny advises the deep digging of the soil for their better cultivation, and leads us to surmise the careful study of varieties in a Rose garden set apart for their welfare.

The raising of varieties from seeds or sports was well known and studied with deep interest from the earliest ages of horticulture.

It would be impossible in a chapter to give extracts of all references to the Rose by the ancients, or even to make such a notice representative of the attention paid to it throughout the ages. India, Persia, Turkey, Egypt, Spain are all full of ancient history of the Rose. Its medicinal properties have been handed down through time. Rose-water and Attar of Roses have been valued commodities through many centuries, and certain old varieties of Roses, favoured for commercial purposes, still exist, even where others have disappeared.

It was not until the Wars of the Roses that the Rose received any real prominence in this country, however. It will be remembered that during those troublous times, the House of Lancaster chose the red Rose as its badge while the House of York decided upon the white Rose. When, in 1486, the two factions became united with the marriage of Henry VII with the heiress of the House of York, the Rose was then adopted as the Royal Emblem of England.

In the eighteenth century almost all writers on horticultural subjects deal at some length with the Rose, but it was not until the beginning of the nineteenth century, when the Empress Josephine, sending messengers to every corner of Europe in order to secure every known variety of the flower, planted the famous Rose gardens at the Palace of Malmaison, that Rose-growing received the final

fillip which was to raise it to the extreme popularity it enjoys to-day.

If we studied the Rose catalogues of a hundred years ago, however, we should be surprised to find few varieties live to-day. In 1596 the Provence, or Cabbage Rose, and the common Moss Rose were found in well-stocked gardens, and the Austrian Yellow and Austrian Copper flourished at the same time. These live to-day, but there is no doubt that many other varieties existed, and were prized until replaced by more attractive introductions raised in our own country or introduced from the Continent.

In 1815 the French growers began to go ahead and in 1829 we find Mons. Desportes issuing a catalogue of 2000 named varieties. Ten years later the number had risen to 5000 and at present Rose-growers' lists contain upwards of 15,000 named varieties.

We expect too much when we look to find, for purposes of comparison, a list of the Roses grown in the hanging gardens of ancient Babylon or a tradesman's catalogue of the days of Nero!

For many years it was assumed that modern introductions, in other words the Roses we now grow in our gardens, must be budded or grafted upon a parent stock such as seedling or cutting Briar, and that they did badly if they were grown on their own roots. Experience has taught us that that is not the case, and with few exceptions, the sorts in which Pernetiana blood predominate are an example and should be avoided, they thrive admirably from cuttings. The method of dealing with cuttings is described further on. Previous to 1940 few people took the trouble to insert Rose cuttings, but when Roses became scarce owing to war conditions and stocks for budding were unprocurable, the general scarcity that ensued induced growers to raise a collection from cuttings. The old Roses, such as the Damasks, Moss, Provence, China, Alba and others, are generally grown on their own roots in gardens where they still survive. The grand old Tea Roses, for example, always do best when they are grown on their own roots. Their association with stocks, particularly Manetti, spelt disaster so far as they are concerned. Many good rosarians are now making a practice of raising stocks of Roses by means of cuttings. In this respect we seem to be on the threshold of a new era in Rose growing.

SELECTING SITES FOR ROSES

FEW of us can choose a house for the quality of its soil. Even the most enthusiastic would-be Rose-grower amongst us can hardly say: we will live in such and such a district because the soil there is ideal for Roses.

Fortunately, it is not necessary to do so. There is not the slightest doubt that Roses can be grown in any garden anywhere.

All the same it is equally a fact that, in some gardens, it is necessary, for complete success, to give preference to one site over another, and to give the soil special preparation.

Where Roses Cannot be Grown.—You cannot grow Roses like Ivy under trees; neither can you grow them successfully on a continually wind-swept and exposed site, such as we find round the coast, where even the stunted and half-limbless trees show by the angle at which they are growing the path of the prevailing winds.

Roses must smile at the sun, moon, and stars, and Roses must have shelter, be it the thatched hurdle or the distant wood. Look at the wild Rose growing in the field or hedgerow, and note when it does best on a variety of soils. It does best where the soil in which it is growing is shaded, as in the hedgerow of a country lane or the border of a wood. Why? Because such shade conserves the moisture in the soil; also, the Thorn or material over which it grows lends support against rough winds.

When considered, the aspect is in nearly every case the best that could be got, and the surroundings are found to be those that are most congenial. This is natural, and when we think it over it is only what we should expect, for, although Rose seed is scattered everywhere by birds, it grows and thrives only in the choicest sites, where it can survive to reproduce on the same land for very many years.

The Ideal Site.—Actually, the ideal position in the garden in which to construct a Rose bed or Rose garden is one that has a south or south-western aspect, which is protected by a distant hedge, fence, or building from northern and north-easterly winds and which is well away from the shade or drip or underground roots of trees.

Withal, the situation should be open. A closed-in position will invariably mean trouble with mildew.

This does not mean that Roses cannot be grown in other situations than the above. As reference to another chapter will show,

there are Roses which thrive in almost sunless beds and in almost any awkward position. I know many a Rose blooming freely in positions where, theoretically, they should be a complete failure.

That is worth remembering. If you would have Roses peeping into an eastern window or draping a northern porch or climbing an almost shady wall, forget the instructions about what *should be*, and go ahead with the planting.

It is when the garden *does* offer a choice of situations that one may well select those where conditions will be ideal.

Study the Soil Question.—In many gardens there is a good deal of variation in the soil in different parts of the garden. In some places it is good; in other places it is bad.

It is certainly a fact that Roses *can* be grown in any soil.

A man once showed me hard rock, and said: "Get on with that!" I replied: "Oh! that is easy," and I sketched him out a plan of beds and paths, and proved to him that by the removal of a little stone where the beds were required, a little drainage to follow the fissures in the rock, natural giant pots could be formed to grow Roses. To give the extra depth, I planned all beds to be raised on the principle of a rockery and, beyond the carting in of the soil for the actual beds, the rest was simple.

All the same, it is a fact that the same can be said of soil as the Scotsman said of whisky—there are no bad brands, but some are better than others.

The Ideal Soil.—If possible, choose for your Rose beds or Rose garden a situation where the soil is as near the perfect as one can reasonably hope for. The ideal soil is a 2 to 3 ft. depth of rich, deep, and moderately heavy loam set on a subsoil of heavy clay.

The worst kind of soil for Roses is one that dries out very quickly. My observations have taught me that a good supply of water is as important to the Rose as good soil. In a dry season the Dutch hoe is not going to compete with your neighbour's watering-can, nor a sandy soil with a rich loam. Moisture is everything to the Rose. Where it exists in the soil every effort must be made to conserve it, and where it is lacking it must be supplied.

The methods of converting good soil into Rose soil are fully set out in another chapter. Here it suffices to urge you all not to attempt to grow Roses without first staisfying yourself about the nature of your soil and then, having discovered its imperfections—if any—putting them to rights.

You can, I repeat, grow Roses on any soil and without doing more than digging it over, but you will not obtain quality Roses that way; nor will the blooms be as plentiful as you could wish.

PLANNING THE ROSE BEDS

IF ever I am asked for my advice concerning the planning of Rose beds, the first law I lay down is that Rose beds should contain only Rose trees; secondly, that they should be planted as thick as thieves; and, thirdly, that they should be subject to general effect; that is to say, that, as far as possible, they all be made "to toe the line", and conform more or less to the usual pruning meted out by growers. If Roses only are grown in a bed, the trees can be planted closer than if other small flowers are used to carpet the soil. Roses are gross feeders, and if you are going to limit their space you must from time to time top-dress and mulch, else the soil will soon get impoverished, and your trees will soon go back. I would never nurse a sick tree or leave a vacant space unfilled, for not only do you waste good ground, but you lose a season's pleasure in a plant that should have been.

If you arrange your varieties, you can get your trees to conform to a set space, such as 18 or 20 in. apart and 16 in. between the rows. This is the not place, however, to discuss distance apart at which to plant, and for information on the subject readers are referred to the chapter on planting. One thing can be said: Keep your strongest growers to the centre of the bed, and, in the case of two or only three rows, plant a strong and a shy grower alternately. Examples of strong growers are Caroline Testout, Frau Karl Druschki, George Dickson, and Elsie Beckwith, and examples of weak growers are Dame Edith Helen and Mme. Edouard Herriot.

Of course, it may be that you are only moderately interested in Roses, and that they take a secondary place in your garden. If it is so, and you want to grow them with other flowers in the same border, then give them plenty of room, and do not let tall plants, like Hollyhocks and Delphiniums, crowd their ground and encroach upon their soil, else you will soon lose the lot.

The Shape of the Beds.—In regard to the actual shape of the beds, this must of necessity be a matter of the amount of space at your disposal, the position they have to occupy, and your own personal taste. I would point out, however, that it is advisable to restrict each individual bed to a reasonably small size. The general care of Roses necessitates a considerable amount of close-to-the-trees work and if the beds are large this will, of course, mean a lot of trampling on the surrounding soil. With smaller beds, on the

other hand, all the work can be done whilst standing on the path or grass verge and the soil therefore, does not become unduly consolidated over the Roses' roots.

I always think that the lines of a Rose bed should be bold; meaningless curves and angles cause no end of work in trimming and, anyway, the effect is lost when the trees and bushes are in full bearing. Square and oblong beds always set Roses off to perfection, as also do circular, oval, or crescent plantations in certain circumstances.

For Beds on Lawns.—If the beds are cut out of a lawn, see that the soil is not banked up too high. The rain runs off such beds too quickly and no amount of artificial watering will properly moisten the roots.

One cannot leave the subject of planning the Rose beds without saying a word about the disposition of their occupants, the colours of Roses being so delicate as to lose much of their charm if planted near something which does not agree with them.

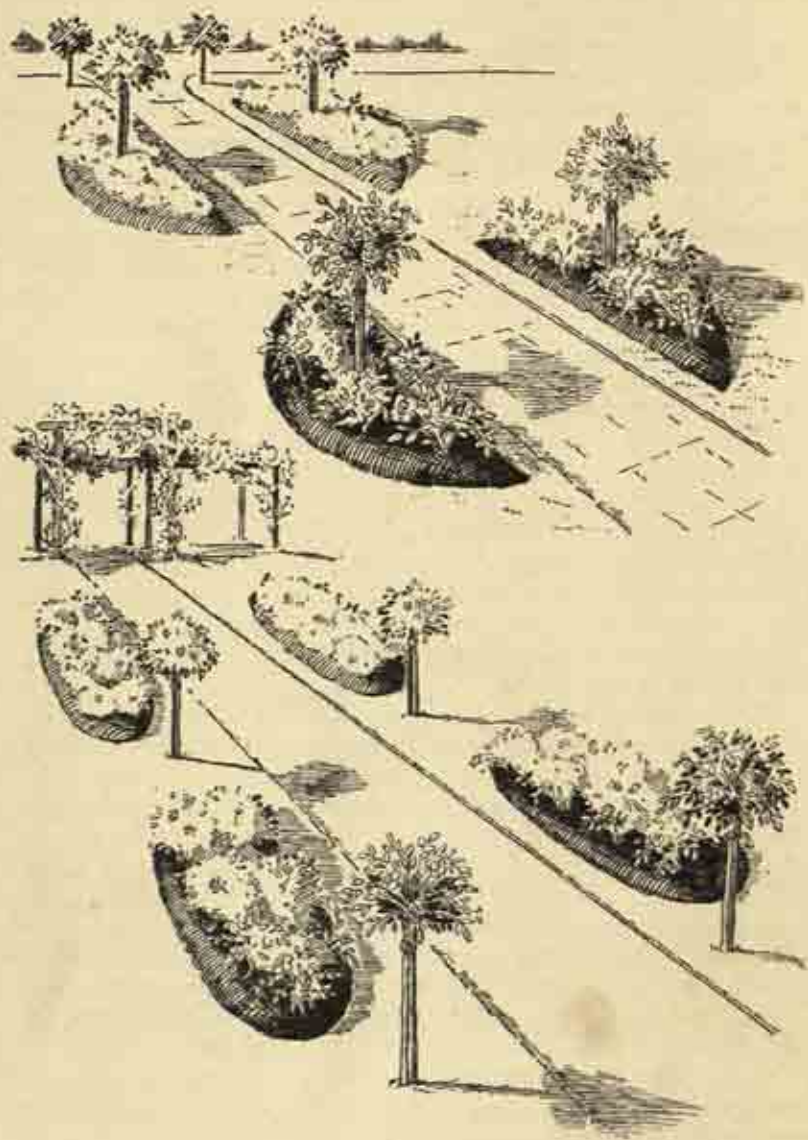
Colour Schemes.—White will tone with any other colour, but its pure beauty is most effective with red.

Red and soft yellow and cream shades, pink and any shades of cream and pale gold, blend perfectly; but red and pink, crimson and deep yellow are not harmonious companions. Always have white or cream between these shades if you propose to plant them in a bed or group of beds.

As you know, there are many dwarf Roses, such as Katherine Pechtold, in which two, three, or even more colours are blended. One colour is always dominant, and in Katherine Pechtold the dominant colour is orange. You should regard this as the base shade with which others are to be blended. An orange shade with a yellow, cream, or coppery-flushed rose is a delight to look upon.

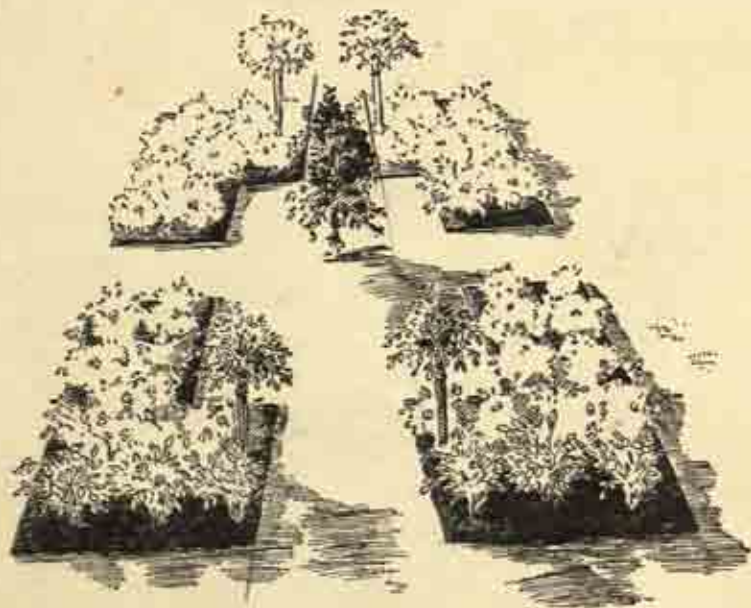
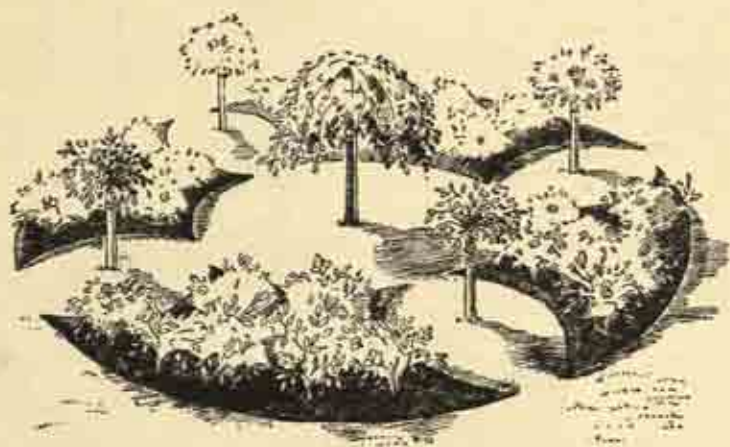
For a long while it was held that all Rose beds looked dull, had an unsightly appearance of flatness, when planted solely with bush Roses. To-day's views are different. For beds in Rose gardens and for small, "shaped" Rose beds about the general garden it is considered desirable to confine planting mainly to dwarf trees. Of course, in the modern Rose garden a standard quite often forms a centre piece, but standard Roses, for the most part, are planted as "specimens", by themselves, in selected positions, rather than among the bushes.

When long, narrow beds, as in a front garden, say, are planted with Roses it is still permissible, if desired, to plant standard, or half-standard Roses at intervals of, say, 6 ft. In long, wide, oblong or square beds, too, there may either be a line of standards 6 ft.



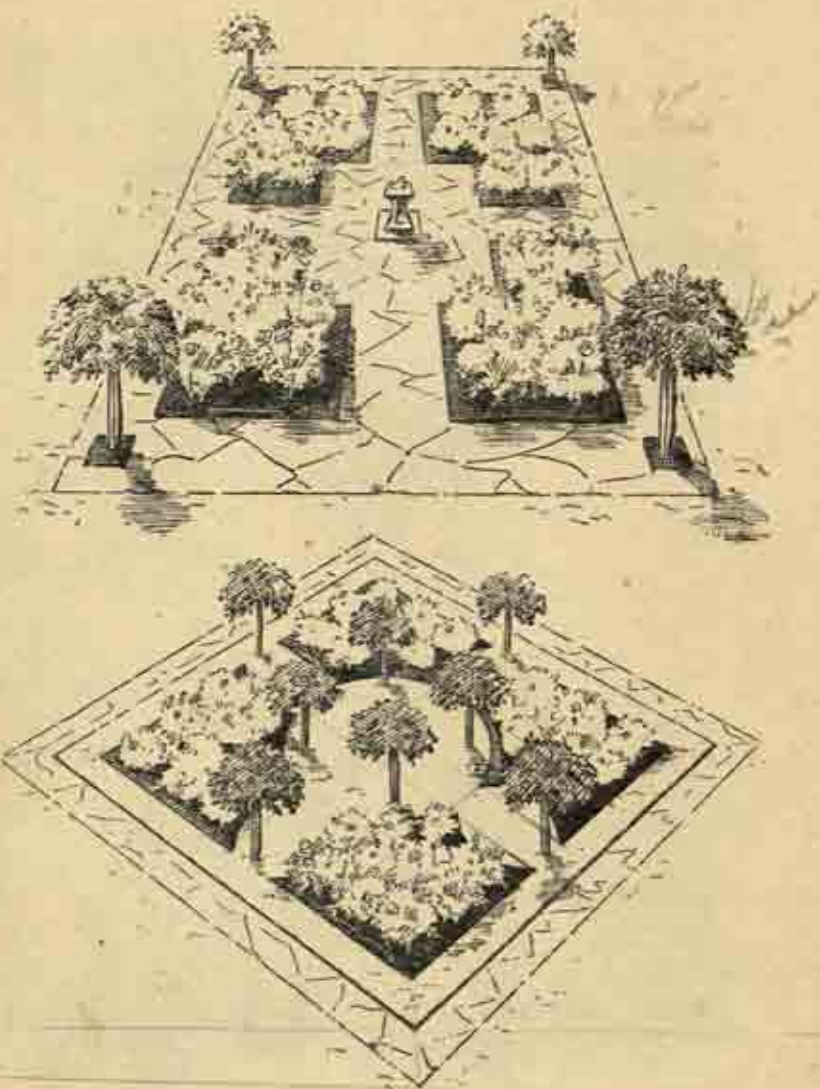
ROSE BEDS FOR BORDERING A PATH

Two suggestions for Rose beds in the lawn along each side of a path.



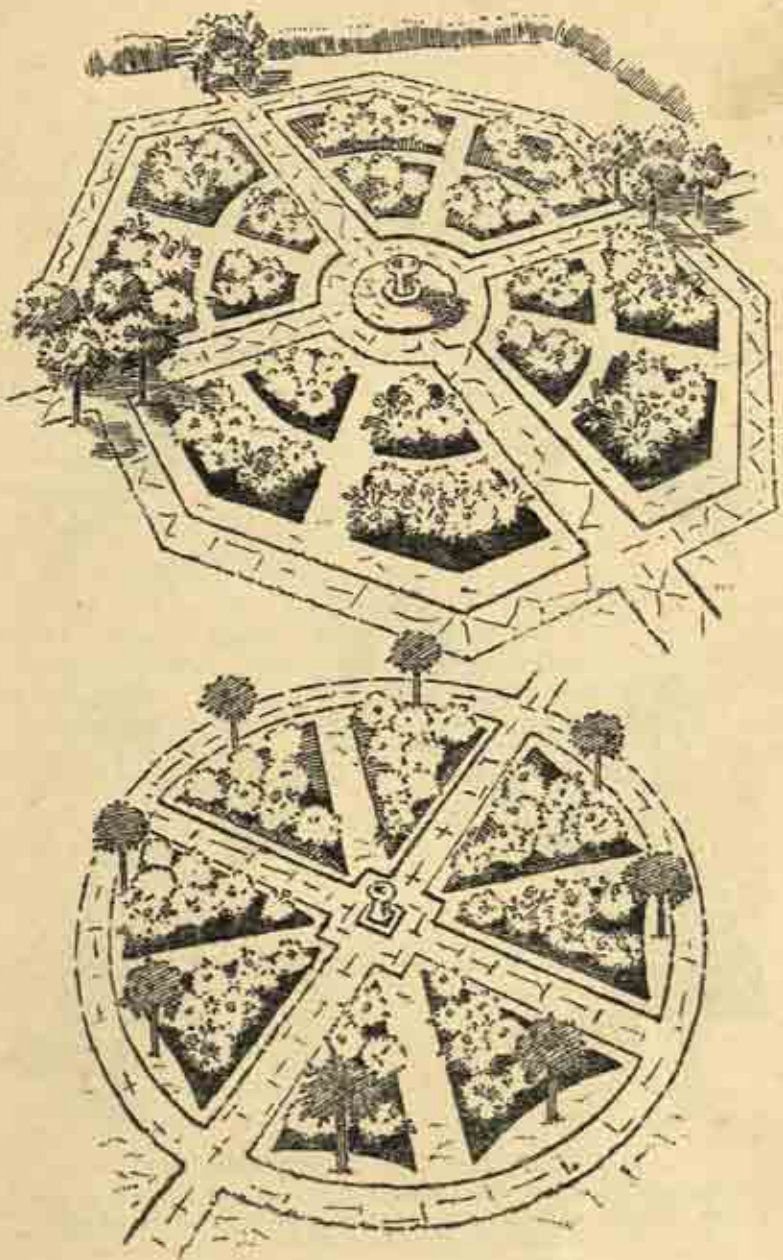
SUGGESTIONS FOR A GROUP OF ROSE BEDS

Two extremely pretty schemes to include a group of Rose beds. The paths may, of course, be of grass, as here, or of gravel.



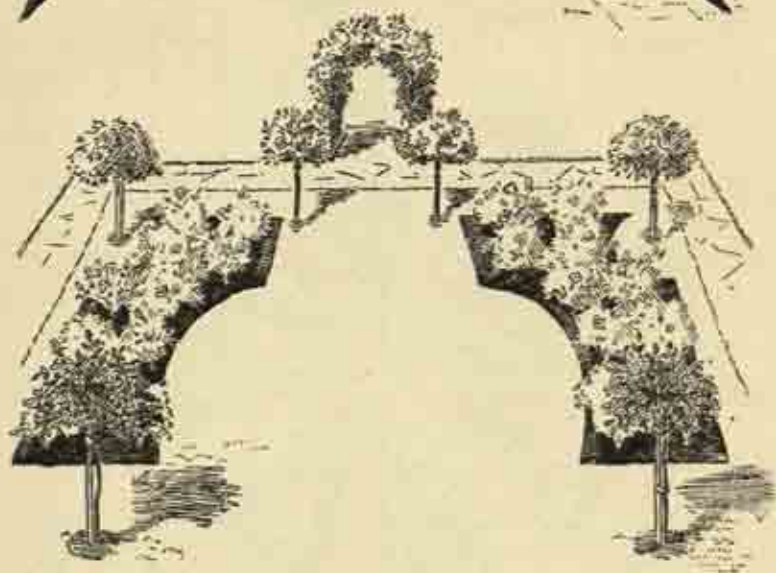
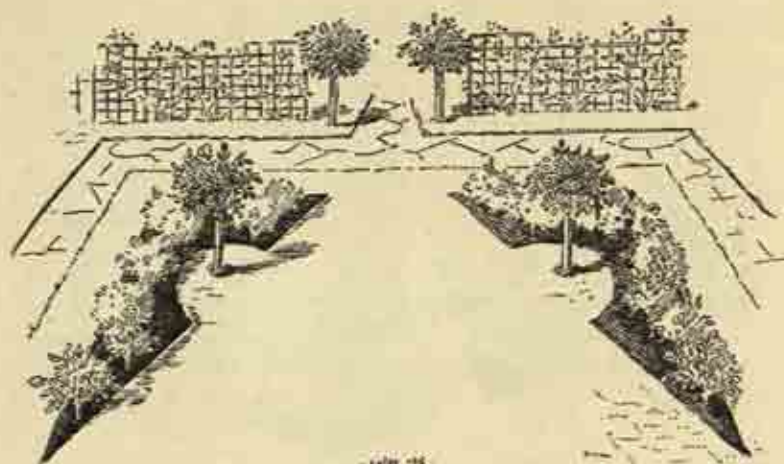
DESIGNS FOR A ROSE-BED CENTRE-PIECE

*Two attractive suggestions for a Rose-bed "centre-piece" to the lawn
or other part of the garden.*



ALTERNATIVE ROSE-BED CENTRE-PIECE SCHEMES

Two rather more ambitious ideas for utilizing Rose beds in the making of a centre-piece feature.



ROSE BEDS FOR THE LAWN'S CORNERS

Frequently it is required to construct Rose beds at the corners of the lawn. Usually such beds are square or circular, but there are other designs, as these two examples show.

apart down the centre or climbing Roses trained to rustic poles at 8-10 ft. apart.

Unless your Rose beds have a near background of trees or shrubs, the colour of the standard must be deeper than that of the dwarfs growing beneath it. Standards are suitable for sheltered gardens, but in exposed places the heads are liable to be damaged by wind. But the half-standards, having shorter stems, are quite safe. If the situation of your garden compels you to use them, you should make sure that there is a clear distinction between them and the bushes beneath.

Sometimes weeping standard Roses are set in the centre of circular beds. That can only be commended with reservations.

Weeping standards and ordinary dwarf Roses do not mix well, but there is nothing more attractive than a mixture of weeping standards and Polyantha Roses. Unless the bed is very large, only one weeping standard should be planted—at the centre. If there is more than 7 ft. of space from the centre to any point of the bed, other weeping standards may be introduced.

Do not plant any considerable number of varieties in one bed. Should you be filling a group of beds with Roses, stick to two varieties of dwarf at the base, and one standard or half-standard as dot plants. If you are planting one bed only, do not set more than three, or at the very most, four, varieties in it.

PLANNING THE ROSE GARDEN

IN the foregoing chapter, we have considered merely the planning and making of Rose beds, such beds as are to be found in nearly every garden in the British Isles. Here I want to deal with planning on a more ambitious scale, the scale in which a whole garden or the whole of one part of a garden is devoted exclusively to the growing of Roses.

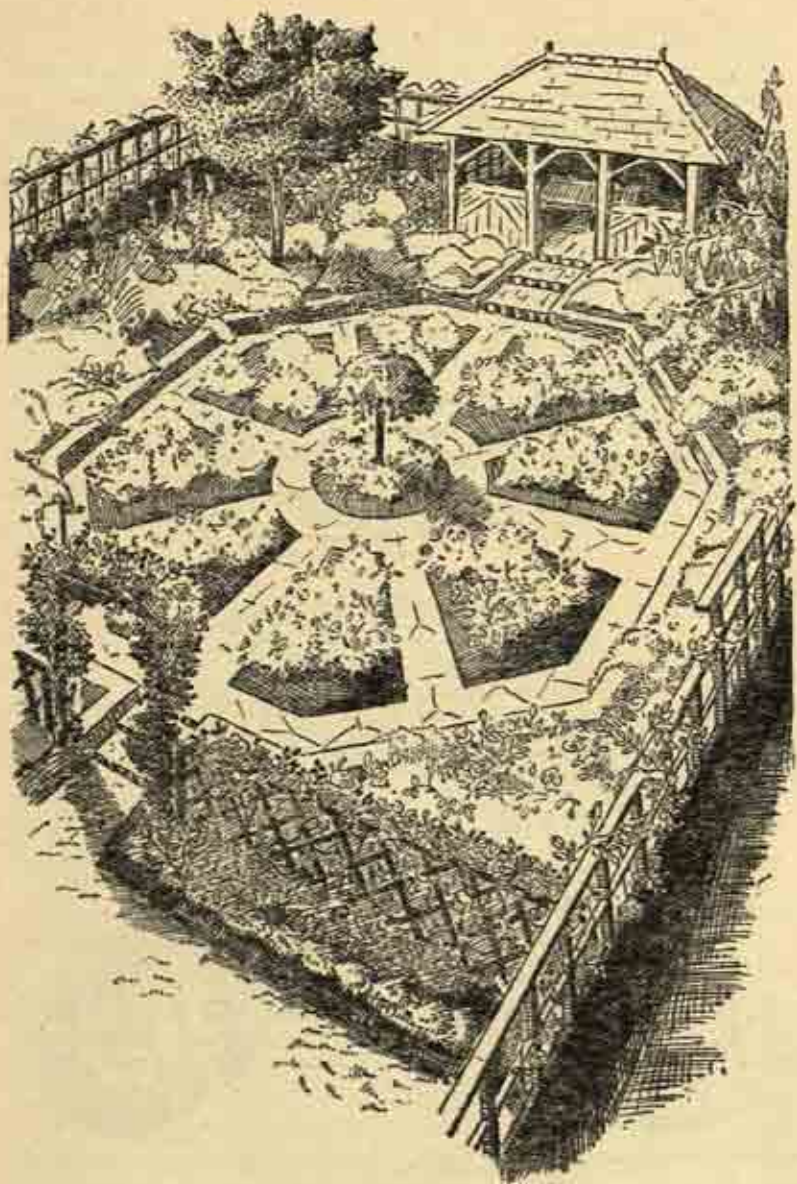
In planning a garden, the first consideration is not so much the Roses you wish to grow as it is what style of planting will best suit your house or its surroundings. Not every garden will admit pergolas, or arches, or even pillars, although weeping standards, standards, and dwarfs, need seldom be absent. As a rule, a corner can be found for almost every kind of Rose, and most gardens are improved by a well-made pergola or arch. But even when the grower has planned his garden and decided as to the position of beds, arches, pillars, and the like, there yet remains the all-important point of suitable selection.

One variety will flourish where another will hardly exist and, unless great thought and judgment are used, years will be wasted before the mistakes are fully realized. For instance, the yellow or the white Banksian Rose seldom does well anywhere except on a south wall, while W. A. Richardson, to retain its colour, should not be exposed to too much sun. Again, some sites are very hard to provide for, and there is but small choice for the grower to select what he would fancy. Having, then, your plans made out, and having in making it given every care to the position of arches, pillars, and the like; also in the making of beds, having exercised due care as to the simplicity in design to save labour in edging and mowing, start to dig and plant your garden.

In planting, great attention should be paid to the habit of the various varieties, the time of flowering, height attained, and such matters.

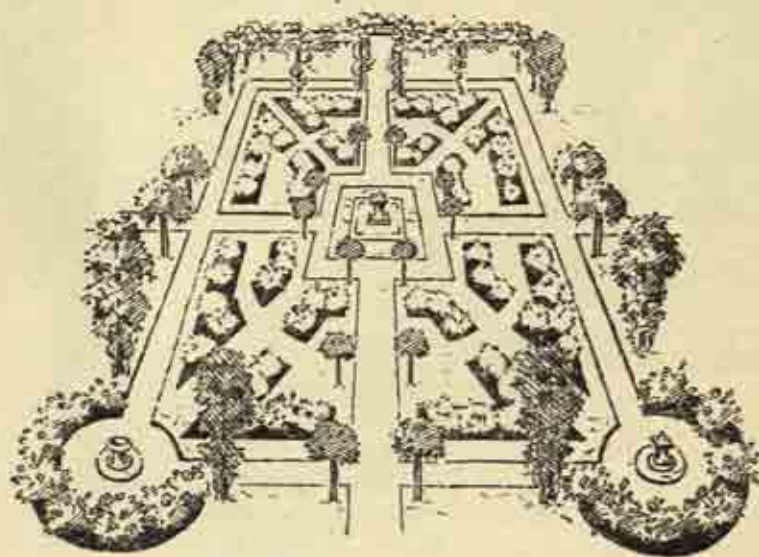
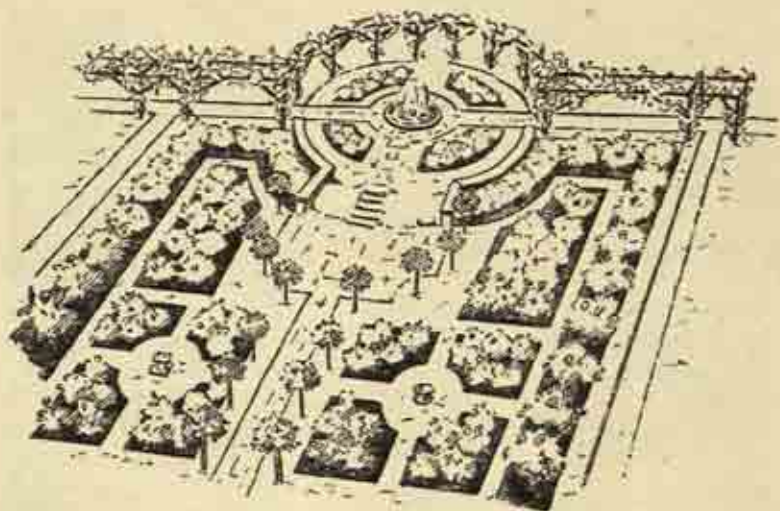
In a Rose garden proper, of course, you will want as long a display as it is possible to get. The ideal is to have at least some trees in bloom right away through from May to October or, in a fine autumn, November even.

This is not difficult. There are early-flowering varieties and late-flowering varieties; there are varieties which bloom not once or twice but almost continuously from one end of summer to the other.



A DESIGN FOR AN END-OF-THE-GARDEN ROSE GARDEN

In smaller gardens where there is insufficient room for a Rose garden proper the end of the plot may be laid out in Rose-garden style with delightful effect.



TWO MODEST ROSE-GARDEN LAY-OUTS

Though seemingly rather ambitious, neither of these Rose-garden schemes is beyond the scope of any amateur and no more room is required for them than the ordinary garden would afford.

If varieties are desired that only bloom once, then care should be taken to plant such alternatively with those that flower twice, so that the Rose garden always appears to be in full and equal bloom. Bare gaps must be avoided, if possible; we do not want to find only here and there a show of Roses; we would rather they were equally distributed.

Another important consideration when deciding upon the varieties which are to go into your Rose garden is colour-blending.

You may include Roses of very available colour but they must be so planted that they make one harmonious whole. You will never be far wrong if you have the darker colours in the centre and the lighter colours on the outskirts. I don't mean that *each* bed should have a dark centre and a light surround. In a Rose garden there are usually many beds. The centre bed or beds should contain your reds, scarlets; those around it should be planted with yellows, creams, salmons, pinks, corals, buffs, etc.

Our next consideration is: Where shall our Rose garden be installed?

Generally speaking, any position will serve if it is sunny, well-drained, and draught-free. It need not necessarily be as far away from the house as you can get it, nor yet right in front of the windows.

I have seen Rose gardens constructed in the centre of a large lawn, in a space between the flower garden and the kitchen garden, in the area screened off by a shrubbery, on the side plot of land which so often a householder buys to prevent the building of a too-near house, and as an end-of-the-garden feature.

Now for a few words on the laying-out of the Rose garden.

Shall the garden be sunken or shall it be on the level?

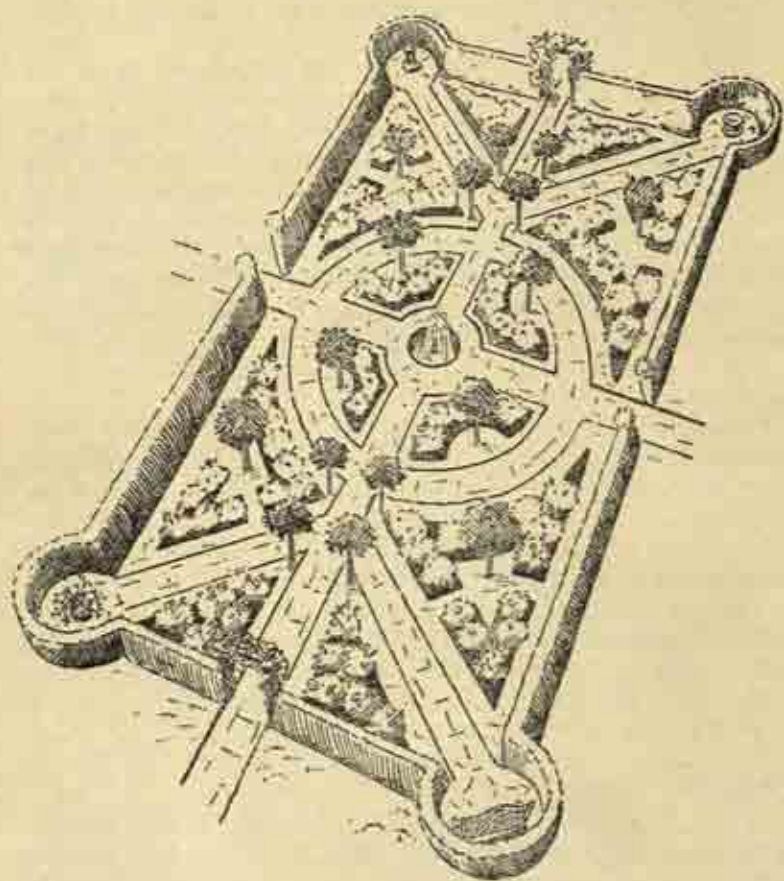
Your choice here should depend on two factors: the type of ground you have and the position the Rose garden is to occupy.

A sunken garden is certainly most attractive, but how troublesome it can be, and what a failure when it is always wet and sodden, half-full of water in times of heavy rain! Sunken gardens can only be constructed in well-drained positions, as when they are on high ground or the subsoil is sandy, gravelly, or chalky.

A sunken garden looks well when built in the centre of a lawn or similar open position, but is out of place in a position naturally screened off, as by a shrubbery.

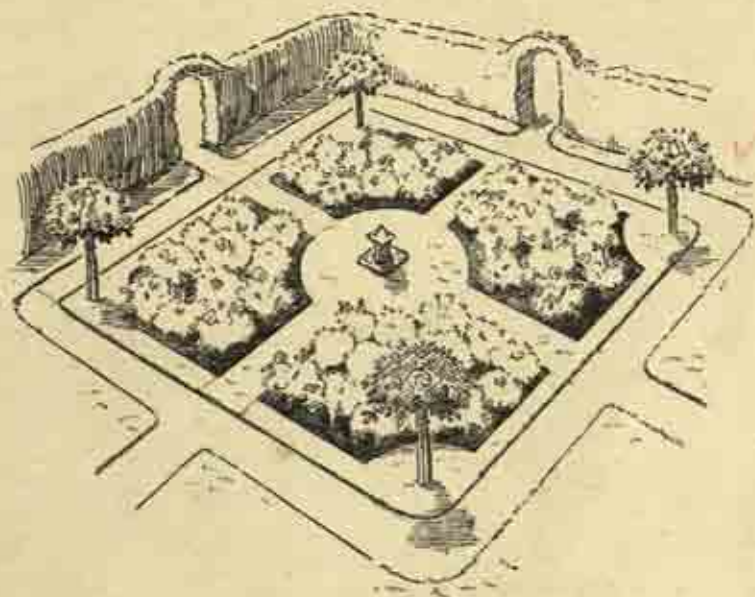
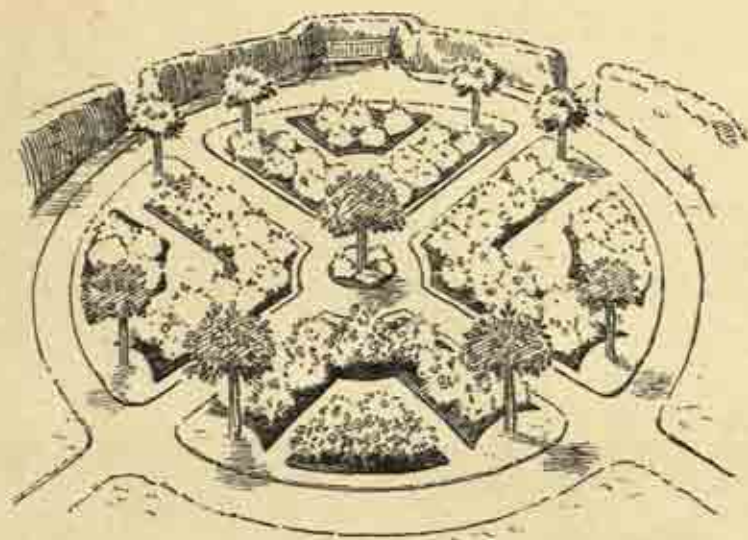
Whether sunken or "on the level", a Rose garden should always be enclosed—it should be of the general garden and yet apart from it.

Make the enclosing feature beautiful. It might be a surround



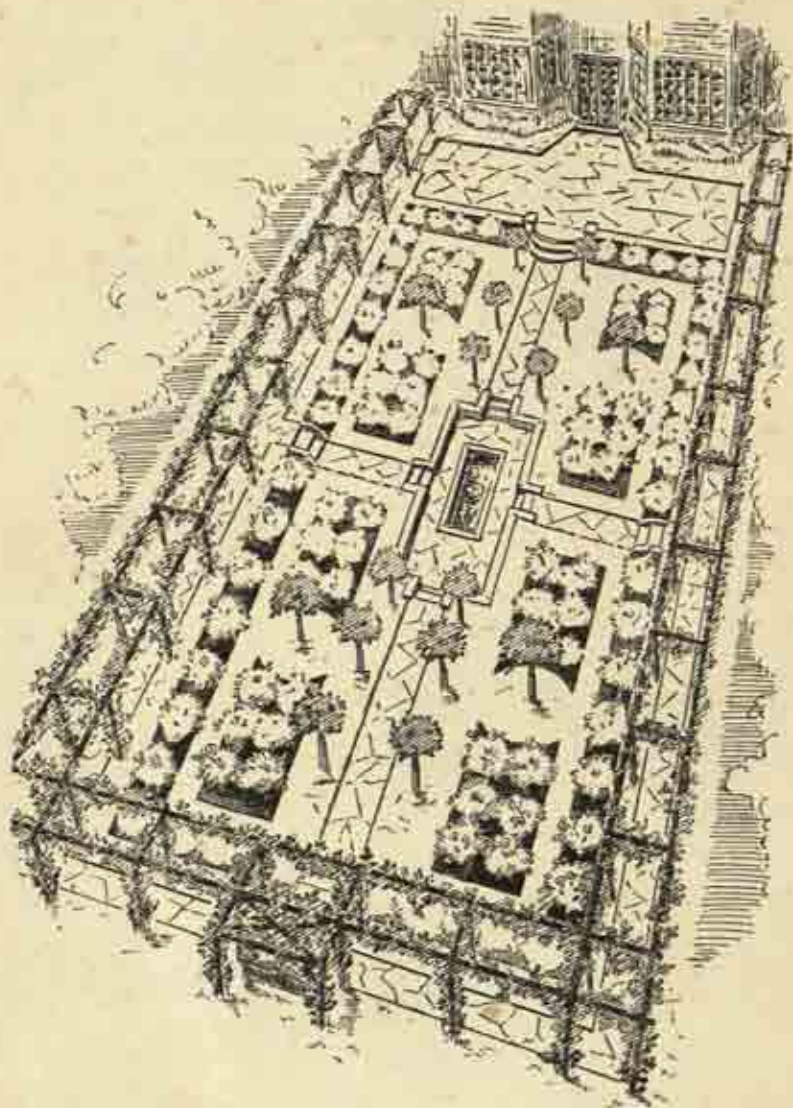
A DESIGN FOR AN ENCLOSED ROSE GARDEN

A scheme for those with sufficient ground to enable a Rose garden proper to be made.



DESIGNS FOR SMALL ENCLOSED ROSE GARDENS

Alternative suggestions for laying out as a Rose garden a small piece of ground enclosed by hedges.



A DESIGN FOR AN ALL-ROSE GARDEN

*Some Rose enthusiasts like to have nothing but Roses in their garden.
In that case some such lay-out as here will produce attractive results.*



Photo H. A. Malby

SUNGLOW

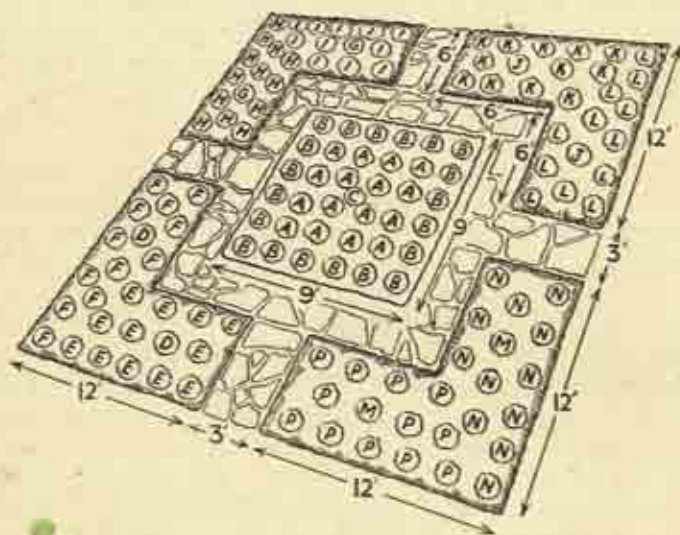
This variety is a very beautiful orange-colour, striking when on the bush and lovely when cut for decorative purposes. The nicely shaped blooms are fragrant and the plant is a strong grower.



of Rambler Roses trained up pillars, a hedge of Briars, or, if you wish for variety, a hedge of the lovely evergreen *Cupressus Lawsoniana* var. *Allumii*.

Some designers surround the Rose garden with a rustic screen over which Ramblers or Climbers are trained. I have also seen a pergola surround.

Now to the general formation of the beds, which, of course, determines the shape of the garden. If generally on your place the outlines are rectangular, work the Rose garden in circles. If you have many curves, a rectangular scheme would be appropriate. Examples of both appear in the accompanying diagrams.



A simple lay-out scheme for a Rose garden, the letters (the key to which appears above) showing the varieties of Roses to plant and the positions they should occupy.

The size of the beds is again not a constant factor. Some account must be taken of the proportions of the garden. As a general rule, however, it is better to go in for a comparatively large number of small beds than a few large ones. You have a better chance of making the colours "speak" in all their delightful harmonies.

The key to the Roses shown in the sketch is as follows:

Centre bed: (A) Polyantha Paul Crampel, scarlet; (B) Polyantha Yvonne Rabier; (C) Standard Sanders' White Rambler. Bottom

left-hand bed: (D) Standard Madame Butterfly, apricot and gold; (E) Mabel Morse, yellow; (F) McGredy's Ivory, cream. *Top left-hand bed:* (G) Standard McGredy's Yellow; (H) Dame Edith Helen, rich pink; (I) Comtesse Vandal, pink shaded with gold. *Top right-hand bed:* (J) Standard Betty Uprichard, salmon pink and carmine reverse; (K) Mrs. Edward Laxton, orange; (L) President Hoover, orange and gold. *Bottom right-hand bed:* (M) Standard Duchess of Atholl, copper flushed with rose; (N) Mrs. A. R. Barraclough, deep pink; (O) Joseph Hill, pink.

If something more pretentious than the foregoing is required, the plans set out in the previous pages will suggest schemes of varying kinds for all the kinds of sites and situations. It will be noticed that, in these schemes, the beds are mostly of the shapes suggested in the previous chapter and, for those who prefer to do their own garden designing, various combinations of these beds should give them all they desire.

THE ROSE CLASSES

THE great majority of my readers would skip this chapter of my book if I entered too fully into the botanical history of the Rose or discussed at length all the species of the genus *Rosa*. In the "Rosarum Monographia" no less than seventy-eight species are described, besides others that are doubtful. Botanists, however, do not stop here; some have produced a far greater list, and even to-day are adding trouble for the student. The average grower does not care a brass button how many species are recorded, and, since botanists cannot agree, what does it matter? M. Boitard, a French author, has maintained that there are only three species: (1) *R. simplicifolia*; (2) *R. lutea*; (3) *R. mutabilis*. He divides these into races and varieties, and brings most of the cultivated varieties under the third species (*R. mutabilis*). I would like to go further, and say, with the Book of Genesis, "In the beginning," etc., and thus bring "species" down to the one or two common parents.

It is the law of nature that alterations and variations shall take place, and to the end of the world the operation of this law will go on producing in the Rose world new creations that in course of time will vary to such an extent that even scientists will only live in an atmosphere of surmise. The grower, professional or amateur, only concerns himself about clearly defined groups of Roses, by reason of the special methods of culture that have to be meted out to each group or class, and as long as he can get the best out of each from careful proscribed treatment, what does it matter how narrow is made the dividing line between species, groups, or varieties? You are certain, by hybridization, to produce new varieties with peculiar habits, and these will be so marked that their likes and dislikes in respect to general culture will have to be studied if good results are to be obtained. What is the result? A new group will be formed, and, like the Pernetiana Roses, will grow and soon give birth to something else more distinct.

Good reader, this book is for practical purposes, and you should only look to find in it hints for culture and advice, for selections, planting schemes, and all those particulars that are calculated to assist in the general advancement of the Queen of Flowers. Let me, then, follow the most accepted lines, and divide the Roses of to-day into two classes. Class 1: Summer Roses, blooming in May, June, and July. Class 2: Continuous Roses, blooming from

May to November, or until frost shall end their season. These two classes we will divide up into groups, and with each group I will give you a little history and some of the general methods to be adopted to ensure good culture, and thus assist the dictionary of Roses to be found at the end of the book.

EARLY SUMMER ROSES

Under this class come the earliest of all cultivated Roses; Roses of ancient Rome, medieval England, and far-off lands, where history and mystery have lingered round the scrolls of ancients and the scent of the potpourri jar. Exclusively cultivated up to the beginning of the nineteenth century, varieties of these Roses have gradually dwindled until only the fittest have survived to contest with the more favoured gems of the autumn class.

PROVENCE ROSES (*Rosa Centifolia*)

This Rose, better known to the public as the old "Cabbage" Rose, by reason of its full-folded petals shaped like an early Cabbage, was reputed to be the most ancient Rose in the world, and was said to have been cultivated by the Greeks and Romans, noted by Herodotus and mentioned by Theophrastus and Pliny. Botanical science, thanks to the development of cytology, has now proved that what we now know as *R. centifolia* did not arrive in this country until the eighteenth century and is actually the youngest of all our old Roses. Space will not allow full details here, but in brief it may be stated that it is not a wild species as many supposed. It is a complex hybrid made up of four species, *R. rubra*, *R. phoenicea*, *R. moschata*, and the Dog Rose, *R. canina*, and it can be presumed to have had a garden origin. We definitely owe this grand old Rose to the efforts of the Dutch breeders who began work upon it in 1580 and continued until they obtained what they considered perfection somewhere about 1710. Its flowers are globular, very full, and sweetly perfumed; the leaves are light-green, with red borders.

A sub-variety of the Provence is the Miniature Provence, not to be confused with the Lawrenceana, or Fairy Roses. The Provence Roses are quite hardy, and will stand the severest frosts. They require moderate pruning and generous cultivation.

MOSS ROSES (*R. Centifolia*)

The Moss Rose was first introduced into England from Holland in 1596, and was very highly prized in this country. It has all the

characteristics of the Provence Rose, with the addition of the Moss on its sepals and stems.

It is slightly perfumed, and some varieties more so than others.

This group is perfectly hardy, and although the pruning varies according to the variety, yet it may be treated as the Provence Rose, and, generally speaking, cut back moderately. It requires generous treatment, and should not, as it often is, be relegated to any ordinary corner of the garden. It can be grown in bush form or as a pillar Rose.

THE DOUBLE YELLOW ROSE (*R. Sulphurea*)

Much has been written about this Rose by reason of the rarity in early days of all-yellow Roses, but it is not of value, and can be dismissed in a few lines. It is a native of Persia, and was first introduced into this country from Constantinople.

It opens badly, and requires a south or west wall. It should be lightly pruned and generously manured.

THE DAMASK ROSE (*R. Damascena*)

This group is undoubtedly one of the oldest, and its date of introduction into this country is uncertain. The date 1573 has been generally accepted by most authorities, but Johnson, in *The History of Gardening*, says: "The learned Linacre, who died in 1524, first introduced the Damask Rose from Italy." Modern Rose-growers have produced through it, first the Damask Perpetual, and then the Hybrid Perpetual, which once enjoyed so much popularity.

The Damask Roses are very hardy, free flowering, and the blooms are of fair size. The old York and Lancaster, which is a pale Rose, or white, and sometimes striped, comes under this group. They are all very hardy, and require moderate pruning and good cultivation. They are best grown as standards, and while they do not make very good compact heads, yet the growth is graceful.

THE FRENCH ROSE (*R. Gallica*)

The French Rose is termed "Gallica" from its being a native of France, although it is found growing abundantly in Italy, Switzerland, and Austria.

It was for a long time a very popular group in France, and numerous varieties were raised that were conspicuous for their striped or spotted petals, which with the brilliancy of the stamens

and the peculiar fragrance of the bloom, mark this group as being more distinct.

From this group is descended the Hybrid Chinese, but there is little fear of confusing the two groups, as the differences are very marked. They are very hardy, and require to be thinned out well if fine flowers are sought.

THE HYBRID CHINA ROSES (*R. Gallica*)

This group has originated from the French and the Provence Roses crossed with the Chinese, and owing to their retaining more of the French Rose characteristics they are classed under *R. Gallica*. They are all strong growers, and most of them make good pillar Roses.

The principal feature is that they bloom only in June and July, whereas the Chinese bloom constantly from June to November.

These Roses are very hardy, will do well in poor soil, and often succeed in situations where other kinds will fail.

THE HYBRID BOURBONS (*R. Gallica*)

These Roses are hybrids from the French or Provence Roses with the Bourbon race. They are more robust in growth than the Hybrid Chinese, and possess a fine broad foliage. They bloom freely, and their large handsome flowers are equally fine when forced under glass as when grown in season in the open.

The Hybrid Bourbon is often a fine pot Rose, and equally useful as a standard or pillar Rose.

THE WHITE ROSE (*R. Alba*)

The Alba Rose, which is a natural hybrid and not a species as hitherto supposed, introduced in 1597, ranges over the middle of Europe; this group differs from all others and is quite distinct. It is an old-fashioned class of Rose, and is generally found to-day in old cottage gardens. The majority of these Roses are not pure white, but possess a pink flush towards the centre.

The blooms open rather flat but are most attractive, and are produced in great abundance. The trees are good as either standards or dwarfs. It is a very hardy group, and although it responds to liberal treatment, yet it will do well on poor soil.

THE AUSTRIAN BRIAR (*R. Lutea*)

The varieties of this group come from Armenia, Persia, and the Himalaya mountains, also Southern Europe. The blooms are nearly single, and with the exception of Austrian Copper, which

is a glorious shade of coppery red, they are yellow. They all like a dry, light soil, and do best on their own roots, the methods of propagation being to take off suckers at the fall and transplant them into fresh ground. Persian Yellow is a very good type of this group. They are all very hardy, but dislike the smoke of large cities and do best in pure air and genial surroundings.

THE SCOTCH ROSE (*R. Spinosissima*)

This most thorny of all Roses is found growing wild in many parts of Britain, especially in Scotland, from whence most of our finest varieties have come.

They are easily propagated from seed, and soon make sturdy little trees; but the usual method is to propagate by means of suckers, which are liberally thrown out, and if taken off in the autumn soon grow into large bushes.

There are a great number of varieties, ranging in colour from white to pink, and including a good yellow. They make splendid miniature hedges for a Rose garden, and if the bloom lasts but a short time, yet it is very sweetly scented and exists in great profusion.

THE SWEET BRIAR (*R. Rubiginosa*)

Who does not know the Sweet Briar, growing, as it does, wild in many parts of our country?

Eglantine, as it was called in the early days, was cultivated as a good Rose for garden hedges, where, after a spring or summer shower, it scents the whole place. Lord Penzance has raised many valuable varieties, and there now exists a good range of colours, but the foliage is, and always will be, its greatest charm. It responds to liberal treatment, but will also do well in poor ground.

THE AYRSHIRE ROSE (*R. Arvensis*)

Found throughout Europe, this Rose is a native of our own land; it is extremely hardy and will grow anywhere. Indeed, it forms one of the most valuable groups we possess. Adapted for trailing over unsightly fences and old tree-trunks, its long, slender rods push themselves rapidly to the top and hang in graceful fashion, supporting its countless blooms to the delight of all.

They form good weeping Roses on tall stems, and flower from June to July. They need no pruning or training, and do best if allowed to ramble at will, growing where other Roses would not exist and thriving in the poorest of soil. Good types of this group are the Dundee Rambler, and Splendens.

THE EVERGREEN ROSE (*R. Sempervirens*)

This group is suited for the same purpose as the Ayrshire, and is even more valuable by reason of its varieties, retaining its foliage almost throughout the winter. It is supposed to have been introduced into this country in 1629 from the Continent. It is found throughout the middle of Europe growing in profusion, and being very hardy is easily propagated and maintained.

Most of the varieties make superb pillar, climbing, or weeping Roses, and need no pruning beyond the tipping of shoots. *Félicité-et-Perpétue* is the commonest representative and no Rose garden should be without one or the other, if only for the sake of the foliage when all else is bare.

THE BOURSALT ROSE (*R. Alpina*)

The name of this group was given out of compliment to M. Boursault, a French grower, and it was so named after the introduction of the first double Alpine Rose.

The Boursault Roses are very distinct, and form—like the Ayrshire—a most valuable group. The shoots are long, very flexible, and almost free from thorns. The flowers are produced in clusters and are most conspicuous.

Coming, as they do, from the Alps of Austria and Switzerland, as might be expected, they are extremely hardy, and will face almost any situation or soil. Poor soil will not hinder this Rose from doing well, but, like all Roses, the best results will be obtained on good cultivation.

THE BANKSIAN ROSE (*R. Banksiæ*)

Named after Lady Banks, the white variety of this Rose was introduced into this country from China in 1807, and in about 1817 the yellow variety arrived to beautify our homes. Flowering from April until the second week in May, it is one of the first Roses to greet us growing in the open. Of most rampant growth, this Rose, not unlike a double-flowering Cherry, delights in a southern aspect and a high wall space, which it will soon cover. The beautiful yellow variety is almost scentless, but the white, with its large flowers, has an odour not unlike that of Violets.

Unfortunately, the Rose is rather delicate, and dislikes an exposed position, but where it is suited to its surroundings it is surprising what growth it will make in a short period of time. Summer is the correct season in which to prune this Rose, and as soon after it has flowered as possible. The Banksian Rose delights in a deep,

rich soil, and a good mulching after a storm of rain, when the wood is growing, will greatly help.

WICHURAIANA ROSES (*R. Wichuraiana*)

In 1860 Dr. Wichura, a famous botanist, discovered in Japan this species, and introduced it into Europe about 1873. Crossed with Tea, Noisette, Polyantha, and other Roses, *R. Wichuraiana* has given to us a group of Roses that to-day is one of the most popular in the Rose world. Dorothy Perkins, with its sport, White Dorothy Perkins, Minnehaha, Lady Godiva, Gardenia, Excelsa, and many others are to be found in the majority of gardens. For the most part late summer flowering, we can hardly do without their presence, and their exquisite beauty and range of colour are too well known for me to dilate upon them here.

Grown on their own roots they soon make fine trees which require but little pruning beyond the removal of dead and weakly wood. However, as the trees grow too thick, young rods should be tied in and the old removed. All this class benefit by liberal cultivation, but at the same time they will do well on poor soil.

THE POLYANTHA ROSE (*R. Multiflora*)

This charming group of Roses is best known to all in its dwarf varieties of perpetual kinds, such as Eugénie Lamesch, Léonie Lamesch, Perle d'Or, and others. There have been quite a number of beautiful varieties introduced of late, and all of them are valuable additions to the garden. The little trees make fine miniature Rose hedges and border edgings. They are always in bloom and the clusters of tiny flowers last a long time. Called by the National Rose Society Dwarf Polyantha Roses to distinguish them from the climbing Polyanthas, we find them often listed as such. They make good pot Roses and force well. Quite hardy, they do well in poor soil, and only require light pruning and the thinning out of old wood.

CONTINUOUS FLOWERING ROSES

Under this class are made up species that flower several times from May to October. It especially comprises varieties introduced from Eastern Asia and a number of hybrids created since their introduction. The popularity of the various continuous-flowering groups has quite eclipsed that of the older and summer-flowering kinds, so that in the dictionary of Roses at the end of the book will be found varieties that for the most part come

under Class 2. To a certain extent Class 1, summer-flowering Roses, and Class 2, continuous-flowering Roses, overlap, but for general purposes these two classes divide up the ranks of the Queen of Flowers, and help to set before the grower a classification of species which without such divisions would be hard to set in order or group for review. I do not intend to divide up the groups more than is necessary, and therefore must crave the indulgence of the super-critical if I omit some, or combine small groups with others that will admit of the combination.

HYBRID PERPETUAL ROSES

Before the Hybrid Tea became so popular and the Tea Roses multiplied into so many varieties, the Hybrid Perpetual held the field and contested all comers. Their origin, which is from many sources, many unknown, hardly will interest the reader; yet this work would not be complete without more than a reference as to their history. The first varieties were raised by M. Laffay from Hybrid Bourbon Roses or Hybrid Chinese and Damask Perpetuals.

Princess Héline, introduced in 1837, was the first notable variety. Then followed Queen Victoria in 1840. Then a number of other varieties were listed in the trade catalogues, but many of these bore marked resemblances to one or other of the parent groups, and the distinctions were of a minor character. A good deal of chance work was undertaken, and the French Rosarians who sent out most of the first varieties could not with certainty give any parent or groups. Nevertheless, the rich colours, wonderful scent, and sturdy foliage soon brought this new collection into favour, and grown in our own country they developed a sound constitution and showed their true worth. This resulted in our growers working upon more scientific lines, and the results were so satisfactory that before many years numerous varieties of sterling worth were added to an ever-growing list.

HYBRID TEAS

This class has now almost completely usurped the position formerly occupied by the Hybrid Perpetuals and is to-day not only the largest class but also far and away the most popular. Countless gardens contain only Hybrid Tea Roses though what they lack because of it is not for me to say.

Originally the cross was between Tea Roses and Hybrid Perpetual varieties, and the progeny bore a resemblance to both sections; but the writer could put his finger on more than one

Rose listed as a H.T. that has no right to be classified as such. The great characteristics of this group are that they are very free flowering and supply more than one crop of Roses from early summer right up to November and even December. They are for the most part hardier than the Teas and require less protection. All of them require very liberal treatment as regards manuring and general cultivation, and it is wisest to err on the side of protection against frost.

HYBRID POLYANTHA ROSES

This class was evolved in 1924 and was begun by Poulsen, of Copenhagen, who initiated the race by crossing the Dwarf Polyantha Orleans Rose with the Hybrid Tea Red Star. From amongst the seedlings arising from that cross he selected a couple which he named Else Poulsen and Kirsten Poulsen. In 1932, after one or two others had been put into commerce, he sent out Karen Poulsen. This class has become quite as popular as the Hybrid Teas, and is now a great favourite. Many fine kinds have been added during recent years such as, for example, Donald Prior, Van Nes, Orange Triumph, and Dainty Maid.

The enormous masses of flowers, so freely produced throughout the season, and their rich colours, have made this new class indispensable for bedding and massing, and in that respect few others can rival them. The display of colour they afford is magnificent. There is just the danger of this class becoming too close to the Hybrid Tea section if raisers persist in back-crossing between the two types. Roses like Karen Poulsen are typical Hybrid Polyantha Roses, but some of the newer sorts, such as Anne Poulsen, are very close to the Hybrid Teas in character.

The Hybrid Polyantha Roses require the same treatment as that recommended for the Hybrid Teas.

THE BOURBON ROSE (*R. Bourbonica*)

This group was at one time quite an important section of the Rose world, but it has almost passed out of sight. Discovered in 1817, it was introduced into this country in 1825. M. Jacques, gardener to the Duke of Orléans, of Neuilly, in 1819, sowed seeds of the Rose discovered, and raised a new variety which he called Ile-Bourbon Rose. From this Rose issued all the varieties produced since that time. Rather sensitive to cold and damp, the blooms often suffer in this country, but the trees do remarkably well, and Souvenir de la Malmaison, Mrs. Paul, and Madame Isaac Pereire, still in commerce, testify to their worth.

Not unlike the H.P.s, these Roses respond to similar treatment in pruning and general cultivation; indeed, there is little doubt but that many of our H.P.s have the Bourbon strain in their constitutions.

THE CHINA ROSE (*R. Indica*)

Introduced into this country from China about the year 1789, they form a group of the truest Perpetuals known. The common Pink and Monthly Rose are the parents of all the varieties introduced.

They require very little pruning and do best upon their own roots; although not very strong growers, yet they are hardy and are constantly in bloom throughout the season.

In spite of the lack of attention that this Rose usually gets, it loves generous treatment and responds to careful cultivation, but, above all, it likes a south aspect and a warm corner of the garden.

THE LAWRENCEANA OR FAIRY ROSE

This Rose was introduced from China about 1810. It is simply a China Rose in miniature, and must not be confused with the Miniature Provence. It is in constant bloom and makes a good edging to a Rose bed. It is largely used as a pot Rose, and very pretty it is potted up for house decoration. It is cultivated in the same way as all China Roses, and is quite hardy.

THE TEA ROSE (*R. Indica Odorata*)

This group is a much-valued section of the Rose world, and often the origin of the name is called in question. It is known as the Tea-scented China by reason of its perfume, which resembles the odour of tea. The first variety was a pink Rose introduced from China about the year 1810, and subsequently in 1824 the Yellow Tea Rose was sent over to be the progenitor of a fine list of varieties of a delicate constitution. They all need protection from frost and cold, cutting winds, and in spring very careful pruning. I have always found that the Teas do best when budded on to standards and half-standards, and when pruned rather late in the season.

Subsequent experience has shown that the Tea Roses are not nearly so tender as they were reputed to be. Grown on their own roots they do well and are akin to the Chinas in hardiness.

Many of the varieties make excellent Roses for forcing under glass, and retain their colour and perfume to a marked degree. A rich loam and liberal treatment is necessary for good blooms.

THE NOISETTE ROSE (*R. Moschata*)

Named after Mons. P. Noisette, this Rose has its origin in America, and was introduced into France in the year 1817 and into this country about the year 1820. It is considered to be a cross between the Chinese and the Musk Rose, and its principal recommendations were its hardy nature, free growth, and late flowering. The blooms were borne in large clusters and were sweetly perfumed.

THE MUSK ROSE (*R. Moschata*)

Found in Asia, Persia, and Northern Africa, the Musk Rose is thought to have been introduced into this country about the year 1596, and it is more or less popular, being found growing throughout the country. The flowers are formed in large clusters late in the summer, and possess a faint musk odour. The trees make good bushes, but are not adapted for climbers. Some of the hybrids of this group are most attractive, such as the *Moschata Grandiflora* and *Moschata Floribunda*; these are strong climbers and a great acquisition to the garden.

A generous soil and a sheltered site are necessary, for the Musk Rose dislikes an exposed position.

The Hybrid Musk Roses are now in favour, and are valuable for the formation of hedges and also for making fine bold specimens in the manner of flowering shrubs. The late Rev. Joseph Pemberton was notable for the introduction of this fragrant class. Such sorts as *Moonlight*, *Danae*, *Clytemnestra*, and *Penelope*, created an interest and were followed by others like *Cornelia*, *Sammy*, *Vanity*, *Fortuna* and others of similar character. The Hybrid Musks ought to be pruned hard the first season, and afterwards the side shoots that have borne flowers should be shortened to three or four eyes. Any old, worn-out growth should be cut away.

THE CLIMBING POLYANTHA ROSE (*R. Multiflora*)

This group, the varieties of which are by no means all hardy, hails from Japan and China, and varieties introduced have given birth to others of great value.

Introduced into this country in 1804, it soon became popular. Easily grown in dwarf or climbing varieties, it is found in most trade catalogues. One variety, *De La Grifferaie*, is used largely as a stock on which to bud Tea-scented Roses, and a very excellent foster-parent it makes. A new break was made in this class by the issue of *Crimson Rambler* (Turner, 1893); this, again,

gave birth to a fine seedling, Blush Rambler (B. R. Cant & Sons, 1903). These Roses are gross feeders and will benefit from a frequent mulching.

THE MACARTNEY ROSE (*R. Bracteata*)

Introduced from China by Lord Macartney in 1795, this Rose is little known by amateurs. It does best on a south wall, flowering in summer and autumn. The habit is vigorous, but the Rose is not very hardy. Moderate pruning and good soil are necessary. A shy seed-bearer, this Rose has not given us many varieties, but it is well worth the hybridist's attention, for it holds out great possibilities.

Since this was written the hybridist has given us the lovely Hybrid Bracteata Rose Mermaid, with its exquisite large, single sulphur-yellow flowers. It is now a great favourite.

THE BERBERRY-LEAFED ROSE (*R. Berberifolia*)

A native of Persia, introduced in 1790. It is seldom met with in this country, and does not do well, being rather of a delicate nature. It is of greater interest to the botanist than the rosarian.

There is a hybrid between this species and *R. Clinophylla* named *R. Hardii* which is more robust. It has sulphur-yellow flowers, with a red-brown blotch at the base of each petal and is very pretty. It has proved to be quite hardy in Scotland.

THE MICROPHYLLA OR SMALL-LEAFED ROSE (*R. Microphylla*)

Found in the Himalaya Mountains and also in China, this Rose was introduced into this country in 1828. It is rather delicate, and likes a warm, light soil, and grows best under a south wall.

Very little pruning is necessary, but it likes generous treatment and benefits from having its tiny foliage sprayed in the dry months.

THE JAPANESE ROSE (*R. Rugosa*)

These Roses are gaining in popularity every day, and rightly so, for flower, foliage, and seed pods are most attractive. The best-known varieties are the red and the white. They make good bushes, and can be used in the Rose garden to form a hedge, or they can be planted in groups. Very hardy, they require little attention either by way of pruning or feeding, but like all Roses, they respond to good treatment and attention. I have seen these Roses planted in open glades in woods with other

berried shrubs, for their fruit in autumn is much loved by pheasants, and it helps to keep the birds from straying.

There are now many fine Hybrid Rugosas, notably Conrad F. Meyer, Rose à Parfum De l'Hay—one of the sweetest of the deep crimson Roses—and Blanc Double de Coubert.

Under Autumn Roses come also the Perpetual Scotch and the Perpetual Moss, each requiring the same treatment as the summer-flowering groups already described. These two groups are great additions to the Rose world, and growers should pay more attention to them, for they are honestly worth it. There are other groups and botanical varieties of interest, such as the Bramble-leaved Prairie Rose (*R. Setigera*), which comes from India; but the grower will hardly care to go farther, and if he does, I doubt if he will find a garden large enough for them all, unless he is prepared to realize my great dream of a National Rose Garden.

CHOOSING ROSE COLLECTIONS

THERE are no two growers in the Rose world to-day who would agree on any selected list of varieties. We all have our fancies, our likes and our dislikes—that is, if anyone can be found who dislikes a Rose. I have often heard an enthusiast speak disparagingly of a variety, so much so that unless you realized the remarks were the result of selection you would begin to think he had a dual personality, the one loving a Rose and the other hating it. Comparisons are odious at all times, and never more so than in the show tent when playing second fiddle to an inferior box of blooms. Personally, I love all Roses so much that I find it hard to make selections, not that I am afraid of my selections being outclassed, but because I cannot keep my lists within bounds. Ask me my favourite Rose and I will say, "La France", but I could not honestly select La France in a six that had to compete for a challenge cup. It would be like putting up a featherweight champion to fight a heavyweight. But as your class grows, and from six you go to eighteen or twenty-four blooms, then La France finds an honoured place or would until recently.

What the grower really wants to have is a list or lists of varieties of Roses suitable for certain conditions and arranged in order of merit. It cannot be done; I am sorry, good reader, but even knowing the possibilities of a Rose, I should not know your garden, and one variety might do badly where another would do well.

I will, however, give you lists of some of the best varieties compiled from personal experience and accepted trade opinions as to their worth for the varied uses required.

If my selections omit Roses of note and include varieties less known, it is because I have given my readers names of Roses I know to be good and on which they can rely. With the confidence of an old exhibitor and a judge at many of our shows, I feel that, armed with perfect blooms of the varieties I have selected, I would meet all comers and never fear them being outclassed by even the latest novelties for many years. Fashions may change and tastes may alter, but good Roses die hard; and I venture to predict that most of those selected will contest their position in the Rose world for the best part of a century. If

others take their place through honest worth, happy the grower and happy the garden that sees the improvement.

ROSES FOR WALLS

There are two kinds of walls to consider: (1) the walls of the dwelling-house; (2) the walls of the garden. For the walls of the house should be chosen Roses of free climbing habit, but not of the rambling class. You might, if you wished, have ramblers on the ordinary garden wall, but you will have a great deal of trouble in training and keeping them tidy and they will never seem quite in keeping somehow. Wherever possible I consider that all wall space should be devoted to Roses of the exhibition class, and ramblers and rampant climbers should be left to cover arches and fences. However, since some walls are hard to clothe, such as a north or east wall, I have included in the lists the Roses that do best, irrespective of their class.

Climbers for North and East Walls, etc.

| | |
|--|--|
| Lady Waterlow (salmon). | Paul's Scarlet Climber (vivid scarlet). |
| Bennett's Seedling (cream). | |
| Dundee Rambler (white and pink). | Mrs. Arthur Curtiss James (golden yellow). |
| Gloire de Dijon (salmon). | Silver Moon (creamy white). |
| Zephyrine Drouhin (rose). | Dr. W. Van Fleet (soft pink). |
| Cl. Caroline Testout (pink). | Madame Gregoire Staechelin (carmine and pink). |
| Conrad Ferdinand Meyer (pink). | Clg. Paul Lede (rose shaded yellow). |
| Cl. Gruss an Teplitz (crimson). | Clg. Madame Abel Chatenay (salmon and carmine rose). |
| Madame Alfred Carrière (white). | |
| William Allen Richardson (apricot-yellow). | |

Ramblers for North and East Walls, etc.

| | |
|-------------------------------|-----------------------------|
| Alberic Barbier (cream). | Thelma (coral pink). |
| Tausendschön (pink). | Crimson Conquest (crimson). |
| Félicité-et-Perpétue (cream). | Blush Rambler (soft blush). |

Climbers for South and West Walls, etc.

| | |
|--|---|
| Alister Stella Gray (yellow). | Lady Waterlow (salmon blush). |
| Cl. Château de Clos Vougeot (crimson). | Clg. Cramoisie Supérieure (deep crimson). |

- | | |
|---|---|
| Cl. Irish Fireflame (orange and crimson). | Clg. Souvenir de la Malmaison (soft pink). |
| Maréchal Niel (orange-yellow). | Homere (T.) (bright pink). |
| Fortune's Yellow (orange). | Paul's Lemon Pillar (sulphur-yellow). |
| Sinica Anemone (silver-pink). | Gruss an Teplitz (crimson). |
| Madame Isaac Pereire (pink). | Chaplin's Pink Climber (pink). |
| Allen Chandler (scarlet). | William Allen Richardson (apricot yellow). |
| Paul's Scarlet Climber (scarlet). | Clg. Lady Hillingdon (apricot yellow). |
| Cl. Etoile de Hollande (dark red). | Clg. Lady Sylvia (rose pink). |
| Cl. Shot Silk (cherry). | Mary Wallace (rose pink). |
| Madame Gregoire Staechelin (pearl pink). | Thelma (coral pink). |
| Cl. Frau Karl Druschki (white). | Clg. La France (silvery pink). |
| Cl. Madame Edouard Herriot (coral-red). | Bourbon Queen (deep rose). |
| Souvenir de Claudius Denoyel (crimson). | Gloire de Rosomanes (China) (bright crimson). |
| Mermaid (sulphur). | Mrs. Paul (Bourbon) (deep blush). |
| Cl. Golden Emblem (yellow). | |
| Cl. Madame Butterfly (salmon). | |

(Varieties listed for North and East walls will also thrive on South and West walls, etc.)

Ramblers for South and West Walls, etc.

- | | |
|---|--|
| Albertine (coppery pink). | Lady Godiva (blush). |
| American Pillar (pink, white eye). | Mary Wallace (pink and salmon). |
| New Dawn (pale pink). | Sanders' White. |
| Emily Gray (yellow). | Tea Rambler (salmon). |
| The Garland (fawn). | Minnehaha (deep pink). |
| Excelsa (crimson). | Leontine Gervaise (yellow and salmon). |
| Dr. W. Van Fleet (pink). | Snowflake (white). |
| Hiawatha (crimson, white eye). | Mary Hicks (scarlet). |
| Phyllis Bide (gold and pink). | François Juranville (salmon pink). |
| Dorothy Perkins (pink). | Blush Rambler (blush). |
| Blush Rambler (blush pink). | Paul Transon (saffron yellow). |
| Chaplin's Pink Climber. | Gerbe Rose (silvery rose). |
| Easlea's Golden Rambler (yellow and crimson). | |

(Varieties listed for North and East positions will also thrive on South and West walls, etc.)

CHARMING WAYS OF GROWING ROSES



Copyright Photo.

BEAUTY OF THE PERGOLA

Pergolas covered with roses are always attractive, whether the pergola itself be of an ornamental nature or, as in this example, simply a series of plain uprights linked with rope along which the rose growths are trained.



Photo: R. A. Malby.

THE SUNKEN GARDEN

The sunken garden enclosed by low stone walls is particularly pleasing when filled with the smaller types of bedding roses.



Photo: R. A. Malby.

ROSE BORDERS

There could be few more delightful features than a long border filled, as here, entirely with roses. They harmonize perfectly with whatever other flowers may be grown anywhere near them.

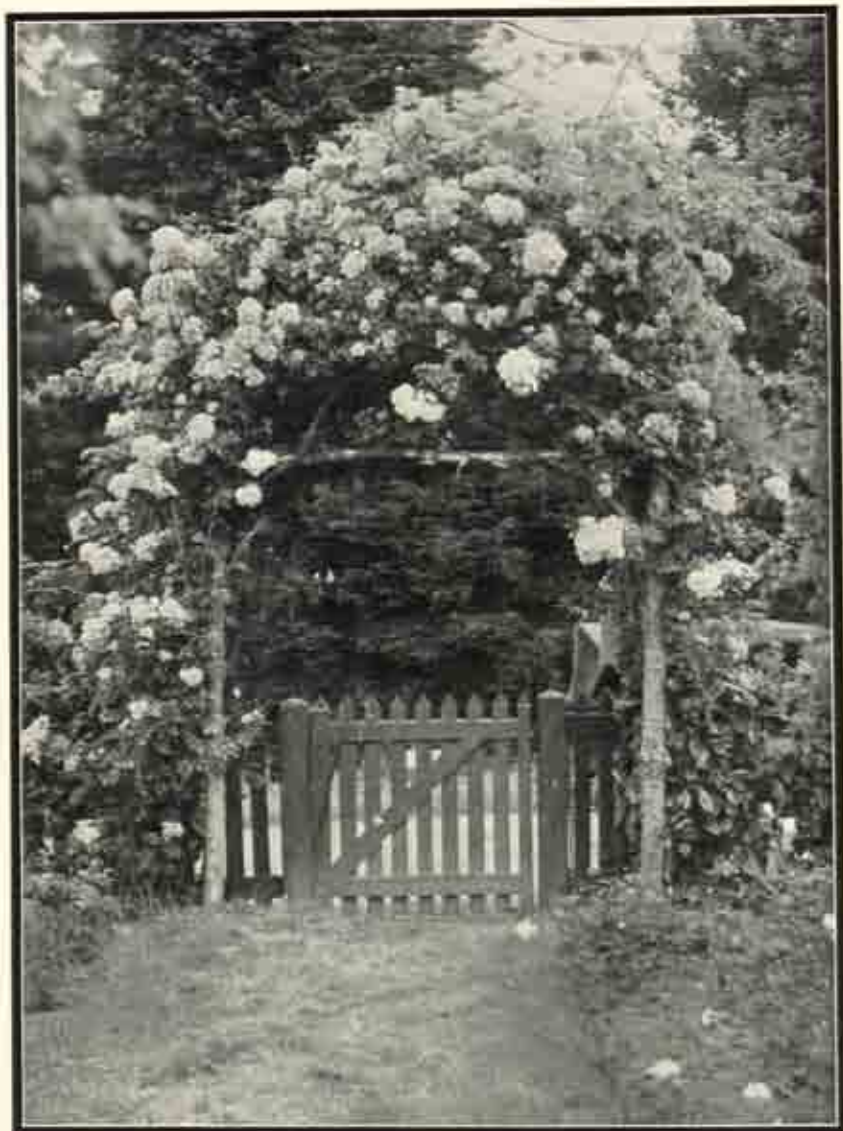
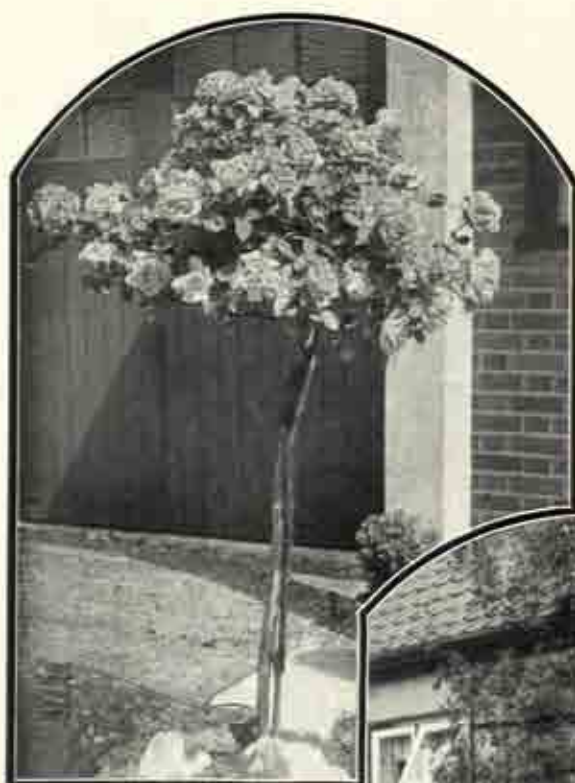


Photo: E. A. Malby.

OVER THE GARDEN GATE

A vigorous grower, like the American Pillar seen here, is most desirable for this purpose. The clean, glossy foliage of this variety makes it attractive even when there are no blooms.



GRACEFUL STANDARDS

For those focal points about the garden where something distinctive is needed there could be no better choice than standard roses. Besides their attraction of form and richness of colouring they take off the flatness which tends to mar so many gardens.

FOR THE HOUSE WALLS

A lattice simply made from builders' laths and treated with wood preservatives or green paint will provide support for roses grown against house walls. Careful choice of colour is necessary, especially where the house walls are of strong-coloured brick.



Photos: Copyright

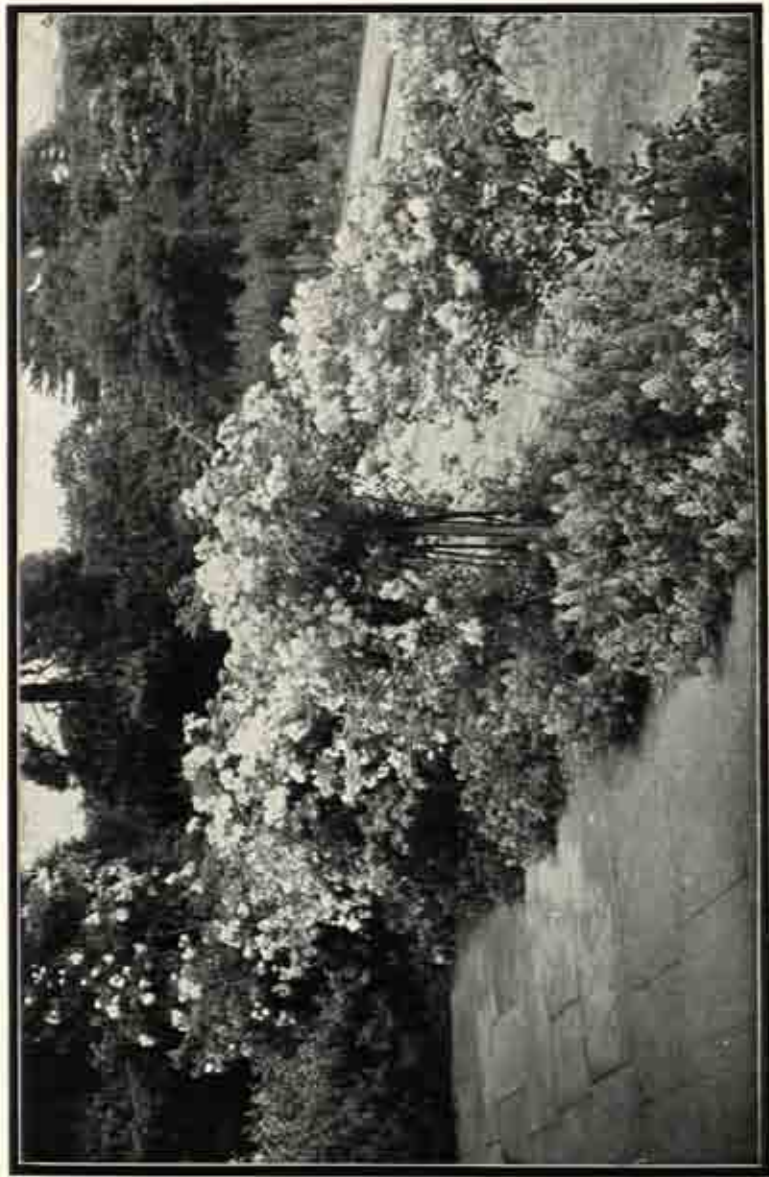


Photo: R. A. Malby

COLOURFUL HEDGES

Here rambler roses are trained along chains to form a hedge, and very pleasing is the result. Many other types of roses—Sweet Briars, Rugosas, China Roses and even Hybrid Teas—will make fine hedges.

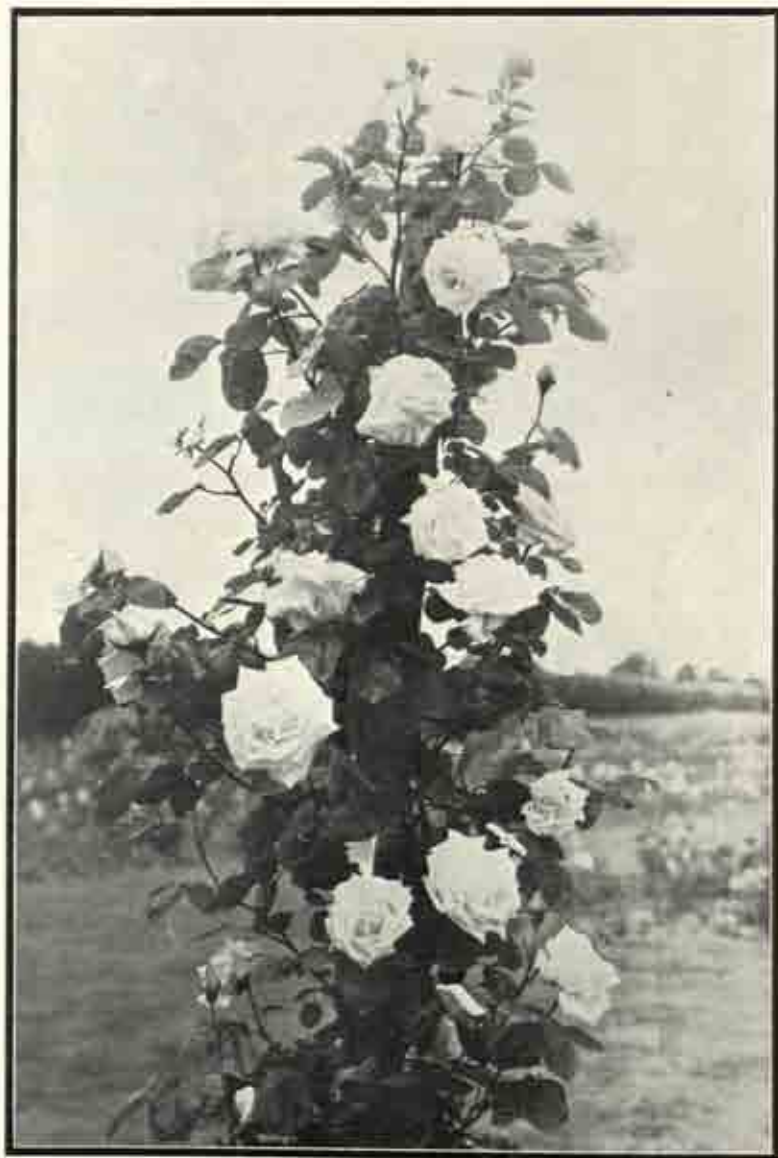


Photo: R. A. Mailey.

FOR PILLAR WORK

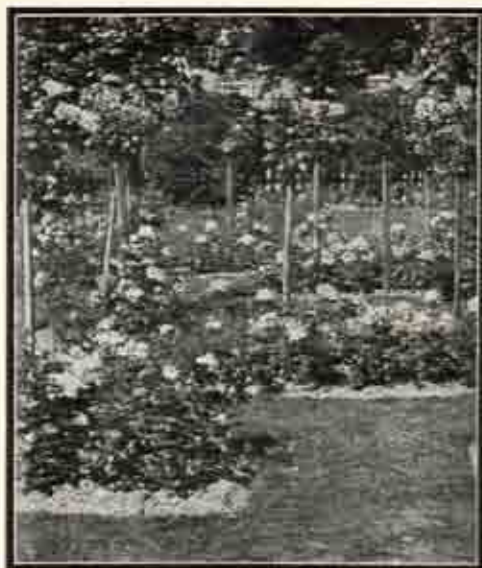
For an isolated pillar a rose like the handsome Lemon Pillar seen here is ideal. Its rich sulphur-yellow flowers are freely produced and the growth is vigorous.



Photo R. A. Malley.

MASSSES OF COLOUR

An alternative for pillar work, to make a big splash of colour, is a Multiflora Rambler such as the Blush Rambler here depicted. The large clusters of flowers are very fragrant.



AMID THE TURF

The cool, fresh green of the lawn provides the perfect setting for roses. That is why beds cut in the turf and borders flanked by turf are always so delightful. Even the smallest lawn offers opportunity for at least a bed of two, or length of border. In the larger garden there can, of course, be a "pattern" of beds, a long sweep of border.

Photos: R. A. Malby.





MELLOW BRICKWORK

Reference has already been made to the charm of a pergola, however simple. Here is something more elaborate, of stout timbers and mellow bricks. Different rose varieties, harmonizing and contrasting with each other and the brickwork, make this a striking feature.

Photo R. A. Malby.



Copyright Photo.

ROSES, ROSES EVERYWHERE

A scene in one of London's parks showing the magnificent effect which can be obtained by the lavish use of roses of different kinds.



Photo R. A. Mabey.

A ROSE-LOVER'S GARDEN

Showing the result of using roses exclusively for the filling of a small suburban garden. At the height of the season there is a feast of colour, and lovely is the fragrance.

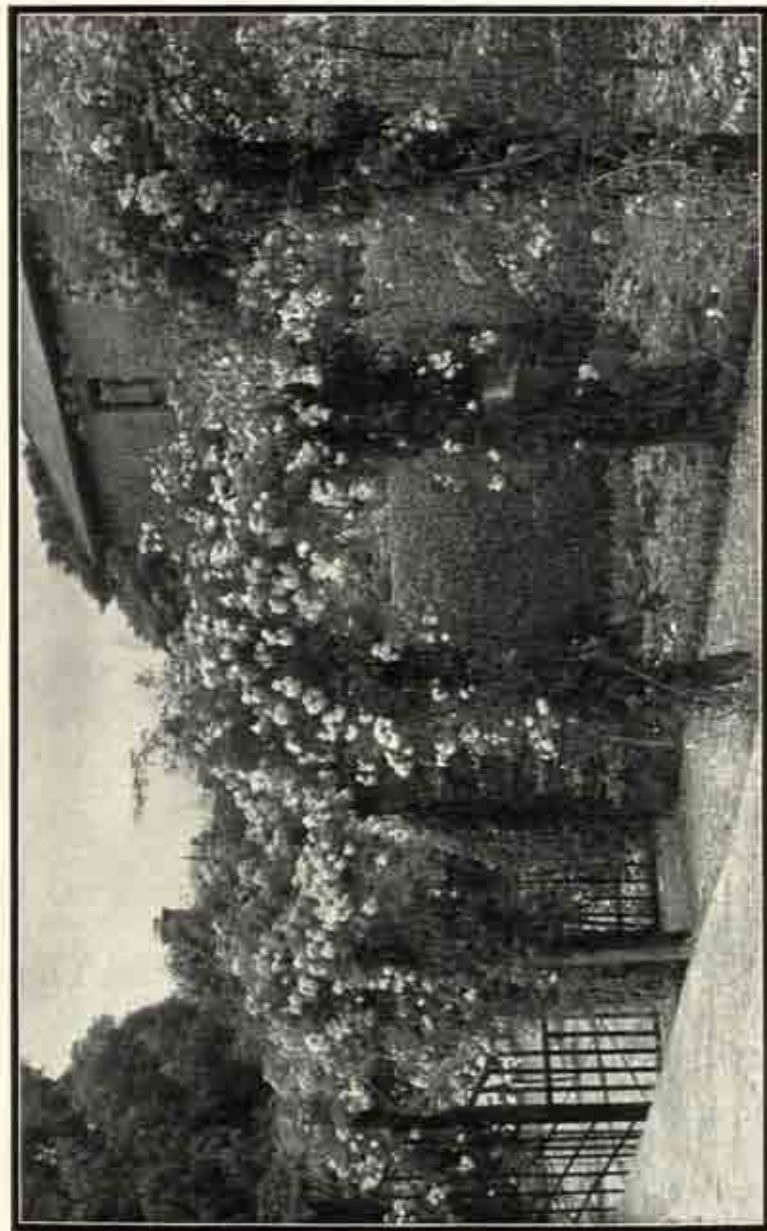


Photo: R. A. Mabey.

ROSE-CLAD ARCHWAYS

This feature consists of a series of rustic arches covered with brightly coloured ramblers. A different variety is planted against each arch,

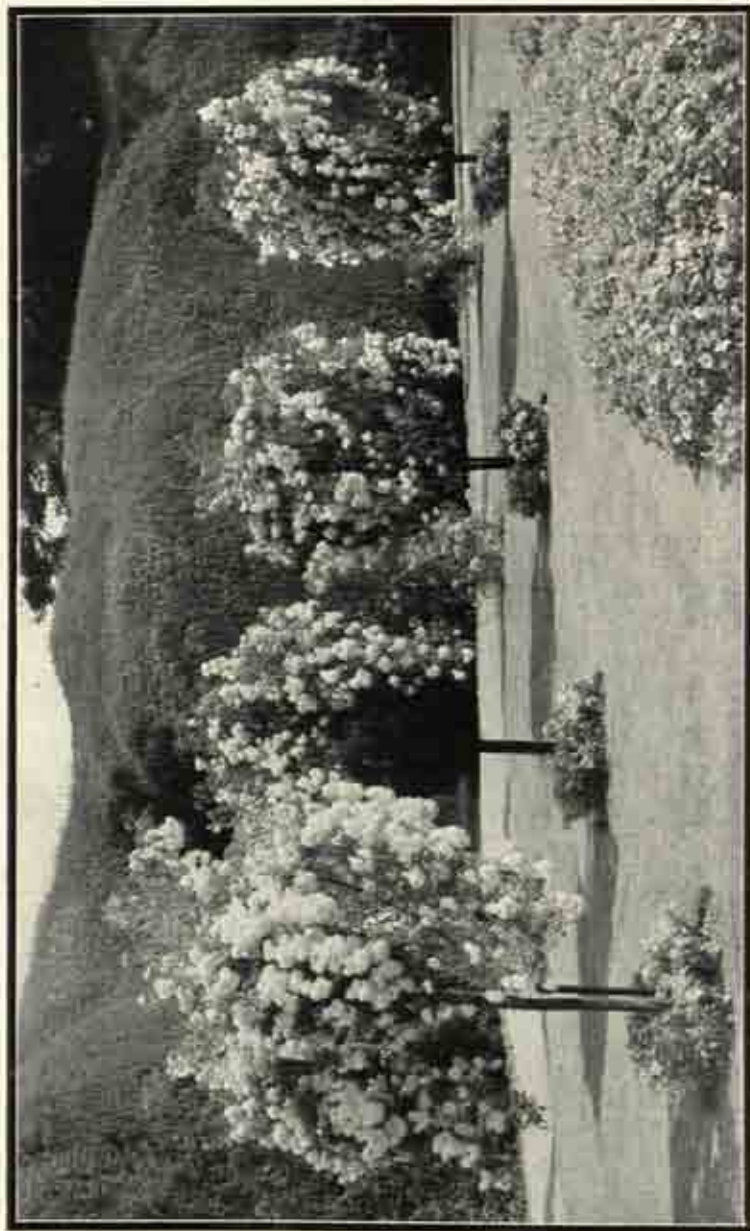


Photo: R. A. Malby.

TRAINED WEEPING STANDARDS

Weeping standards are not seen so often now, but when skilfully trained they are striking in the extreme. These fine specimens show up to perfection against the massed green of the hedge.

CLIMBERS FOR PILLARS

Pillar Roses are Roses grown up tall rustic poles. They are frequently planted in Rose beds and occasionally in borders and also beds which are formally bedded out for summer.

It is not generally realized that there are two distinct sections of climbers, the one very vigorous, the other less free in its growth. The former cover a wall or fence as quickly as a rambler would and therefore would prove something of an embarrassment when trained to a pillar. For pillars, then, we choose the less vigorous group.

The following is a good selection from the latter:

| <i>Shady Positions</i> | |
|--|--|
| Cl. Paul Lédé (yellow and carmine). | Souvenir de Claudius Denoyel (crimson red). |
| Cl. La France (silvery pink). | Clg. Cramoisie Supérieure (China) (deep red). |
| Chaplin's Pink Climber (pink). | Zephyrine Drouchin (silvery pink). |
| Clg. Golden Emblem (yellow). | Madame Gregoire Staechelin (pink and carmine). |
| Allen Chandler (scarlet). | Mrs. Arthur Curtiss James (yellow). |
| Madame Alfred Carrière (white). | Clg. Madame Edouard Herriot (terra cotta). |
| Clg. Souvenir de la Malmaison (blush). | Lady Waterlow (salmon blush). |
| Gruss an Teplitz (crimson). | Florence Haswell Veitch (scarlet). |
| | Lemon Pillar (sulphur). |
| <i>Sunny Positions.</i> | |
| Cl. Madame Butterfly (salmon). | |

RAMBLERS FOR PILLARS

Though climbers are generally planted as pillar Roses, a small selection of Rambler Roses are equally suitable for the purpose, not being so vigorous that they overrun their allotted space and making up for their weaker growth by flowering right from the bottom to the top.

The following are good pillar Ramblers:

| | |
|--|----------------------------------|
| Mary Wallace (pink). | Mermaid (yellow). |
| Mary Hicks (deep scarlet). | Crimson Conquest (crimson). |
| Dr. W. Van Fleet (pink). | Phyllis Bide (gold and carmine). |
| François Juranville (coppery salmon pink). | Thelma (coral pink). |

ROSES FOR PERGOLAS, ARCHES, ETC.

The Roses that are useful for pergolas are equally useful for arches. The usual method is to clothe arches and pergolas with Ramblers alone, but I confess to a preference for a combination of Climbers and Ramblers. With pergolas especially, the effect is very charming when a Climber is trained up, say, alternate uprights or every third upright, Ramblers being planned against the remaining uprights. With arches you may like the effect, as I do, of a good Climber on one side and a Rambler on the other.

Where it is decided to use Climbers a selection can be made from the pillar Roses already named. Of Ramblers I give preference, for arches and pergolas, to the following:

| | |
|------------------------------------|-------------------------------------|
| Easlea's Golden Rambler. | Thelma (pale pink). |
| Hiawatha (crimson, white eye). | Sanders' White. |
| Dorothy Perkins (pink). | Excelsa (red). |
| Albéric Barbier (creamy white). | Crimson Conquest. |
| American Pillar (pink, white eye). | Mary Wallace (pink and salmon). |
| Albertine (coppery pink). | Mrs. Arthur Curtiss James (yellow). |
| Chaplin's Pink Climber. | New Dawn (pale pink). |

ROSES FOR WEEPING STANDARDS

Most of the Wichuraiana Ramblers make fine weeping standards. Budded on to a seven-, eight- or nine-foot briar, they trail right down to the ground a mass of bloom.

In giving the following varieties, I would point out that although each variety will do well as a weeping standard, yet so will others of a like character:

| | |
|------------------------------------|---------------------------------|
| Excelsa (red). | Dorothy Perkins (pink). |
| Emily Gray (yellow). | Minnehaha (deep pink). |
| Chaplin's Pink. | Hiawatha (crimson). |
| Lady Godiva (pale pink). | Sanders' White (white). |
| Albertine (salmon and copper). | Albéric Barbier (creamy white). |
| American Pillar (pink, white eye). | |

ROSES FOR STANDARDS

The Rose garden would not be perfect without its standard or half-standard Rose trees; it would lose half its beauty did we take away those slender stems that support such a wealth of

bloom above the dwarf trees. To be able to look into the growing Rose without stooping down, to smell it and touch it, is indeed a pleasure. Many Roses, too, hang their heads, and it takes a standard tree to set off their charms.

The following varieties have particular merit as standards:

| | |
|--------------------------------|--------------------------------|
| McGredy's Ivory. | Picture (pink). |
| Mrs. A. R. Barraclough | Sir Henry Segrave (primrose). |
| (pink). | Mrs. G. A. Van Rossem |
| Margaret Dickson Hamill | (orange). |
| (straw). | Mrs. Henry Bowles (pink). |
| Barbara Richards (maize). | Etoile de Hollande (dark red). |
| Duchess of Atholl (coppery | Crimson Glory (velvety |
| pink). | crimson). |
| Ophelia (salmon). | McGredy's Yellow (yellow). |
| Southport (scarlet). | Caroline Testout (pink). |
| Hugh Dickson (crimson). | The Doctor (silvery rose). |
| Frau Karl Druschki (white). | Shot Silk (orange-rose and |
| Betty Uprichard (coppery | yellow). |
| pink). | Lady Sylvia (flesh pink). |
| Golden Emblem. | President Hoover (orange |
| Madame Butterfly (salmon). | and gold). |
| Mrs. Sam McGredy (orange). | Madame Edouard Herriot |
| Edith Nellie Perkins (cerise). | (terra cotta). |
| Golden Dawn (yellow). | Emma Wright (orange). |

ROSES TO GROW IN SHRUBBERIES

Many Roses are now regarded as being ideal for growing in the form of flowering shrubs, and as such they are splendid ornaments in gardens where the necessary space can be found for them. They must have ample room for development. Any of the strong-growing Hybrid Teas such as Betty Uprichard, Caroline Testout, Elizabeth of York, Mrs. Sam McGredy, and Mrs. Wemyss Quin, will make stately bushes if allowed to grow. The single Hybrid Tea Roses Isobel, Dainty Maid, and Irish Elegance, for example, are also splendid. The Hybrid Polyanthas such as Else Poulsen, Kirsten Poulsen Improved, Karen Poulsen and Salmon Spray, are ideal for such work and form large spectacular bushes smothered with flowers. Then we have a big selection amongst the species—*Rosa Moyesii* for example. The old Moss Roses always do best when cultivated as big bushes with as little pruning as possible, and the Alba Rose, of which Alba plena, Maiden's Blush, and the sweet old Celestial

Rose are examples, make charming shrubs. The old Cabbage Rose is also fine in shrub form. The following is a good selection:

| | |
|--|--|
| Hugh Dickson (crimson). | Cornelia (Musk) (strawberry flushed yellow). |
| Caroline Testout (pink). | Vanity (Musk) (rose pink). |
| Betty Uprichard (orange pink). | Sammy (Musk) (carmine). |
| Elizabeth of York (cerise and orange). | Mermaid (soft yellow). |
| Mrs. Wemyss Quin (yellow). | Fellenberg (China) (crimson). |
| Isobel (single carmine pink). | <i>Rosa Moyesii</i> (ruby crimson). |
| Mrs. Sam McGredy (coppery orange). | And of species: |
| Souvenir de la Malmaison (blush). | Hermosa (China) (crimson). |
| Rose à Parfum de l'Hay (deep crimson). | <i>Rosa Hugonis</i> (yellow). |
| | <i>Rosa Andersonii</i> (pink). |
| | <i>Rosa Willmottiae</i> (rose purple with charming foliage). |
| | <i>Rosa macrantha</i> (white and rose). |

ROSES TO TRAIN UP SHRUBS

A very delightful picture results when Rambler Roses are allowed to thread themselves through shrubs such as holly and laurel. These are good varieties for the purpose:

| | |
|--|--------------------------------------|
| <i>Rosa moschata floribunda</i> (white). | <i>Rosa macrophylla</i> (rosy red). |
| <i>Rosa moschata himalayica</i> (white tinged pink). | American Pillar (crimson and white). |
| <i>Rosa Russelliana</i> (pale blush). | Silver Moon (creamy white). |

SELECTED POLYANTHA ROSES

The Polyantha Roses are now divided into two distinct classes, Dwarf Polyanthas and Hybrid Polyanthas. The dwarf sorts, with their clusters of small flowers which are borne in great profusion, are ideal for bedding, especially so where Roses of dwarf character are required. The Hybrid Polyanthas are much taller in growth—in fact, such kinds as Else Poulsen and Kirsten Poulsen can be grown up to six feet in height if required—and have larger flowers in huge bouquets. They have become very popular as they make splendid bushes smothered in blossom all through the season. They rival the best of the Hybrid Teas for bedding and massing. The following sorts are considered to be the best for the average garden.

Small-flowered

Paul Crampel (deep orange red).
 Cameo (flesh pink).
 Golden Salmon Superior (coral salmon).
 Little Dorrit (coral salmon).
 Ellen Poulsen (cherry rose).
 Gloria Mundi (rich orange).
 Coral Cluster (coral pink).
 Edith Cavell (crimson).
 Ideal (dark scarlet).
 Ebouissant (dark crimson).
 Josephine Wheatcroft (yellow).

Large-flowered

Karen Poulsen (vivid scarlet).
 Donald Prior (crimson scarlet).
 Dainty Maid (carmine and white).
 Orange Triumph (orange scarlet).
 Else Poulsen (rose pink).
 Anne Poulsen (crimson).
 Betty Prior (pale pink).
 Van Nes (cochineal carmine).
 Salmon Spray (salmon pink).
 Poulsen's Yellow (yellow).
 Golden Polyantha (deep yellow).
 Dusky Maiden (dark red).
 Poulsen's Pink (pink).

ROSES FOR FRAGRANCE

Crimson Glory (velvety crimson).
 Etoile de Hollande (dark red).
 Dame Edith Ellen (pink).
 The Doctor (silvery rose).
 General McArthur (scarlet crimson).
 Barbara Richards (maize and rose).
 Madame Butterfly (pink and apricot).

Portadown Fragrance (orange, pink and scarlet).
 Lady Forteviot (golden yellow and apricot).
 Rose à Parfum de l'Hay (crimson).
 Shot Silk (orange rose and yellow).
 President Hoover (orange and gold).

ROSES FOR PEGGING DOWN

There are a few Roses that will bloom more profusely if their branches are bent back and pegged down. The effect is a very pretty one, and often, where there is a blank space in a border, this method has helped to fill it for the season. The most suitable Roses for this purpose are Roses with habit of growth similar to:

Gruss an Teplitz
 Frau Karl Druschki.
 George Dickson.

Zephyrine Droughin.
 Madame Jules Gravereaux.
 Hugh Dickson.

ROSES FOR COVERING BANKS

Most of the Wichuraianas do well for covering banks and old tree stumps, and these being very hardy can be planted anywhere. A good selection of Roses for this purpose is the following:

| | |
|------------------------|------------------------------|
| Albéric Barbier. | Chaplin's Pink Climber |
| Dorothy Perkins. | (soft pink). |
| Sanders' White Rambler | The New Dawn (flesh). |
| (white). | François Juranville (coppery |
| Excelsa (crimson). | salmon pink). |
| Minnehaha (deep pink). | |

ROSES FOR BUTTONHOLES

For buttonhole purposes you need a Rose having a tapering bud, which will remain fresh for the longest possible period. The following possess these attributes:

| | |
|---------------------------|----------------------------|
| Lady Pirrie (salmon). | Mrs. Sam McGredy (orange |
| Clarice Goodacre (cream). | and red). |
| Marcia Stanhope (white). | Golden Dawn (yellow). |
| Lady Sylvia (flesh pink). | Picture (rose pink). |
| Etoile de Hollande (dark | Emma Wright (orange). |
| crimson). | Southport (vivid scarlet). |

GOOD SINGLE ROSES

The single Roses are a truly lovely class, vivid in their colouring, very free in flowering. Mostly varieties with a good deal of Hybrid Tea blood in them, they possess but five to fifteen petals only. This means that they open with a distinct eye, revealing a central boss of lovely golden stamens. There is not a touch of starchiness about them; sheer elegance is their principal charm.

One warning may be given about the singles: they do not show at their best when mixed with the doubles.

Here are a few of the most dependable varieties:

| | |
|-------------------------------|-----------------------------|
| Isobel (pink flushed orange). | Bill Boy (yellow). |
| Irish Elegance (bronze and | Irish Fireflame (orange and |
| apricot). | crimson). |
| Dazla (orange). | Innocence (white). |
| Dainty Bess (pink). | Vesuvius (velvety crimson). |

GOOD ROSES FOR BEDDING

It is indeed a thankless task to attempt to recommend Rose varieties for Rose beds. Turn to any modern catalogue, pick varieties from it at random and, provided you have blended your colours properly when planting, you will still have a delightful show. The truth is that every modern bush Rose has something to commend it.

What can be said of the following list is that it includes only varieties of exceptional beauty.

Orange and Copper

- Emma Wright (clear orange).
 Mrs. G. A. Van Rossem
 (shaded orange).
 Sir Henry Segrave (yellow,
 deeper base).
 Betty Uprichard (carmine,
 coppery sheen, suffusion of
 orange).
 Mrs. Sam McGredy (coppery
 orange).
 Duchess of Atholl (coppery
 orange and rose).
 Katherine Pechtold (old gold
 and copper).

- Golden Gleam (brilliant
 colour).
 Florence L. Izzard (richly
 scented).
 Mrs. Wemyss Quin (nice
 form).
 Phyllis Gold (magnificent
 introduction).
 McGredy's Yellow (bright
 yellow).
 Christine (golden yellow).
 Golden Emblem (golden
 yellow).
 Sir Henry Segrave (primrose
 yellow).

White

- Mrs. Herbert Stevens (a Tea).
 Marcia Stanhope (hardy
 constitution).
 Madame Jules Bouche
 (creamy white).
 Margaret Ann Baxter (snow
 white).

Yellow

- Mabel Morse (deep yellow).
 Margaret Dickson Hamill
 (carmine on back of petals).
 Golden Dawn (sunflower
 yellow).

Crimson

- Etoile de Hollande (rich red).
 J. C. Thornton (ruby scarlet).
 Crimson Glory (velvety
 crimson).
 W. E. Chaplin (deep crimson).
 Miss C. E. van Rossem (dark
 red).

Scarlet

- McGredy's Scarlet (glows
 like fire).
 Southport (largest scarlet
 Rose).
 Anna Neagle (bright red).
 Gerald Hardy (scarlet red).

Pink

Dame Edith Helen (fine perfume).
 Caroline Testout (old, still good).
 The Doctor (silvery rose).
 Mrs. Henry Bowles (rich rose).
 Lal (salmon pink).
 McGredy's Pink (rose pink).
 Home Sweet Home (pink).
 Picture (rose pink).
 Madame Butterfly (pink and apricot).

Art Shades

McGredy's Peach (yellow and salmon).
 Lady Sylvia (pink and apricot).
 Lady Forteviot (yellow and apricot).
 Talisman (scarlet and gold).
 The Princess Elizabeth (orange yellow splashed cerise).
 President Hoover (cerise and coppery red).
 Mrs. G. A. van Rossem (yellow, orange and red).
 Madame J. Perraud (orange and pink).
 Autumn (apricot, gold and red).

ROSES FOR EXHIBITING

In making a selection of the best Roses for exhibiting, I feel that I shall not be able to please, for there are so many varieties, both old and new, to select from, and it is doubtful if any two exhibitors would think alike. However, I present my selection for the grower with every confidence, feeling that although many Roses may be found of equal merit, yet few can be chosen that will in any way prove of greater worth.

For a Collection of Twelve.

| | |
|---|--|
| Barbara Richards (maize). | Mrs. Chas. Lamplough (lemon). |
| Dame Edith Helen (pink). | Mrs. Henry Bowles (pink flushed salmon). |
| Earl Haig (crimson). | Mrs. Sam McGredy (coppery orange). |
| George Dickson (crimson). | President Charles Hain (yellow). |
| Golden Dawn (yellow). | W. E. Chaplin (crimson). |
| McGredy's Ivory (cream). | |
| Mrs. A. R. Barraclough (pink and yellow). | |

For a Collection of Twenty-four.

| | |
|---------------------------|--------------------------|
| Barbara Richards (maize). | Golden Dawn (yellow). |
| Earl Haig (crimson). | Julien Potin (primrose). |
| George Dickson (crimson). | Lal (salmon-pink). |

| | |
|---|--------------------------------------|
| McGredy's Ivory (cream). | The Doctor (silvery rose). |
| McGredy's Yellow (buttercup). | Crimson Glory (deep crimson). |
| Mrs. A. R. Barraclough (pink and yellow). | Margaret Anne Baxter (white). |
| Mrs. Chas. Lamplough (lemon). | Rex Anderson (cream and gold). |
| Mrs. Henry Bowles (pink flushed salmon). | William Moore (deep pink). |
| Mrs. Sam McGredy (coppery orange). | Glory of Rome (crimson scarlet). |
| Phyllis Gold (yellow). | Percy Izzard (cream shaded yellow). |
| President Charles Hain (yellow). | Directeur Guerin (cream and orange). |
| W. E. Chaplin (crimson). | Dr. Chandler (scarlet). |

ROSES FOR SUBURBAN GARDENS

Some of the most beautiful Roses I have ever seen have been grown in suburban gardens, and it is absurd to decree that Roses cannot be grown in the environment of large cities. Of course certain varieties, being of a more hardy constitution, will do better than others, and in making a selection I would choose those that are most free from attacks of Mildew.

I give a list of varieties for the small grower who has little time to spare for gardening, and these have been well tried and proved, and under trying conditions have done well, but the list can be enlarged, and in doing so the grower should take great care that only free flowering and vigorous kinds be selected.

Dwarf Rose Trees

| | |
|-----------------------|--------------------------------------|
| Caroline Testout. | Talisman. |
| Betty Uprichard. | Mrs. Sam McGredy. |
| Duchess of Atholl. | Mrs. Henry Bowles. |
| Mme. Edouard Herriot. | Violinista Costa (scarlet and gold). |
| Gruss an Teplitz. | Comtesse Vandal (copper and pink). |
| Edith Nellie Perkins. | Margaret Anne Baxter (white). |
| Etoile de Hollande. | Crimson Glory (velvety crimson). |
| Hugh Dickson. | Southport (scarlet). |
| Dame Edith Helen. | Lal (salmon pink). |
| Golden Dawn. | |
| Lady Sylvia. | |
| Mrs. Wemyss Quin. | |
| Polly. | |

Standards

Mrs. Henry Bowles.
 Caroline Testout (rich pink).
 Crimson Glory (crimson).
 Mrs. Van Rossem (orange
 apricot).

Pillars

Allen Chandler.
 Chaplin's Pink Climber
 (pink).
 Paul's Lemon Pillar (soft
 lemon).

Ramblers

American Pillar.
 Crimson Conquest.
 Paul's Scarlet Climber.
 Albéric Barbier.
 Excelsa.
 The New Dawn.
 Minnehaha (deep pink).
 Mermaid (sulphur yellow).
 Sanders' White (white).

ROSES FOR CULTURE UNDER GLASS

I have dealt with the growing of Roses under glass in another chapter, so that beyond giving a list of varieties suitable for pot culture, and also a list of climbing varieties that do well under glass, I need add little upon the subject here.

Bush Roses for Growing in Pots.

| | |
|---|--|
| Lady Hillingdon (apricot). | Mrs. Herbert Stevens (white and fawn). |
| Ophelia (salmon). | Katherine Pechtold (old gold flushed rose). |
| Roselandia (cream and apricot). | Crimson Glory (deep crimson). |
| Lady Sylvia (pink). | Picture (rose pink). |
| Barbara Richards (maize). | |
| Madame Butterfly (pink and apricot). | |

Climbing Roses for Greenhouse Borders.

| | |
|---------------------------------------|---|
| Maréchal Niel (butter yellow). | Cl. Etoile de Hollande (deep crimson). |
| Cl. Niphétor (white). | Cl. Dame Edith Helen (pink). |
| Cl. Lady Sylvia (salmon and gold). | Cl. Liberty (velvety crimson). |

Polyantha Roses for Pot Culture.

| | |
|------------------------------|----------------------------|
| Gloria Mundi (orange-red). | Golden Salmon Superior |
| Coral Cluster (coral pink). | (salmon and orange). |
| Ideal (dark crimson). | Kersbergen (dark scarlet). |
| Perle D'Or (nankeen yellow). | |

LIST OF FRAGRANT ROSES

The following varieties have all been carefully selected for their sweet perfume. They are all suitable for cultivation in the ordinary way in gardens, and are all good for cutting.

- | | |
|--|--|
| Crimson Glory (deep velvety crimson). | Lady Sylvia (flesh pink, yellow base). |
| Etoile de Hollande (bright dark red). | Shot Silk (orange rose, shaded yellow). |
| Dame Edith Helen (pure glowing pink). | Dr. Chandler (scarlet). |
| General McArthur (bright scarlet crimson). | Portadown Fragrance (orange, salmon pink and scarlet). |
| Barbara Richards (maize yellow, flushed rose). | Golden Dawn (pale lemon yellow). |
| Madame Butterfly (pink, shaded apricot). | Lady Forteviot (golden yellow, shaded apricot). |



ORDERING THE ROSES

NEARLY all the Rose nurserymen send out their Rose catalogues and price lists during September and it is advisable for those who require new trees to make up and send off their order for them as soon after as possible. Early ordering means that one can be sure that all the varieties required will be in stock and will be dispatched in due course. When ordering is postponed there is always the chance that one's nurseryman may have sold out of some much-wanted Rose.

When the order should actually be dispatched, however, depends, of course, upon when planting can be done. It would be foolish to order trees in October, say, if the ground for them could not be got ready until February. The Rose-planting season extends from October to mid-March (though December and January are naturally awkward months with always the chance that the ground will be snow-covered or frost-bound) and the correct procedure is to place an order for Rose trees about a month before they will be required, the nurseryman being asked to deliver on a stipulated day or—if in mid-winter—as soon after that day as the weather permits him to lift the trees from his nursery.

In compiling the list of your requirements your first step, if you are a beginner, might be to go through some current catalogue and jot down the varieties whose colours appeal to you most. But if you have nothing more substantial than a batch of names to guide you, you are almost certain to make mistakes. For some reason or other one is liable to favour the most attractive names, but these are not always the most attractive Roses!

The fact is, successful Rose-buying is an art which is founded on some technical knowledge. It is to give you that knowledge that there has been inserted in this book a complete dictionary of all modern Roses, with descriptions which not only give their colour but also their class and characteristics. With the aid of the dictionary a satisfactory list of Roses to suit any purpose and situation can be drawn up.

Buying Bush Roses.—Let us assume that you desire to purchase bush Roses. There are five classes—Teas, Hybrid Teas, Hybrid Perpetuals, Hybrid Polyanthas, and Hybrid Musks. If your garden is at all exposed avoid the Teas. They are, however,

seldom offered to-day, and it is a pity for they are lovely Roses. They gained a reputation that is quite wrong, and when they are properly grown they are quite hardy. Errors of cultivation in the past, such as budding on incompatible stocks, are the cause of the neglect of the Tea Roses. The Hybrid Perpetuals are slowly going out of cultivation as they do not flower long enough for modern tastes. The Hybrid Polyanthas are a magnificent class and give a grand display of bloom over a long period. The beginner should make his choice from the Hybrid Teas and Hybrid Polyanthas. The Hybrid Musks are splendid for hedges as they make large bushes.

The Question of Stocks.—Ascertain, if possible, what stock the Roses are budded on. If they are on Briar or Laxa, they are on the best stocks going. They maintain health, vigour, and long life in the variety. The Manetti stock is not so good. Roses on this stock flourish well for a year or two, but after that they are liable to collapse.

Sometimes it is mentioned in a catalogue that the Roses are frequently transplanted stock. In this case you can be sure that the bushes will take hold readily after planting. Frequent transplanting encourages the free formation of small fibrous roots, the very life-blood of a Rose. A nurseryman who has worked on the progressive lines will gladly lift a sample bush and show you the root system. If this consists of three or four strong roots and a mass of fibres, there is a splendid Rose.

Avoid the bushes that make very weak and much-divided growth. These have not taken to the stock well, and will never be good Roses.

If you are able to visit a nursery and inspect before buying, choose Roses that have four or five fairly vigorous branches of equal length and strength and have, too, a strong fibrous root system.

Avoid the Continental stuff—not merely on grounds of patriotism but because you invariably run the risk of finding yourself with inferior plants and with plants which are not the varieties named on their labels.

It does not matter so much from which part of our own country the Roses come. Those from up north ought to be hardier, and possibly are. But those from the southern half of England are likely to be more vigorous and have better ripened wood. And ripe wood leads to hardiness. Irish Roses are quite reliable.

Climbers and Ramblers.—Perhaps you desire to cover some

arch, pergola, or wall. If so, choose from the *Wichuraiana*, *Polyantha*, or *Climbing* sections. For all practical purposes the two first-named can be regarded as one. They are the *Roses* of the *Excelsa* and *Dorothy Perkins* class, popularly known as *Ramblers*. Their flowers are always borne in clusters.

Climbing Roses are really a climbing edition of the bush *Roses*. Their flowers are similar in form and, though bigger than the *ramblers*, never occur in clusters. Neither is their growth so vigorous. If you want to clothe something quickly and thoroughly, *Ramblers* should be your choice.

Wichuraiana *Roses*, that is the *Dorothy Perkins* type, should never be grown on a wall; always select *Climbing Hybrid Tea* and similar sorts for such work. The appropriate lists contain the best kinds for walls and pergolas.

The Two Types of Standards.—Perhaps you require some *Standards*. Of these there are two types—weeping and upright, and though these terms practically explain themselves, you want to be quite sure. *Weeping Standards* are really *Ramblers* whose growths droop on all sides from $3\frac{1}{2}$ - to 6-ft. tall stems, whereas the flowers of upright *Standards* are like those of bush *Roses*. On looking at the names of varieties, you see that the same run through *Ramblers* and *Weepers*, and upright *Standards* and bush *Roses* respectively.

To be effective, *Weeping Standards* must have stems not less than $3\frac{1}{2}$ ft. high. If the stems are lower the growths simply trail along the ground and all their beauty is lost. It is only *Roses* of trailing growth such as *Excelsa* that are suitable for *Weeping Standards*. Sorts such as *Paul's Scarlet Climber*, which make upright growth, are quite useless for such work.

This affords an explanation of the statement that the nurseryman has budded his upright *Standards* on *Rugosa* or *Briar* stocks. You see, these *Roses* do not grow on their own roots. By a special process, growth buds from them are united with the roots and stem of a strong *Rose*—*Rugosa* or *Briar*. If you are assured that this partnership exists, you can buy with confidence. No such claim will be made on behalf of *Ramblers* and *Weeping Standards*. Unlike the other mentioned, they grow successfully on their own roots. Try to procure your *Standard Roses* on *Briar* stems. *Rugosa* is now very troublesome with disease.

Weeping Roses, trained to umbrella-like frames, are particularly suited to isolated positions on the lawn, at the centre of small beds; or along walk-sides they are delightful.

The upright *Standards* are ideal for the same purposes. They

can also be used with great effect as dot plants in beds of Hybrid Teas. Varieties in this section are taken from the Hybrid Teas.

The Polyanthas.—Dwarf Polyanthas are ideal bedding Roses, particularly for small beds. Really they are a dwarf type of the climbing Polyanthas, which means that on an 18-in. tall stem you get similar clusters to those of Rambler Roses.

When and How to Buy.—Having decided on the actual layout of your Rose beds or garden and carefully estimated the number of plants of each class you will require, send off your order to the nurseryman, writing very clearly and, as already mentioned, allowing a month between the sending off of the order and the time you wish to plant.

On no account have too big a delivery at one time, unless you have the hands to cope with the careful planting, staking, labelling, etc., that must be done. It is a bad plan to keep trees too long before planting, or to leave them tied up in the nursery bundles. I have seen large bundles of trees delivered, which, owing to frost and snow, could not be unpacked, and then, when the weather changed, heeled into trenches prior to planting so long that they lost their labels, and even started to root.



MANURES FOR ROSE BEDS

ROSES are gross feeders, and every Rose-grower who is desirous of being successful must study their likes in that respect.

Even if the soil is ever so good it will, unless the stores of nourishment are augmented, gradually become exhausted of all those properties so necessary to Rose life; while if the soil is poor the building up of the same will be an annual consideration. As to what manures to use, much depends upon what you can get. It is an easy matter for the man who keeps cattle and horses to obtain all that he requires, but not so for the suburban gardener who neither keeps a horse or pig, nor lives near a farm. Yet most difficulties can be overcome. Even the suburban gardener *can* usually get supplies of manure if he tries hard enough. And if he *really* cannot—well, there are always artificial manures to fall back upon.

Two Kinds of Manure.—If I divide up all manures under two headings, natural and artificial, I shall doubtless be better able successfully to deal with the subject. Under natural manures I would place farm-yard manures, such as that of the cow, pig, horse, and sheep; house manures, such as soot, the cesspool, and night soil; garden manures, such as leaf-mould, green refuse, burnt ash, and turf. Outside these come poultry manure, bone-meal, fish manure, guano, shoddy, etc. Under artificial manures we have a variety of compositions all containing in various quantities those ingredients so necessary for plant life, namely, Lime, Nitrogen, Phosphates, and Potash.

No matter what manure we use, a plant will only assimilate a certain quantity of those ingredients necessary for its well-being. If too much of any of its foods be given to it the results are disastrous. Like a greedy child, it will devour more than is good for it and suffer in consequence.

The earth, with its inexhaustible stores, is so ordered that seldom do we find in soils such an overplus of foods as to be detrimental to plant life; on the contrary, it is noticeable that for higher cultivation it is essential to increase the properties required, but there are limits, and enough is as much a feast as a feast is enough.

Technical books tell us—quite rightly, of course—that the



Photo. E. A. Malby

THE BISHOP

With its bright crimson-red blooms and true old rose fragrance this is a rose to include in every collection. Its growth is vigorous and it makes an excellent bedding variety.

nutritive value of manures varies according to the source. For instance, manure from cattle fed on cake and corn is of far greater value than that from hay- or grass-fed beasts. Even soot varies, while bone-meal and guano are hardly ever the same. Such matters need not concern the Rose-grower, however. The Rose, fortunately, is a plant of generous habits, possessing a constitution not easily upset, so that one need have no fear of a slight overdose doing much harm, even if it does not do any good.

The Needs of Various Soils.—In considering what manures we shall use and how much, it is necessary to take some stock of our soil. Fresh-broken land *may* be poor and need more manure than land that has been worked for many years, but, speaking generally, fresh-broken pasture land with a good depth of loam is usually rich to commence with and should need very little manure for a year or two. All it requires to bring it into perfect condition is to dig in stable or farm-yard manure. Let it be said here and now that in no case should any fresh manure be placed in contact with the roots of the newly planted tree.

Fresh-broken land, if poor, is better enriched with shoddy, bone-meal, soot, old stable manure, and the like, a similar point being made, when the trees are established, of feeding them from the surface.

Old garden land, as a rule, is rich in humus or decayed vegetable matter, but having been cropped heavily it is generally found to be lacking in many mineral ingredients so much required by the Rose. Lime is the best tonic that can be given to old and often sour land, and it is perfectly marvellous what a coating of lime will do for worn-out soil that has been overfed for years. In addition, a supply of rotted farm-yard or stable manure should be dug in.

So far I have mentioned farm-yard and stable manure as if one or other could be used at will. Actually, in some circumstances, one will be better than the other.

ANIMAL MANURES

Which is the Better—Farm-yard or Stable Manure?—Speaking generally, farm-yard manure (that is cow manure, pig manure, or a mixture of cow, pig, sheep, etc., manure) is the better for nearly all soils, having that "heaviness" which suits the Rose's requirements. On the other hand, I recommend stable manure for soils which are naturally on the heavy side.

Neither farm-yard, cow, nor stable manure should ever be

used fresh from the stable or byre for digging into the ground when preparing Rose beds. It must be well-rotted. Fresh manure—especially if any of it comes into contact with the roots—will cause rank growth and may even kill the Roses.

Fresh stable manure may be used as a *top-dressing* for a Rose bed when the Roses are growing, but to my way of thinking, being of a strawy nature, it is far too untidy and makes a Rose bed something of an eyesore.

The best condition in which to apply stable manure is when it has decomposed enough to cut with a spade. The manure which formed the bed for a garden frame, or the contents of last year's pit frame, is in an ideal state in which to apply it to the garden.

When one has a choice of either cow or pig manure I recommend—for all ordinary soils—cow manure, this because it is cool, and of a less fiery nature than pig manure, and is the soonest found in a suitable condition for application.

Sheep Manure.—What about sheep manure? I shall be asked. I do not recommend this for digging into the ground in preparation for planting Roses. Its proper use is in liquid form (a bag of it should be suspended in a tub of rain-water and the liquid drawn off as required, as advised in the chapter on "Feeding Roses"), when it is very valuable.

It is well worth while for all who have facilities to collect a supply of sheep manure when the ground and the manure are dry, place it in bags, and stand these under cover in a dry place.

Poultry Manure.—Poultry manure is another of the readily available manures which I do not recommend for digging into Rose beds-to-be. Its value comes in as a *top-dressing*. If it is stored under cover with about three times its bulk of sand or dry soil and is well mixed before use, it can be scattered over the Rose beds in June.

I would add this, however: Be sparing in its use, for it is very strong and rapid in its action. *Never* apply it "neat". Always, as already advised, mix it with soil or sand, or, if you like, with leaf-mould. Further, I would strongly advise that fowl manure be only used with well-established trees that are making big growth. Then scatter evenly over the surface of the soil and rake it in very lightly.

Pigeon Manure.—Pigeon manure is even stronger than fowl manure, and should only be sown over the surface, never dug in when preparing the bed. I once nearly killed a bed of fifty La France trees through too liberal an application of droppings from

a pigeon loft. It is, however, a fine fertilizer, especially for H.T.s, and if it can be secured there will be no need to buy artificials. However, it must be kept very dry, and not allowed to heat. Before applying it to the soil mix it with leaf-mould, soil, or sand, and scatter it evenly over the surface; do not fork, but rake it in very lightly. It is very rapid in its action, and a few days after a storm of rain its effects will be seen in the growth of your trees.

Guano.—All guano, which is bird deposit, should be treated in the same manner as pigeon manure, although it may be used more liberally, for no guano is as strong as pigeon manure. Guano is much older; often it is collected after many years' exposure to the elements. Some guano even has ceased to be of great value as a fertilizer, although it will ever retain many of its valuable plant properties.

SUBSTITUTES FOR ANIMAL MANURE

As I have already said, there is nothing to equal horse, cow, or pig manure for use in the preparation of Rose beds, and there are very few gardeners who definitely cannot get one or the other.

When reasonable exposure does not matter overmuch, the townsman and suburbanite can order supplies to be delivered from the country. Alternatively, the local nurseryman has always stocks of manure to sell. Those local tradesmen known to use horses for their transport (and these are still numerous even in these days of motor-vans) will usually let their customers have an occasional load of manure.

Where manure really *cannot* be obtained, then recourse must be had to substitutes.

Hop manure.—First and foremost among substitutes for animal manure I place hop manure—which is not a manure *for* hops but consists of spent hops treated with chemical fertilizers. A good brand such as Wakeley's is as good as good stable manure. It possesses the great advantage that it not only supplies plant foods to the soil, but adds "hody"—that is humus—to it. In other words, the hops play the same part in hop manure as straw plays in stable manure.

Hop manure can quite well be used when preparing a bed for Roses. It should be dug into the lower soil at the rate of a double handful per square yard. The top soil should at the same

time be enriched by working into it 4 oz. of bone-meal per square yard.

Hop manure is also useful for top-dressing Rose beds. Two handfuls should be worked into the surface soil around each tree.

Compost.—The second alternative to animal manure is compost. Compost is a mixture of tree leaves and such garden rubbish as can be collected during the year—vegetable leaves, lawn mowings, turf trimmings—anything, in fact, that will not burn.

Compost may be made either by digging a pit and storing the rubbish in that or by building up the rubbish into a heap. The proper procedure is to put a "sandwich" of soil in between each 6 in. or so of rubbish and to let the last layer be soil. The value of the compost is improved by occasionally pouring the household "slops" over it.

If any objectionable smell arises from the compost, this can be neutralized by occasionally putting a layer of lime over the material.

The compost is ready for use after it has had three months in which to rot down. It is better if it can be given six months in which to "make", however.

It may here be mentioned that there is a preparation called Adco which, poured over the compost, greatly improves its manurial value as well as accelerating rotting. It is claimed that compost treated with the preparation is a complete substitute for animal manure.

When compost is to be used for the making of Rose beds, it should be dug into the lower soil. It will greatly improve the moisture-holding capabilities of the soil. The top soil will, of course, also need enriching. Four ounces of bone-meal per square yard will be beneficial.

When Rose beds have been manured with compost, generous surface feeding will be needed during the summer. (See chapter on "Feeding Roses".)

Shoddy.—In some districts shoddy is available. This can be used for a Rose bed, but in no case must it be dug in "raw". The following is the plan I recommend: Take, say, a couple of two-bushel bags of shoddy, break it up well, mix with it twice the quantity of spent hops, and then four times the bulk of these two combined of leaves. Give it a shaking out and rebuilding once a week for two months, after which it will be ready for use.

Dig it into the lower soil and enrich the top soil as advised with compost.

PREPARING BEDS FOR ROSES

TO the lover of the Rose no trouble is too great to ensure that Rose beds are exactly what the Rose requires. There is no need to be extravagant or expensive in one's ideas, however, for the Rose is as much the poor man's flower as it is the rich man's, and a little thought and prudence will save much unnecessary labour and expense.

If you have a garden ready-made with a good depth of soil of a nice retentive loam, you have got all that you require for the Rose. Manures, natural and artificial, in season will do the rest. Granted that every soil can be improved or altered a little so as to suit all classes or variety of Roses; yet when you have that which will do, to go to additional labour and expense is not unlike the cook who uses six eggs in a cake where two are sufficient, or vintage port in a trifle when the ordinary wine is good enough.

To come to actual practice, the great point to remember is that a Rose bed has to last for years, and that means not only getting the top soil into the right condition, but also paying special attention to the subsoil.

The Treatment of the Subsoil.—When making my own Rose garden, all the small beds were emptied of soil to the depth of 3 ft., the bottom of the bed picked over, rough stone and broken brick was then thrown in to a depth of 6 in., upon this came a heavy coating of manure to about 5 in., then the roughest of the soil was put back to the depth of 1 ft., and then the last foot of soil. Allowing for additions, such as broken brick and manure, this procedure raised the bed to a nice height above the level of the ground.

Before replacing my last foot of soil I scattered some old, well-rotted manure, burnt garden ash, or old leaf-mould to the depth of 2 in.; then threw back the top soil and shaped up my bed, leaving it to settle for a few days before planting the Rose trees. By this means I grew perfect Roses.

The Best Surface Soil.—The best soil to use for surfacing the Rose beds is the soil that lies 3 or 4 in. beneath the turf of old pasture land; but if you are on a good loam, the soil of your garden should suffice, and, according to its nature, so you can improve it. Try to keep the top soil light and retentive of moisture. If there is too much clay in your soil, dig into the surface some sand or road grit that has been screened or sifted.

I am a great believer in working plenty of sand into the top 6 in. or so of soil, for it promotes root growth.

The Value of Clay.—People have got it into their heads that Roses to do well must be grown not *on* but *in* clay, and it is a very hard matter to dispel this notion. There is only one thing in clay that is of real benefit to the Rose, and that is water. For this very reason, a percentage of clay in the soil is beneficial. If, then, we add feeding properties and good drainage, we are working on right lines. Clay that has been exposed to frost and sun soon gets into a friable condition, and is ready to dig into a light soil during dry weather.

TREATMENT REQUIRED BY DIFFERENT SOILS

With all soils, as already mentioned, deep digging is essential, but with none is it advisable to bring the subsoil to the top—let it remain where it is, below the surface, keeping the naturally better top soil above it.

You can easily keep the two spits separate when digging by taking out two trenches, both 1 ft. deep. Make the top trench 3 ft. wide, the bottom $1\frac{1}{2}$ ft. Turn over an 18-in. wide strip of both spits, and you have the two-step arrangements still in existence. Remove the excavated soil to the other end of the bed, where it is necessary to fill in the last trench.

Break up the bottom spit thoroughly, but leave the top fairly rough. When you chop the top spit finely, the surface cakes and you lose the benefits of exposure. A fortnight before planting, fork 1 ft. deep, this time reducing the soil to the finest tilth. In all types save heavy clay the lumps fall naturally, thus revealing the benefits of early preparation.

Heavy Loam.—This being the soil Roses like best, it requires comparatively little preparation.

All that need be done is to dig 2 ft. deep, incorporating with the bottom spit three-quarters of a bucketful of fairly littery manure, and with the top, half a bucketful of well-rotted manure. Your Roses when planted will take hold at once.

Clay Soil.—With each square yard of the bottom spit of clayey soil, mix thoroughly three-quarters of a bucketful of the most littery manure you can find, and with the top, half a bucketful of well-rotted manure. Through both spits work into every square yard half a bucketful of lime rubble, road grit, or

sand. Lime rubble is preferable, because it contains lime in the form that Roses love.

The best time to prepare clayey soil is when it is drying after rain. Then the lumps, which otherwise are most intractable, will break up without difficulty.

Sandy Soils.—The weakness of sandy soils is their extreme porosity. They do not hold the manure you dig in. You can make them do so by placing between the two spits a 3-in. thick sandwich of turf, grass downwards. Chop it into pieces approximately 4 in. square. In turf there is food for the Roses and, while it dams no water, nor prevents root penetration, it does arrest rapid seepage.

By the time the turf decays, the nature of the upper spit will have completely changed and it will be an ideal home for the roots. In addition, incorporate with each spit three-quarters of a bucketful of fairly littery mixed stable manure or cow manure alone.

Chalky Soils.—In spite of the fact that Roses are considered shy on chalky soils, they do really well if these are given body. Their warmth is their greatest advantage. Provided the roots are fed well, you will have no difficulty.

Cow manure is the best manure to use on chalky soils. It is not easily washed out, is slow to decay, and it binds the loose particles of which chalk is composed, giving the cohesion which otherwise is sadly lacking. Mix three-quarters of a bucketful per square yard of each spit. The turf sandwich advised for sandy soils is helpful here, too.

Use Lime in Preparing Rose Beds.—Considering the supreme importance of lime to most subjects, it is surprising how often Roses—real lime-lovers—are forgotten in this respect. The result is a plethora of blind shoots, pale leaves, and general constitutional weakness.

The best way to apply lime is to spread it on the surface of the bed immediately after digging. Use 4 oz. of freshly slaked lime per square yard. Do not dig it in; let it be washed down by the rains.

Every type of soil needs lime. It helps to lighten clay, and binds sand. Though chalk is a form of lime, this may be so locked up as to be no practical good. So you must lime chalky soil, too.

On no account, though, allow lime and manure to come together, or you will destroy the value of both. No destructive action ensues, however, when you spread lime on the surface.

By the time it washes down and reaches the manure, it has changed chemically to such an extent that the two work together in harmony for the general good of your Rose soil.

When to Prepare Rose Beds.—The best time to start making new Rose beds is as early in the autumn as possible, preferably in early September. In any case all digging, preparation, and liming must be finished a month before actual planting is done, for this amount of time is necessary to allow the soil to settle and consolidate.

For Single Rose Trees.—When only one or two Roses are to be planted, individual sites can be prepared by digging and turning over the soil in a circle from 2 to 3 ft. across and 2 ft. deep.

On no account use fresh manure for digging into the soil; it might cause too rank growth in subsequent years. But if you have some very old and very well-rotted hotbed or Mushroom-bed material, then a thin layer spread on the bottom of hole or trench, and a little also worked into the top soil, will be a help.

It is important to break up all lumps and clods of soil as you dig, for only in this way will the soil settle down again properly and not leave spaces to collect moisture and also leave the roots at a dead end.

When Stable and Farm-yard Manure are Not Obtainable.—Would-be Rose-growers who definitely are not able to obtain either stable or farm-yard manure for the preparation of their Rose beds—and there will be very few, for manure *can* be secured by those who have the will in almost every district—are advised to turn to the chapter on "Manures for Rose Beds" and see there the alternatives that are available to them.

PLANTING THE ROSES

THOUGH Roses may be planted at any time between the beginning of November and the middle of March (except, of course, during spells of wet weather), November is definitely the *best* planting month. Roses planted then will produce a perfect display of bloom the following summer, whilst the flowering of late-planted Roses is, to say the least, a doubtful proposition.

When New Roses First Arrive.—If your newly purchased Roses arrive before you are ready to plant them, the question arises as to what shall be done with them during the waiting period. Nurserymen, who are past-masters in the art of packing, make provision for moderate delay in planting, and place damp moss and litter round the roots inside the bundle in case frost or snow should suddenly delay their being put in. The gardener need only place the bundles in a shed or cellar free from frost and, having damped the base of the bundles, throw one or two sacks over them to make all safe.

Still, the sooner the Roses are unpacked the better. The moment the weather breaks the bundles should be opened and, wet or fine, a trench should be got out, the trees should be placed in it in a leaning position, and the roots, together with a third of the tree, should be covered with soil, over which should be placed one or two mats.

When unpacking, use every care, for the trees cling together and a disinterested helper is sure to pull or shake them apart roughly, and so damage the trees.

If you have to heel or trench them in the open before planting, see that all labels that are attached are shifted to the tops of the trees. The reason is this: If they are too low when earthed up, the names will get obliterated or the labels destroyed. It is not easy in a large collection to find experts to name every variety at any stage of growth, and it is most annoying to have Roses growing whose names you do not know.

Spacing out the Trees.—Before actually starting to plant Roses, you must first mark exactly the place where you are going to put each Rose. If you are going to have several bush Roses together, each must be quite 18 in. from its neighbours. Some bush Roses, though, are very strong-growing, and these must be even farther apart—from 2 to 2½ ft. Examples of such Roses are Hugh Dickson, George Dickson, and Frau Karl Druschki.

Bush Roses should also be 18 in. from the edge of their bed or border; otherwise, during the summer, the long growths they make will cause annoyance to people walking on the adjoining paths or lawn, apart from the damage suffered by the growths themselves.

Standard Roses planted in a single row should not be any nearer to each other than 3 ft.

The distances apart of pergola Roses are regulated by the support poles, and whether you want a Rose climbing up each, but the roots should not be planted in the hard rammed-down soil at the immediate foot of a post. Actually, it is best to plant *between* the posts.

A wall Rose should be planted so that its growths will fan out on either side. Wall Roses should be kept from 6 to 12 in. away from the base of the wall; otherwise they will receive no moisture.

Preparing the Planting Holes.—It is unwise to dig out the holes in advance of planting, especially if your soil is on the sticky side. A heavy rain will fill them with water and delay planting. Wait until the right weather for Rose-planting—a dry day, free from wind, when the soil is not very wet and sticky—comes along and then take out the holes immediately prior to setting in the plants.

The holes must be large enough to allow the roots of each Rose to be spread out naturally. Wide and comparatively shallow holes are needed—never deep and narrow ones.

Before-planting Examination.—All being ready for planting, carefully unpack the nurseryman's bundles and examine the roots of each plant. If any are damaged they must be cut away just above the breakage, where the wood is sound. Make the cuts cleanly with a sharp knife in order to avoid "snags" or whippy ends to the roots. In any case, long roots (if the Roses *should* come to you with long roots, for nowadays they are generally shortened to facilitate packing) must be shortened back until they are only about 8 in. long.

When planting bush Roses, another thing you must watch for is suckers. These may be apparent as little buds *below* the bulge in the stem just above the roots—the place where the Rose was budded on to the "stock". If allowed to grow these would rob the proper Rose of food. Rub off these buds with your thumb. These are the only buds which should be so treated. This applies also to standard Roses, but not to Ramblers, Rugosas, Sweet Briars, or double white Scots Roses.

The Right Planting Depth.—As regards depth at which to plant, this, with all trees, should be about the same, with the exception of standards, which may be planted a little deeper.

If you look at a tree that has come from the nursery, you will see a soil mark on the stem showing the depth at which it was planted before, and, generally speaking, it will be found to be 4 in. This is deep enough so long as the point of union with stock and bud is just covered when the soil round the tree has been firmed down and all has been finished. It must be remembered that every year additional covering will be added in the nature of manure, which soon becomes soil.

It is dangerous to the life of the tree to plant too deep. If the budding has been done carelessly, so that the point of union is too high up the stock, it is far safer to leave it above the level of the soil than plant deep so as to cover it.

Planting the Roses.—Stand each tree in the centre of its hole and spread the roots out evenly all round it. Do not let roots run upwards or cram them in or twist them round the hole to save trouble. Try also to avoid letting roots cross each other.

To complete the planting, first throw a little fine soil over the roots. Then lift the tree slightly by its branches and jar it gently up and down, to allow the soil to filter round the roots and distribute itself amongst the small fibrous roots. Add a little more soil, and then firm down with your foot all round, and fill in with the rest of the soil, and the planting is accomplished.

Staking.—For Roses which require stakes—standards, weeping standards, etc.—the stake should be driven into the bottom of the planting hole before the Rose is actually put in. If this job is left till after the Rose is planted, the stake may be driven through one of the main roots, thus doing irreparable damage.

Tie the stems quite loosely to the stakes at first; otherwise the settling of the soil about the roots may leave the tree "hanging in mid-air", as it were.

After-planting Treatment.—For a little while after planting, settlement of the soil may leave a depression around the bottom of the stem. This depression would hold water, with harmful results, and must be filled in without delay.

With climbing Roses, it is necessary, immediately after planting, to shorten back the strongest growths to one-third their length. Cut back the shoots of Ramblers to within 1 ft. of the soil. Do not cut back bush or standard (including weeping) Roses, however.

Protection from Frost.—If Roses are planted at the best time—i.e. in November—they may be called upon to face severe frost

very soon after they go into the ground. Therefore some sort of protection is necessary and for this most growers advise litter and bracken. I have tried both. The former is far too unsightly and untidy; the latter is, in my opinion, none too certain a protection. I strongly advise nature's natural covering—leaves—and plenty of them. Do not be afraid to pile them on, and then scatter soil over them to keep them down and from blowing about over the garden. Leaves soon decay, and by April they can either be removed or left to incorporate with the soil.

For standards, leaves again should be tied loosely around the bud or union with raffia. I will not perplex the grower with all sorts of alternatives, for most entail labour and few are effective. Stick to leaves, which can be found anywhere and used with ease, and which do not look unsightly or spoil the effect of a well-planned garden even in winter. If the frost is severe, draw them well round your trees and you will find that they will preserve the trees when everything else will fail.

THE LATE PLANTING OF ROSES

How often it is that we find the most careful gardener unable to plant his Roses until after the planting season proper has passed. Yet it is frequently advised that to plant after the first week in March is to court failure. Frankly, I do not hold with that. Late planting will be attended by quite good results, provided due precautions are taken. I have even planted Roses as late in the year as May 1st and picked excellent blooms from them in July.

How Late can Roses be Planted?—I have given above an extreme instance of very late planting, and although I would not advise it as a practice, yet the question does present itself: "How late can I safely plant?"

Well, without considering any qualifications, such as the nature of the soil, the aspect of varieties, I would roughly give to the end of the second week in the month of March for H.P.s and other early kinds, and to the end of March or the first week of April for H.T.s and T.s. An early season may make a little difference in date, but it is only a matter of a day or so.

Trees must be Specially Prepared for Late Planting.—Late-planted Roses will do better if the co-operation of the nurseryman supplying the trees is obtained. The nurseryman should be asked:

1. To supply trees which have been lifted from their original position and moved from time to time until sent out (this so that they will not have started into growth);

2. To supply trees which have come from the coldest part of his ground;

When new trees arrive late in the season, say after the beginning of March, it is the common practice nowadays to get the pruning done before planting. Often the nurseryman will be found to have done the pruning for you, or he could be asked to do so when placing the order. Failing the nurseryman's help in this direction, do the pruning yourself.

How to Plant Late in the Season.—In planting Roses after the planting season proper has passed, you have to remember that the conditions are altogether different from those of autumn. Roses planted then had all winter in which to settle and form fibrous roots ready for action in spring. Roses planted late have all this work to do in a few weeks.

The following procedure has been found to give every satisfaction:

Supposing the beds have not already been prepared, the first job will be to get the soil into condition. You must break up the soil very finely indeed, so that water and air pass about freely and give every encouragement to the high-speed formation of fibres. For bed and border planting dig 2 ft. deep. Don't mix these spits. To the lower one add three-quarter bucketful of strawy manure per square yard.

With the top spit mix a three-quarter bucketful of the mellowest manure you can find—cow manure for preference—per square yard. After digging, leave the soil for a day or two to dry. Then tread firmly, and rake fine and even. Firm soil is absolutely vital. Spongy rooting conditions have killed more spring-planted Roses than anything.

No matter whether the Roses have come direct from a nursery or have been heeled in in your garden for a while, soak the roots in water for half a day before planting.

While the Roses are soaking, take out the planting holes. Do this as advised for normal planting. After the holes are taken out, loosen the soil at the bottom and spread over it an inch layer of finely riddled leaf-mould, with, if possible, a sprinkling of moist Sphagnum Moss in it. The Sphagnum Moss is obtainable at most gardening stores. Mix with each bucketful of leaf-mould a thumb-potful of superphosphate of lime. The former conserves moisture, the latter encourages prompt root action.

Place the Rose firmly in position at the middle of the hole and cover the roots with a mixture of equal parts leaf-mould and garden soil. Fill up gradually and firmly with fine soil. Immediately afterwards, water well. A few days later spread over the soil around each tree a 3-in. deep layer of old hotbed manure. This will prevent undue evaporation of the natural stores of moisture in the soil and will also help to conserve water that is subsequently applied to the trees.



ROSE PERGOLAS, SCREENS AND ARCHES

THERE are very few gardens which cannot be improved by the inclusion of a well-built pergola; very few Rose-garden planning schemes are complete without one. And yet it is surprising how comparatively few people will go to the trouble of making one.

Pergolas are of two kinds—one which is made of cut and squared timber and the other which is made of rustic work, that is, wood of medium size retaining its bark or not, as may be desired.

A pergola made of cut and squared Oak or Teakwood is well suited to the formal garden, being of a heavier and more solid character than rustic work. It is in keeping with the set paths and beds, the squared turf, the paving, and the well-built walls of such a garden. It conveys finish and an old-world touch, too.

The Climbing Rose, nailed or tied in, should clothe it in preference to the frivolous Rambler, ever sporting with the breeze. Oft-times, however, it is necessary to construct the pergola on the rather tall side, and it is not easy to find Roses that will clothe it quickly enough outside the Rambler classes, so that these have to be included to secure a good effect in a short space of time.

Where the garden is of an informal character, often far from the house, or even when adjoining, full of trees and shrubs and winding paths, then the rustic type of pergola is more in keeping. Further, the rustic pergola is better suited to the rambling Rose, which more often than not is selected by reason of its hardy and vigorous growth.

How to Make a Rustic Pergola.—Properly made, a rustic pergola will last for years. The best material to use in its manufacture is stout brushwood from the periodical clearings out of Hazel and Birch coppices, and the timber toppings of Ash, Oak, Larch, and Fir, all of which should be winter-felled, if you wish to retain the bark. Should you prefer peeled and varnished work, however, you should select material which has been spring-felled.

Coppice clearings are usually made up into faggots of various lengths and sizes on the site and, if you can cart them yourself,

may usually be obtained quite cheaply. Otherwise you must purchase suitable faggots from the rustic-ware merchants who cater for this trade.

A pergola may be built to conform to any garden lay-out. You may build on curves or straights, as surrounds to central lawns and flower-beds, or as intersecting walks where the corner-work will be found of great assistance in steadying the structure against high winds.

The sketch on page 82 shows one complete bay with the corner-work, which illustrates the principles to be followed for pergola-work of any length.

The main posts consist of 8- or 9-ft. poles of Ash or Hazel not less than 2 in. diameter, which must be sunk at least 12 in. into hard ground, the bases to be charred and creosoted before erection.

Horizontal pieces of the same dimensions are fixed crosswise to these, as shown, and divided into intermediate panels, which are then filled in with short bracing according to individual taste. The roof of the pergola is similarly divided into panels and filled in with shorts and diagonal struts, as indicated in the sketch.

A diagram is also given on page 82 of the arrangement for a crossways pergola where paths intersect, which may be made in the form of an octagon so that seats may be set at each angle, thus giving a pleasant vista down any two paths.

Erecting Rustic Work.—In putting a rustic framework together the greatest care should always be taken to get closely fitted joints, as on these the whole strength depends. It is not enough merely to spike the pieces together as is too often done by amateurs in a hurry, as this usually ends in splitting the wood and the whole affair blowing down in a gale.

As all the wood is practically circular in section, the joints must be cupped in, as shown, a fine compass-saw being used for this purpose. When the joint is properly fitted, a galvanized wire nail makes it secure.

As regards the elbows off your main stems, you may leave as many of these, neatly sawn short, as taste dictates. But wherever a cross-joint has to be negotiated, it will be necessary to saw quite close and smooth down with a spokeshave to the main stem.

If you intend to peel the bark, it is usually best to remove all side-growths in this way as it helps in getting the bark off.

How to Bark Rustic Work.—Bark may be removed all in one operation, an old table-knife being much the best instrument for the purpose. If you can afford to wait, though, it is only necessary

to peel off a few strips longitudinally and lay the wood out-doors for a few weeks, when the bark will shell off naturally.

When the wood is peeled, it should be scrubbed with soap and water, stood up to dry and afterwards rubbed down with glass-paper ready for varnishing.

Home-made Varnish for Rustic Work.—A good and cheap varnish for rustic work, which dries a nice nut-brown, can be made by dissolving common resin in naphtha at the rate of one and a half ounces of resin per pint.

Place the resin first in an old tin, cover with a little naphtha and put the tin in a pot of water kept boiling over a slow flame, stirring as the resin melts, and adding the remainder of the naphtha carefully until a smooth varnish has been obtained.

This will soak well into the dry wood and set hard with a medium gloss.

You will find it easier and more satisfactory to apply the varnish before putting up the pergola.

To Prevent Rustic Work Rotting.—Improvements have been made recently in rot-proofing and fungus-resisting processes for garden woodwork, and a new treatment which has been adopted with success in America is known as the sulphate dope.

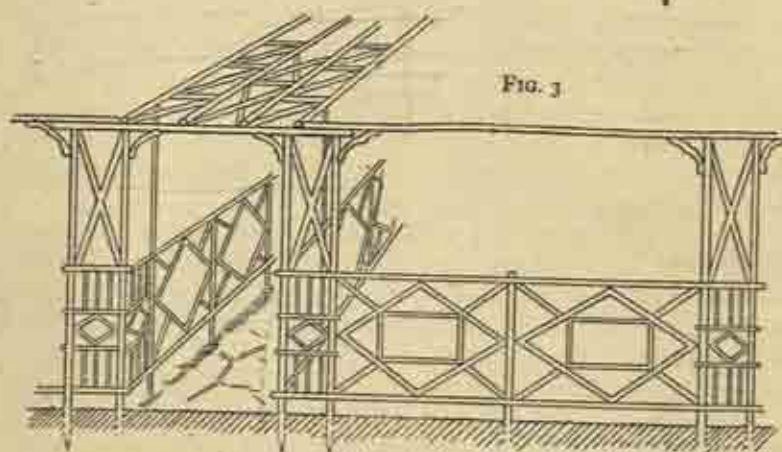
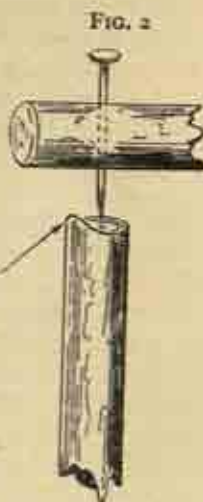
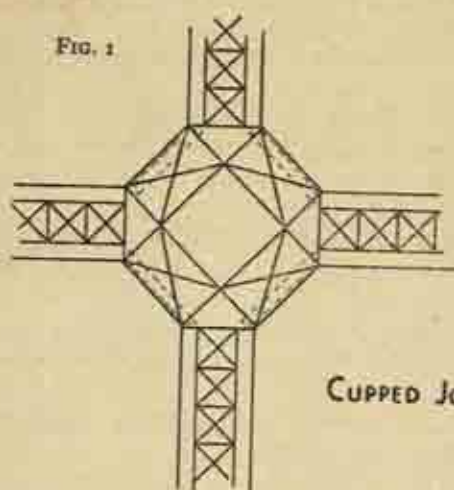
It is quite simple to carry out. First mix up a solution of 2 oz. of copper sulphate, or blue vitriol, per pint of hot water, using an earthenware vessel for the purpose. Apply this freely to the wood, giving it two or three coats until it is well soaked. Leave it for a few hours to dry, and then apply a second solution consisting of 2 oz. of lump ammonia per pint of hot water, putting this on hot also, and in two or three coats, letting each dry on first.

Thus an insoluble metallic sulphate is deposited in the pores of the wood, keeping it permanently proof against rot and fungus.

More simply the rustic work may be washed over with creosote or, better, with Solignum. It is a good plan to char the ends of all posts that are let into the soil. Place the posts in a slow fire and let them char until the outer surface is just burnt.

To Make a Formal Pergola.—Formal pergolas, which should be constructed of strong, well-seasoned timber such as Oak or Teak, should be more or less severe in design, any necessary softening of the general line being left to the Roses which will ultimately clothe them.

Of the various schemes shown on page 83, Fig. 1 shows a type which can be used either singly as a screen, or in a double line as a pergola, and can be made from ordinary square timber.



"Working drawing" for the guidance of the pergola builder, Fig. 1 being a plan for a pergola to be erected at the junction of two paths; Fig. 2 the way to join the wood, and Fig. 3 one of the many designs which can be carried out in the construction of the sections or "bays."

In Fig. 2 there is a novel idea, the lower portion being intended for growing an evergreen hedge, while Climbing Roses are grown against the stout Oak posts. The combination of colour thus produced is very effective and is worthy of consideration where an effective screen is desired.

A more elaborate design is shown in Fig. 3, and this would be best constructed entirely of Oak. It is a structure that can be adapted to many uses, giving a very pleasing effect, for example,

FIG. 1

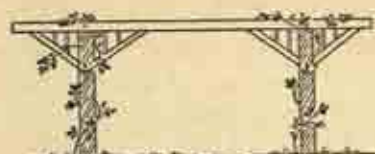


FIG. 2



FIG. 3

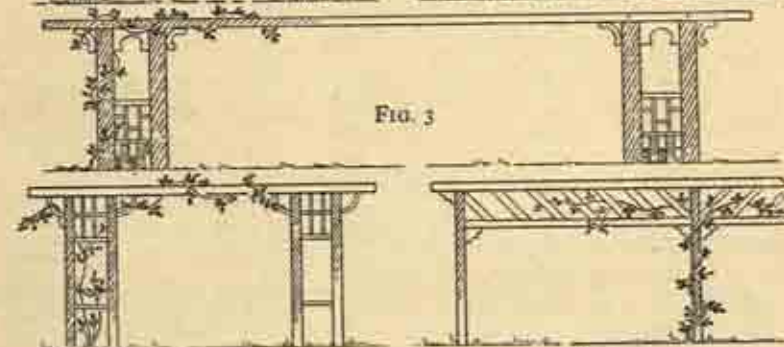


FIG. 4

Alternative designs for a formal pergola made from cut and squared timber, as a screen spanning the garage drive, where it would form a most delightful entry. It would be still more effective if the space allows for a narrow flower border abutting the side panels of the screen. As a pergola it is equally attractive placed over a flagged walk, or on the lawn, with Oak beams supporting the plants above.

FIG. 5

The style shown in Fig. 4 is more of the Japanese order and much lighter in construction than the former types. This can be made from small round timber. The particular design lends itself to many uses in the garden and should create a most imposing feature.

The design shown in Fig. 5 can be arranged either singly, or in pairs—the top panels giving a good base for training Rambler or Climbing Roses. Care must be taken in erecting these over the intersection of paths, in order to secure sufficient height for

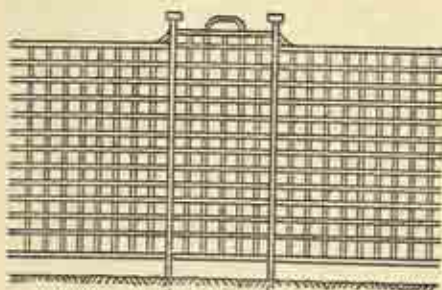
walking underneath. In such cases it is best to omit the lower bar altogether, fixing an arched piece in the place of the straight length.

TRELLIS SCREENS

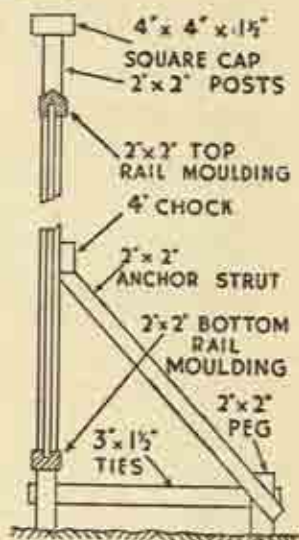
The very latest vogue for garden screens is to make trelliswork of laths and rails of Teak. The great advantages are that Teak requires no paint, is both insect- and rot-proof, while its handsome colour blends beautifully with the Roses trained over it—or indeed with any other climber. Its main drawback is, of course, the expense, but more material comes on the market every year, and a small screen of Teak which can be added to from time to time is much better than a lot of work done in soft wood which perishes after a few seasons.

If, however, you are not disposed to go to the expense of Teak, the best substitute is Pine, protected with two coats of priming and white lead paint, and finished in light grey, or dark green as you prefer.

The accompanying sketch shows a Teak or Pine screen carried out in the latest style, picked out with caps and ornamental work to taste.



A good design for a lattice-work screen suitable for use as a support for Rambler and Climbing Roses.



Showing the various sizes of wood required for an artistic trellis screen.

It is made throughout of $1\frac{1}{2}$ in. by $\frac{1}{2}$ in. planed lath which can be bought from the timber merchant in the wood required, the posts and bracings being 2 in. by 2 in. scantlings.

The best dimension to work on is 6 in. square generally, with posts in 8 ft. lengths or bays, this giving the length for the horizontal laths, the

height being as required—up to, say, 7 ft. When the correct number of vertical and horizontal laths are cut for one day, they are laid out on the ground, a stone path being the best place and the spacings for the joints are carefully measured and marked in black pencil. All that is necessary for the joints where laths cross one another is a $\frac{3}{4}$ -in. brass shoe-brad, which will be rust-proof and can be clenched down nicely by hammering on the stone.

The top and bottom rails for this lattice should be formed of 2 in. by 2 in. grooved mouldings, as shown in the accompanying sketch, which can be bought ready for the purpose, and into these the laths are carefully secured by means of a fine $1\frac{1}{2}$ in. galvanized wire nail at each lath.

In a long length of screen it is advisable to have anchor struts and ties at every alternate post.

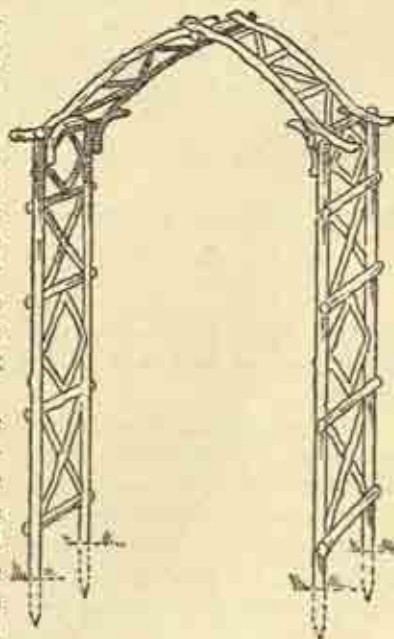
Where, however, there is a "return", or screens cross one another at right-angles, the change of direction provides an excellent support for the structure both ways, and no anchors will be required.

ARCHES

In regard to the making of rustic arches for Roses, much the same rules apply as for making rustic pergolas.

The poles should be 3 in. thick, main side-pieces and braces 2 in., and the filling-in can be $1\frac{1}{2}$ in. down to 1 in. material. Be sure that the nails are accurately driven, and where they pierce through completely they must be well clenched to make a tight joint.

See that the four uprights are firmly set and kept perfectly vertical. If you bed them soundly in the ground and see that the corner braces at the top are well fitted, your arch will be quite firm without any ground braces or anchors, thus keeping the soil as free as possible for plants.



A simple design for a rustic Rose arch.

Tar, creosote or Solignum the bases of the uprights and get them dry before sinking them 2 ft. below the surface, and make the cross-pieces complete before putting on the arch itself. It is often better if the whole arch is made intact on the ground first, then being lifted and set in place.

All arches should give 7 ft. clear of head room.

ERECTING PERGOLAS, SCREENS AND ARCHES

The most important aid to long life in Rose pergolas, screens and arches is a firm stance. Uprights must be fixed absolutely vertical and be set solidly in the ground.

If the ground is very hard—if the subsoil is gravel, say—and it is impossible to drive in the uprights to any depth, it is best to set them in concrete. With the spade cut out a box-shaped cavity 9 in. square and fill it with mixture of four parts gravel to one part cement, and sufficient water to make the whole the consistency of stiff mortar. Whilst this is still moist, insert in the centre a piece of $1\frac{1}{2}$ -in. iron bar of a sufficient length to extend 12 in. out of the ground, this portion being drilled for bolts. The wooden uprights may then stand on top of the concrete and be secured to the iron with two $\frac{1}{4}$ -in. bolts.

With ordinary soils it is sufficient to make holes in the ground with an iron crow-bar and sink the uprights in them, a few taps with a mallet making them secure.

REPAIRING AND RENOVATING PERGOLAS, SCREENS AND ARCHES

Every autumn, Rose supports, be they pergolas, screens or arches, should be overhauled and put into trim; not only so that they may be neat and tidy, but also to avoid any danger of collapse.

Pay particular attention to the feet or supporting posts of all grounded structures, so that if any part in or near the soil is shaky or rotted, this may be made good.

In the case of a decaying post there is no need to pull up the whole of the top work. Such repairs are done quite simply and effectively by driving in a stub piece beside the weakened upright, bolting or clamping this with strong nails in two places.

Of course, you will see that the new foot is charred and tarred and is driven down hard and solid.

The treatment of the upper parts of pergolas and rustic work depends on their nature and upon what was done previously. Should it be stripped and varnished wood, all you need to do is to wash it down with soda-water and put on a fresh coat of the same varnish, first making good any loosened nails or split pieces. Material with the bark on, if it is stout stuff and is standing well, only needs washing down with a solution of 1 oz. copper sulphate per gallon of water, followed, when this is dry, with a solution of 1 oz. lump ammonia per gallon. This will destroy any insects and fungoid spores, and also lengthen the life of the bark.

If the material has been creosoted then it is best to creosote it again. As creosote is harmful to plant life, the Ramblers, etc., must be taken down and laid on the ground before painting commences. Sheets of brown paper laid over the growths will guard them against splashes.

A difficulty arises that wood treated with creosote or other preservative remains poisonous to plants for some while after. Ill effects can be warded off, however, by spraying the structure with a solution made by dissolving 4 oz. soft soap in a gallon of water. Do this a week after the creosote has been applied. The Roses can be tied back to their supports the day following the spraying. A certain amount of creosote is bound to drain down on to the soil at the foot of posts. Such soil should be dusted with lime; this neutralizes any poisonous effect.

PILLAR, PORCH AND WEEPING ROSES

A ROSE garden or ordinary garden looks very beautiful when planted up with beds or bush and standard Roses only; their charm is very greatly enhanced, however, if their contours are broken up a little with tastefully arranged Rose pillars. Just as the hard outlines of a house are very greatly improved by the addition of a porch over front or back door or both, so the lines of the porch itself are softened by the gracefully winding tendrils of a Climbing or Rambler Rose.

Supports for Pillar Roses.—The first consideration, if you wish to have pillar Roses, is to make the pillars themselves. These can either be very simple, consisting of single poles or three poles arranged tripod fashion, or they may be very elaborate affairs constructed of squared timber and trellis work. Seeing, however, that whatever they are made of, they will ultimately be almost hidden from sight by the covering Roses, it would seem that the simpler the construction, the better—and certainly the more economical.

Good, stout poles will be required, of course, for they will have to carry a heavy load when each Rambler is fully clothed with foliage in summer. Lighter poles can be used if the tripod scheme is followed—that is, if three poles are driven firmly into the ground and secured at the top.

As regards the timber to use for the poles and the method of erecting them, I refer readers to the chapter on pergolas, the procedure recommended there being the procedure to adopt here.

Good Positions for Pillar Roses.—A very good position for a Rose pillar or two is among dwarf shrubs. If two or more pillars are set up they should be kept well apart so that each variety of Rose can be displayed to full advantage. A pillar Rose or two along the edge of the lawn is another good idea, the grass setting them off effectively. Pillars near the house, on a terrace, say, are charming; while advantage should always be taken of the "natural" pillars sometimes found supporting house eaves and porches.

While the chief use to which pillar Roses are put is to relieve that flatness which spoils so many otherwise pretty gardens, they can also be used to hide unsightly objects—a clothes' post or wireless-pole, for example. What better than to clothe either with a mass of foliage and bloom?

If the garden boasts any stone work, a rockery or sunk garden, then a finish can be given to the picture by having pillars of brick or stone and training Roses up these, as stone and brick pillars naturally last a lifetime, and are easily erected with the aid of cement.

The Best Roses for Pillars.—The best Roses to grow on pillars are given in the chapter on Choosing Rose Collections.

Porch Roses.—For covering a porch in a sunny position you may use either Climbing or Rambler Roses, but when the porch is in a sheltered position, it is safer to confine your choice to Ramblers. Similarly, Ramblers are the preference if the situation is at all exposed. When selecting varieties be guided by the advice given in the chapter above mentioned, paying due regard to the best varieties to plant in any given aspect.

The soil around a porch is often on the somewhat poor side and it is therefore necessary to incorporate an allowance of rotted manure with the bottom spit when preparing sites for planting such Roses and to feed generously during the spring and summer. It will also be found that the majority of such sites are apt to become dry very quickly and so plentiful waterings should be given.

Weeping Roses.—These are planted in exactly the same way as Standards, particulars of which are given on page 73, the stakes being inserted in the planting holes before putting in the Roses and spreading the roots, or at least before replacing the covering soil.

Immediately after planting, the training should start. The thing to do is to fix a wire framework to the top of the stake. On this you train the long growths of the Rose. Special wire frames for this purpose can be bought from a garden shop, or the handy man could make a framework at home, using a child's wooden hoop as the foundation.

Fix the frame securely to the end of the Rose's stakes, after slipping it over the growths.

Now you are all ready to tie the shoots into position. Bend them down carefully and, spacing them out in a shapely manner, tie them to the wire.

To preserve "balance", it may be necessary to cut off the ends of one or two longer shoots.

In subsequent years only shoots produced *during* that year should be tied in place. The previous year's shoots should be pruned in accordance with the advice given on page 145.

The feeding and general management of Weeping Roses is exactly the same as that recommended elsewhere for Standards.

ROSE HEDGES

ONE sees hedges of Privet and Quick and Yew and a dozen-and-one other subjects everywhere, but how often does one see hedges of Roses? Yet a Rose hedge is often itself a delightful feature and, further, it performs all the duties required of a hedge just as well as any of the commoners.

Probably—and for obvious reasons—a Rose hedge is not to be recommended as the boundary between the garden and a public thoroughfare, but I do urge that Roses are *the* hedging subjects for dividing off one part of the garden from another, for screening the garden's unsightly corners, and for such like purposes. What better bordering for a Rose garden, too, could one have than a hedge of Roses?

Of course, one does not use the ordinary everyday Roses for making a hedge. One uses the special hedging Roses. These will form a hedge either tall or dwarf, as required. Whether the height is to be four feet or seven feet, the hedge Roses are at your service, as will be seen on reference to the paragraphs given later in this chapter.

Preparing the Soil for Hedge Roses.—The great secret of success with Rose hedges is to prepare the soil well. It must be trenched two or three feet deep, the lowest spit being well broken up with the fork and having incorporated with it plenty of good rotted manure. Basic slag, applied at the rate of about $\frac{1}{4}$ lb. per square yard is also a helpful addition to the subsoil. If garden refuse or wood-ashes are available these also may be added to the lowest soil, all helping to improve its moisture-retaining qualities.

With the top layer of soil bone meal should be mixed, and leaf-mould is also a useful addition, but, in the ordinary way, no animal manure should be added. Only if the top soil is particularly poor, will it be advisable to dig in a little old hot-bed material.

For Tall Rose Hedges.—Coming to practical details, for the construction of a tall boundary Rose hedge of from 6 to 7 ft. high, all you have to do is to secure as many poles or iron uprights as you require and, having placed them firmly in the ground at equal intervals, attach four rows of strong galvanized wire to them, making the wire taut. Dig out your beds and

plant your trees in a single row at 3 ft. 6 in. to 4 ft. apart. As they grow, tie in the shoots to the wire.

In two or three years they will have made a perfect hedge which can be cut with shears every spring. No actual pruning will be necessary except the thinning-out of dead and useless wood.

Any of the Lord Penzance Sweet Briars will make a strong, tall hedge; so also will the Wichuraianas and other rampant growers.

For Dwarf Hedges.—For a hedge 4 to 5 ft. high there is no need to employ posts and wires as advised above. The trees will be self-supporting.

Prepare a wider strip of ground, for in this case the trees, instead of being planted in a single row, must be planted in a double row. Set them $2\frac{1}{2}$ ft. apart in the row with the same distance between the rows.

There is a big choice of Roses for dwarf hedges. Specially to be recommended are the Rugosas, the China Roses and the Sweet Briars (the latter having, of course, the charm of fragrant foliage). Then there are the Austrian Briars (ideal for a front border to a tall hedge) and the Hybrid Musk Roses. I have seen known some of the specially strong-growing H.T.s to be used for hedge-making, one variety in particular, Gruss an Teplitz, having been seen thus to particularly good effect.

As a matter of fact, any of the strong-growing Hybrid Teas, such as Caroline Testout, Mrs. Wemyss Quin, and Elizabeth of York, will make fine hedges if allowed to grow and are not pruned in the orthodox fashion. So, too, will many of the Hybrid Polyanthas, such as Else Poulsen and Salmon Spray.

For quite a low hedge—where little more than an edging is wanted—nothing better or more ornamental could be had than the Dwarf Polyantha Roses.

In no case should the classes be mixed. Let your hedges be either all Rugosas, or all Chinas, or all Sweet Briars, etc. Mixed classes will never make a good hedge.

Pruning Hedge Roses.—I have already said that the tall Hedge Roses need no actual pruning, their trimming being done with the shears, just like any other hedge.

In regard to the other Roses, no pruning will be needed by any of the plants during their first year or so, all growths produced being tied out to the best advantage over the wires, the endeavour being made to fill space as fully as possible. In two or three years the hedge will be a solid mass of growths and then

pruning may commence if required. It will be found that systematic pruning (on the lines suggested on pages 142-52, according to the type of Rose used) will result in a far thicker and finer hedge. When time is of value, however, quite good results can be obtained with the shears, with here and there a more careful cutting back with the secateurs.

Encouraging Growth.—In order to encourage the growth of plenty of wood at the bottom of the hedge and thus maintain an evenness of growth throughout its height, cut down one or two of the oldest shoots every yard or so annually. Young growths will then spring from the base of the cut-down ones.

In addition to this it is a good plan to layer several of the old shoots (as advised elsewhere), thus promoting a supply of new growths from the base.

Feeding Rose Hedges.—Throughout the summer occasional doses of liquid manure are of great benefit to Rose hedges whilst once a year a thick dressing of hotbed farm-yard manure should be applied along the foot of the hedge, the best time for this dressing being during the latter part of the winter.

The Caterpillar Danger.—Owing to the fact that one does not prune away the old growths upon which moths lay their eggs, caterpillars are a special plague of Rose hedges. Hand-picking, of course, is out of the question and therefore you should be particularly careful to spray the plants with a poisonous wash in early March. Many suitable washes are available.

WALL AND CLIMBING ROSES

THERE is no more beautiful way of covering the walls of a house or outbuilding or garden than with Roses. Although both Ramblers and Climbers do well in such places, preference, if there is any choice in the matter, should be given to the latter. Ramblers, being perfectly hardy, are eminently suited to pergolas, arches, and the like, but Climbers, about which there is always a certain strain of tenderness, will gratefully repay you for the warmth and protection afforded them by a stout brick wall.

There is another advantage possessed by Climbers over Ramblers—a very important one in my view. Your Rambler has only one short flowering period, nothing remaining when it has ended save foliage which, of course, is quite ornamental. Your Climber, if well chosen and properly planted, will produce a continuous succession of bloom lasting right from the beginning to the end of the season. Your Climber-clad walls will have colour on them almost continuously from June to October.

This chapter deals only with climbing Roses. Where Ramblers are used for clothing walls their treatment is the same as advised in the chapter on Ramblers.

Choosing Wall Climbers.—There are climbing Roses to suit walls of every aspect. See chapter on Choosing Rose Collections.

Preparing the Soil.—No matter whether the wall faces north, south, east or west, the soil must be well prepared for the Roses. In nearly all cases, you will find that the best of the soil was removed from such sites during the building of the house, of the erection of the wall, and so on, the foundations having been filled in with rubble, brick-dust, and all kinds of rubbish. Obviously such "soil" is no good for Roses and improvements must accordingly be made before attempting to plant.

The best thing to do is to trench the whole border, working plenty of hotbed farm-yard or stable manure, as well as basic slag (at the rate of 4 oz. per square yard) into the subsoil, and bone meal and old hotbed material into the surface. Alternatively, you can take out separate planting holes for each Rose, removing the whole of the soil 2 or 3 ft. deep over an area of a couple of square yards and filling in again with rich soil from another part of the garden. Avoid using fresh manure. Avoid also making the topsoil rich with manure.

How to Plant.—Having prepared your site, take out a planting hole sufficiently large to allow the Rose's roots to be well spread out and deep enough to allow the topmost roots to be buried about 3 in. below the surface. Do not put the stem close up against the wall; keep it about 6 or 7 in. out, thus allowing plenty of air to circulate around the stem and preventing rubbing against the wall's face.

Cover the roots first of all with some extra fine soil and then fill in with the remainder. Firmness of planting is essential with wall Roses and so, in addition to trampling over the roots immediately after planting, make a point of repeating this performance a day or two later, filling in a little more soil if the previous lot has sunk at all.

Training Wall Roses.—If wall Roses are to do really well every care must be taken to ensure that sunlight and air reach all parts of them; otherwise they fall victims to Mildew and other complaints.

They cannot receive the necessary sunlight and air if they are trained flat against a solid wall. Moreover, walls get too hot in summer-time, and encourage Red Spider, which suck the sap from the plants and cause wilting, shabbiness, and the death of young growths. Another point is that it is not possible to train the Roses over the wall or fence without disfiguring it with nails and cloth shreds.

All these difficulties are overcome if the Roses are grown on trellis-work, placed against the wall but some little distance away from it, say, about 9 to 12 in.

A very attractive trellis can easily be made from a bundle of builder's laths costing two or three shillings. First make a "frame" the size you wish the trellis to be, using double laths or lengths of slightly more substantial wood for the purpose. Then fill in with laths, 4 or 5 in. apart, down and along the frame, fastening these laths in place with brads.

The trellis can then be painted or creosoted. If creosote is used, however, the trellis must be left to "weather" until all the fumes have gone before Roses are fastened to it; or it must be treated with soft soap, to kill the fumes, as described on page 87.

The above is the best method to adopt with newly planted Roses, but where the Climber is already established there remains the excellent alternative of strands of strong galvanized wire strained along the face of the wall at intervals of, say, 18 inches, and secured to special projecting eyes driven into the brickwork. If you *must* nail in the growths at least do the job in the right

way. The *wrong* way is to use strips of cloth secured with two nails. Fastened in this way the growths are blown about by the wind, are certain to chafe against the wall and thus suffer injury.

The *right* method is to take the strips of cloth right round the shoot and then fasten them with one nail apiece. Nailed in this way, each shoot is properly supported, but is left with sufficient "play" to prevent chafing.

The First Cutting Back.—Very few beginners with climbing Roses—planting their trees in, say, November—realize that, within fourteen or sixteen weeks, all the shoots will have to be cut right back. As a rule, we find the grower nailing up and tying in position every shoot and rod, without a thought that, come the spring, heavy pruning will have to be done and many of the growths so painstakingly tied in will have to be cut away.

I therefore counsel only rough tying-in after planting.

So far as the cutting back is concerned, I know that it is, to the uninitiated, a great act of faith to cut away often from 4 to 6 ft. of growth, and in the very place where it is most wanted, then to wait for long months before the tree so hardly done by covers the same space with luxuriant growth. To this day, I must confess, I have often left one, and sometimes two, small rods, as countrymen say, "to draw the sap"; I so wanted in the early spring to see some foliage on a bare wall to cheer me and give evidence of the good things to come.

But every time I was wrong so to act. If you desire a strong, healthy tree the same law holds good with newly planted climbers as with dwarfs. You must cut them back in spring. On the other hand, I don't agree with those experts who advise a ruthless cutting back.

Often one sees it recommended that all growths be cut back to just above the second or third "eye", or bud. Playing for safety, I cut back to the fourth, fifth, or sixth "eye" in the ordinary way; if the wall is facing full south and the position is a warm one, then cutting back to the third or fourth "eye" would be permissible.

The disadvantage of cutting back each growth very closely is that if the shoots start to grow with undue rapidity, as they often do, and some sudden frost should nip them, that is the finish. When from four to six shoots are left, a late frost does not matter so much. The upper "eyes" shoot first and hold the lower ones in check. If the upper ones are nipped there are always the lower ones to fall back upon.

After the first year, pruning follows the ordinary course, as set out in the chapter on pruning.

Feeding Wall Roses.—Because the soil adjoining a wall is always hungry, wall Roses need generous feeding. Towards the end of summer, every tree, whether newly planted or old-established, must be made to pack as much nutriment as possible into the young growth. Only by so doing can the flowers of the following year be really helped.

Starting at about the end of July and carrying on until the end of the first week in October, feed every fortnight with liquid manure made the colour of malt vinegar. Give to each Rose one gallon per application. If the soil is caked, stir it 3 in. deep and 2 ft. on all sides of the main stems beforehand.

Though liquid manure is the best fertilizer, where it is not available the following mixture of artificials (used fortnightly until the end of September) is a good substitute: Superphosphate of lime and nitrate of potash, four parts each, and sulphate of magnesia, one part. Mix the ingredients well together, and give each Rose 1 oz. at each application. Spread the mixture evenly on the soil, and water it in unless the weather is showery.

Mulching Climbing Roses.—One of the most important items in the culture of climbing Roses is manure mulching.

The mulch, however, has to be applied in a somewhat different way to that adopted in the case of other Roses. A thick mulch of farm-yard manure that would bring out a great crop on the Ramblers would make a Climber sickly for the season.

The best plan, I have found, is to make up a compost in this way: With half a bucketful of riddled leaf-mould, mix a 7-in. potful each of soot and bone-meal. If you can't get poultry manure, use as a substitute a 3-in. potful of Peruvian guano. Don't, however, use in gaseous form the food from the manure and soot. Should lime rubble be unavailable, spread a 4-in. potful of freshly slaked lime per square yard on the surface of the soil a week afterwards.

The best time to apply this dressing is about mid-February.

Spread the mixture evenly 2 ft. out on all sides of the main stem of each specimen, and fork it in 4 in. deep. Use a hand-fork and, if you encounter roots, withdraw it at once. Climbing Rose roots are very full of sap and bruising may cause them to bleed severely.

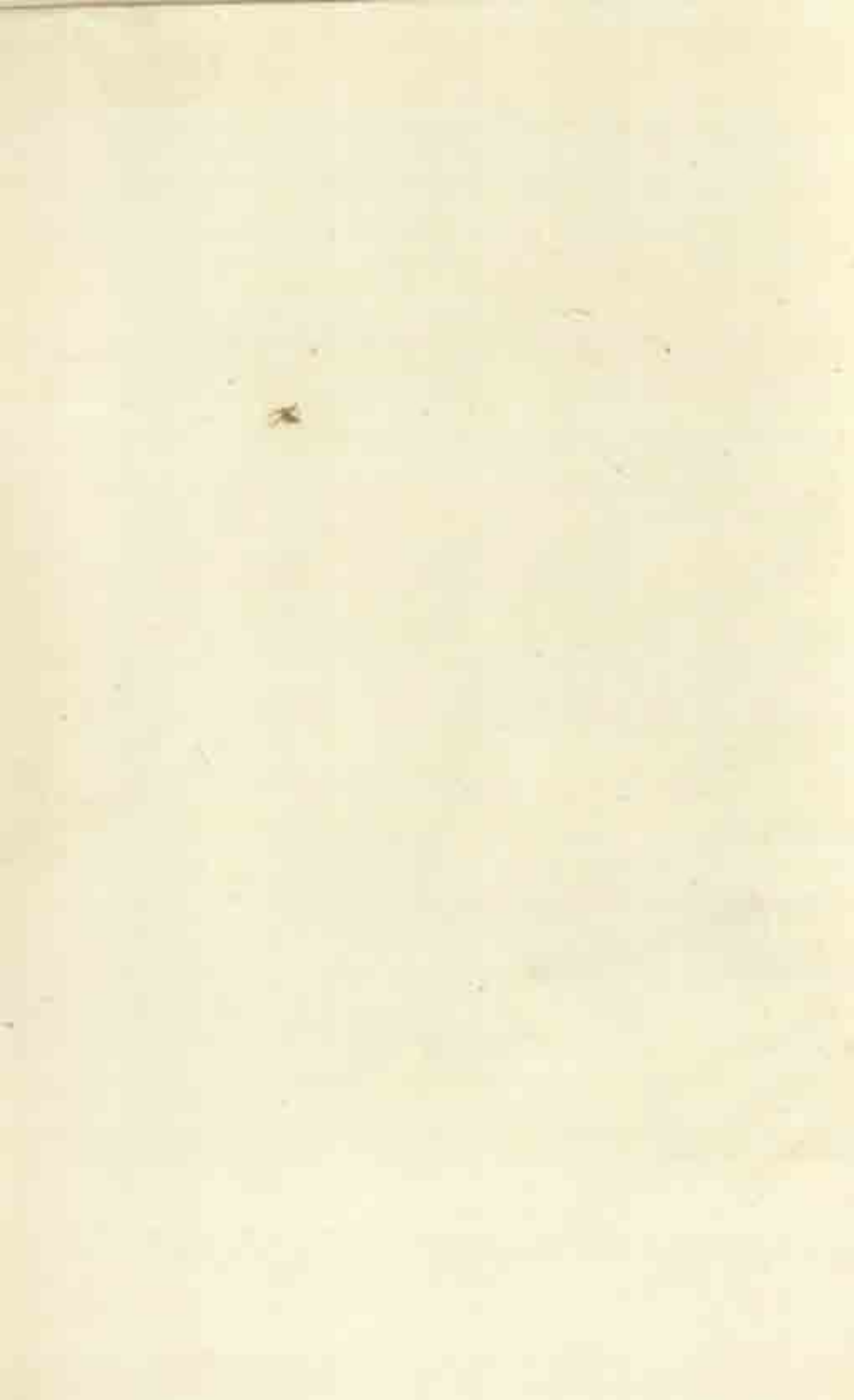
The advantage of this top-dressing is that the food will operate in time to strengthen the first batch of young shoots. If they develop vigorously, the second batch will do likewise. If they don't, your tree will be unsatisfactory all the season. I have never known this treatment fail to bring out the best in climbing



Photo: R. A. Mulvey

ELSE POULSEN

Semi-double rose-pink and carmine flowers make this one of the most appealing of the Hybrid Polyantha roses. As the blooms are particularly long-lasting a bed of this variety is attractive for many weeks in the season.



Roses—in even such coy, shy sorts as William Allen Richardson.

Lime for Climbing Roses.—If any grower prefers to use a light mulch of rotted manure in place of my own "special mixture", well and good. Let him, however, remember that climbing Roses love lime rubble. In spring he should sprinkle this substance (broken up to the size of Broad Beans) thinly on the surface of the soil as far as the branches extend and fork it in to a depth of 4 in. Before long the roots will be found forming fibres and clinging to the rubble, from which they will derive much benefit.

When Climbers are Thin at the Base.—During the first autumn after planting, growers may be disappointed at the appearance of their Climbers. The trees may have made hardly any growth—merely a few young shoots sprouting from the original stems.

This is nothing to worry about. Given feeding on the lines mentioned above, all should be well in subsequent seasons.

It may be, however, that all is *not* well. Sometimes after a few years of growth Climbers become over-tall and bare at the base, thus producing an abundance of flowers high up on the wall, but very few low down where they are equally wanted. Such, however, can, with a little trouble, be persuaded to behave properly and produce blooms over the whole of their area.

The operation is best performed in March. The plan is to compel the new shoots then breaking from the lowest parts of the old stems to lengthen and plump up quickly, thus becoming fit to supplant the old stems.

The procedure is to cut down the very oldest of the stems to within about 3 ft. of the ground and to loosen all the others from the wall and bend them to left or right, according to where they lie best. Get them down as nearly horizontal as possible. This treatment will divert the rapidly rising flow of sap from them to the young shoots. When the young shoots have made a foot or so of growth, cut back the end of the old, trained ones, as far as necessary.

To stimulate the young growths, fork a layer of old manure into the upper 2 in. of soil.

As regards artificials, a mixture of superphosphate, two parts, sulphate of ammonia, one part, may be pricked in in place of animal manure. Three ounces spread over a square yard suffice for one plant.

RAMBLER ROSES

RAMBLER Roses are a delightful section indispensable to every garden. Their disadvantage is that they have but one burst of flowering, then being finished for the year, but their display extends over a fairly long period and is so glamorously colourful whilst it lasts that one easily forgives any shortcomings. Some new kinds of fairly perpetual character are now beginning to appear. The New Dawn is an example, and others of the same type are certain to follow.

The term "Rambler" is often used very loosely as if it also included climbing Roses. Actually, Ramblers and Climbers are two entirely different classes needing very different treatment so far as pruning and general management are concerned. The two are easily distinguished from one another, too.

The Difference between Ramblers and Climbers.—The first thing to bear in mind is that Ramblers produce suckers, or growths from below ground, whilst Climbers don't, save in the very few cases where they are on their own roots. Even then suckers are a rarity. The main branches of the tree go on year after year, thickening each season. So that, in the case of an old specimen, the principal stem may be as thick as your wrist.

The flowers are borne differently. In Ramblers you have a cluster formation, whereas in Climbers the flowers come singly, in twos or in threes. In shape they resemble those of a bush Rose, of which in most cases they are but climbing forms. The individual flowers of Ramblers are smaller, daintier altogether.

A guide to identity is given by the leaves also. Most Ramblers have a palish leaf divided into seven or nine small leaflets, with an odd leaflet at the end. The leaves of Climbers have three, five, and in very vigorous examples, seven leaflets, darker in colour and twice or thrice as big.

The Uses of Ramblers.—Ramblers have numerous uses in the garden. They are ideal for training over pergolas and archways, for use on pillars in the border, for clothing fences and screens, for covering porches, and so on.

For pillars choose moderately vigorous kinds that bloom all the length of their trails. In its colour you cannot beat Emily Gray. Imagine a Rose golden-yellow in bud, passing to pale yellow, finishing choice cream, and you have a true idea of this glorious, free-flowering sort.

Sanders' White is the best of the pure white Ramblers and is very fragrant. It is a vigorous grower and has completely displaced White Dorothy.

Mary Wallace, with its clear rosy pink, fragrant flowers and handsome foliage is still one of the best of the pink pillar Roses.

Hiawatha is a beautiful single crimson with a pure white eye; Mermaid, an exquisite pale yellow, with amber stamens and fine spreading trusses of bloom; and François Juranville is a warm, pleasing pink. All the good sorts that make rustic pillars a fairy-land.

If you wish to cover a trellis screen, pergola, or arch with Ramblers, select sorts that have vigorous growth, or half the background will be bare. The purest scarlet is Paul's Scarlet; its vivid flowers make a glorious picture. Excelsa is a rich crimson whose blooming capacity will amaze you. Mary Hicks, a newer kind of the same shade, has bigger blooms and more ornamental foliage. It, too, sacrifices numbers to size, but is a great Rose.

Some singles you must have—American Pillar, for instance, a vigorous grower, having pink flowers with a pure white eye. I have given only the briefest selection here. Many other excellent varieties will be found in the chapter on Choosing Rose Collections.

Preparing for Ramblers.—Rambler Roses may be planted at any time between the beginning of November and the end of March. The sites must be very well dug—two spits deep at least—but don't overdo the manuring. Unless the soil is particularly poor and hungry, as it is apt to be near a wall or fence, be sparing with supplies. Always let the manure you use be well rotted.

Leaf-mould may be dug in freely, especially if the soil is of a sticky nature, for although Roses like heavy soils they also want well-aerated ground in which the roots can run easily.

Planting Ramblers.—The general details of the planting of Ramblers are the same as those recommended for bush Roses on page 75, but particular attention must be paid to the depth. Your guide here is a dark ring towards the bottom of the stem—which, of course, shows the previous planting depth.

Set the plants 6 or 7 in. from the wall, fence, or pergola and, having filled in the planting holes, trample the soil firmly over the roots.

Pruning after Planting.—Some growers let their newly planted Ramblers—which consist of one or more whippy growths—

remain just as they are after planting on the off-chance that some bloom will be produced in the first summer. A few flowers *may* appear, but they will not be worth having, and their appearance will have taken strength out of the plants which *should* go to the formation of new growths for blooming the following year.

If you plant in the autumn, immediately planting is finished cut back all shoots to within a foot of the soil. If you plant after Christmas, wait until signs of growth appear in the spring; then cut all weakly growths back to within a foot of the ground and cut off the unripened tips of any shoots that remain. Usually these tips are 3 to 4 in. long and you can identify them by their soft "feel" and often rather shrivelled look.

Training Pergola and Archway Ramblers.—Newly planted Ramblers—unless cut back completely—should be tied or nailed in to their supports a fortnight after planting—not before, for the ground may settle and the Roses sink and when that is happening the shoots must have free play.

There are various forms of tie you can employ. As the methods are the same as used for tying in the new growths that appear in summer, readers are referred to the information on that matter given later in this chapter.

There is this to be added: In no circumstances must the ties be tight. Neatly loop your string or twine or whatever you use round each stem. Let the tie pass *once* round the stem and twice round the support, the knot being made against the support. Don't follow the practice of so many novices and tie a piece of string to the growth and fix the other end of the string to the support. That way you "strangle" the growth—check the flow of sap and also cause your string to sink into the flesh of the growth, when it begins to swell.

Training Ramblers on Fences.—For the sunny fences the Rose branches have to be trained out in a manner which is a cross between fan and horizontal training. That is, about a third of the total length of each main branch is bent over as a curve, the other two-thirds being trained horizontally.

About 6 ft. is a good average length for each branch to be produced later, which means that to clothe the fence fully with flowers all the way, the Roses have to be planted 12 ft. apart.

Should a fence be overshadowed by trees—planted on the other side—it will not matter so long as the fence faces south-east, south, south-west, or east. Then the sun will still get in to the Roses. But no Rambler will flower well in continuous shade. Where a fence faces towards north or north-east, you will not

be able to get the side of the fence covered with flowering Rose trails. On the other hand, there is plenty of room for them at the top of the fence, and it would be a good plan to increase the height of the fence by fastening 2-ft. long pieces of stout strap-iron to it and threading a couple of wires through these.

The Care of New Rambler Rose Growths.—Rambler Roses flower on new shoots produced the previous summer, the old growths that have borne blooms being finished and done with and having to be removed entirely.

The new growths begin to appear at about the same time as the current summer's flower buds are showing. Mostly they shoot up from the ground but at times they spring out from the old stems near the ground. At first they are mere tufts, but they grow steadily until, at the end of summer, they will be 6 or even 12 ft. long. I have seen a Rambler Rose growth make 15 ft. of growth during the summer.

Right from the moment they are noticed the new growths should be carefully safeguarded. They are very brittle, very whippy, apt to be blown about, apt to be trodden on, apt to be brushed against. In the slightest accident they will snap off short, and every shoot so damaged means one less flowering growth the following summer.

You will gather from this that the shoots must be tied up to some support, more ties being added as growth proceeds.

Now, in tying them, remember that they need light and air to ripen. They must *not* be pushed among the older growths. They must be so placed that they are unshaded and uncrowded.

The best way with wall Ramblers is to nail the shoots to the wall with a good type of lead-capped wall nail, such as the well-known Chandler brand. After driving in this nail, all you have to do is to push back the flexible cap, gently bring the shoot to position near the nail, and enclose it within the cap, leaving room for later expansion.

The great advantage of these lead-capped nails is that they never constrict the stems. The growth is strong enough to push back the lead as it expands.

Alternatively, ordinary wall nails answer quite well if you enclose the shoot in a $\frac{1}{2}$ -in. wide strip of cloth, through the free ends of which the wall nail is driven.

With Ramblers trained to trellis, pergolas, wire-netting, etc., the growths must be tied in with close hempen string; raffia is not strong enough, while rough fillis and binder twine are undesirable because they act as a breeding-ground for Red Spider.

In all cases more nailing and tying will be needed as growth develops.

Occasionally the old wood is so dense that there is no suitable place on the support for the young. The best way then is to stake each growth separately, pointing the stakes outwards so as to bring them into full light.

The growths will not become hardened and fit to stand the winter weather if, as is frequently done, they are tucked out of the way by pushing them into the mass of older growth. They *must* be drawn well to the outside, where sun and air can have full play all around them.

Syringing regularly with quassia solution, Abol, or other well-known insecticide is first-rate insurance against green-fly—which otherwise may weaken the shoots by extracting much-needed sap, from the soft tips especially.

Watering and Feeding.—During summer, when they are making flowers and new growths, Ramblers *must* have copious supplies of water.

One is apt to overlook the fact that roots near a wall or fence are more in need of moisture than roots anywhere else. Theirs is a naturally dry position, even in showery weather. If water is not given generously there is a big danger that the early buds will drop.

If you have some newly planted Ramblers, don't try to bring them along by giving them doses of liquid manure or fertilizer. Until they are well established, the Rose roots are more harmed than benefited by stimulants.

An aid to Ramblers at this time is to spread a mulch over their roots. This is where any lawn mowings you may have will come in. Spread them on the soil in a 3-in. deep layer. They will help to conserve moisture.

If the Roses are established, a manure mulch will be better, enriching the soil as well as conserving moisture.

Autumn Care.—Early autumn—during September and October—is the time to prune Rambler Roses. Full particulars of how to do the pruning are given on page 148, and great care must be taken to do the work properly; otherwise the display of bloom the following year is bound to suffer.

When fixing up the Roses again after pruning, make quite sure that all loose, straggling shoots are tied in securely, so that there will be no fear of them being bent and battered about by wind.

Where Ramblers appear to be in need of food it will be a good

plan to put a layer of half-decayed manure over the roots. Alternatively to applying manure mulches, a dressing of lime or soot soon after pruning will be very helpful—just enough to lighten or darken the soil, as the case may be. The dressing should be applied over the roots, and lightly forked in.

Liquid manure can be given to the Ramblers from September on through the winter. A bag of fresh cow manure in a tub of water makes an excellent liquid manure. Soot-water is the next best liquid to use.

Transplanting Ramblers.—Quite often Rambler Roses make little growth in their first season, especially if planted in the spring; that is nothing to worry about. Given careful feeding and management, they will usually grow away well in their second summer. Occasionally, however, they fail to make any progress. Time goes by and still no new basal growths appear.

In such cases the chances are that the Rose is not happily situated and will never do well unless it is replanted. November is the best time to do the replanting and the following is the procedure:

Having lifted the plant, examine the roots and cut off any short pieces that have formed no fibres and have on them a white mould or little white, jumpy, springtail insects.

Prepare the new site thoroughly this time, in accordance with the advice given earlier in this chapter. In replanting, make the hole large enough to accommodate the roots when spread out to their fullest extent, and only bury them just below the surface of the soil. Riddle some leaf-mould through a $\frac{1}{2}$ -in. sieve and spread a 3-in. layer immediately beneath the roots. This will stimulate the formation of fibres and prepare the way for strong young growth the following season.

If you live in the neighbourhood of malt kilns, try to obtain some malt culms, and spread a 4-in. layer on the surface of the soil after you have finished planting, as far as the roots extend. This material is splendid for ailing Roses. If it is not available, old lawn mowings or leaf-mould will answer the purpose.

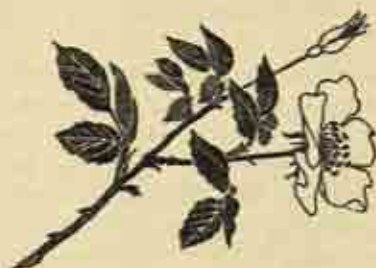
Remember that the more you spread out your Rose growths the better will be the distribution of sap, on which the production of the next year's blooms and young shoots depends in no small measure. In re-attaching your Rambler Rose to its support, bear this in mind: If you fasten the branches straight up, most of the sap will rush to the top and produce an unbalanced growth.

Also cut out any twiggy growths that are obviously too weak to bloom.

Repairing Damaged Ramblers.—During the winter Ramblers are apt to be severely damaged by wind and snow, often being torn from their supports and thrown down flat to the ground. In such cases, the supports must be erected again and the Ramblers tied in without delay.

When the new support has been got ready, disentangle all the Rose growths and lay them out separately. Then you will be able to see how to cut out broken and hopelessly injured growths.

The useless growths having been cut out, fasten up the retained growths.



PEGGING DOWN ROSES

VERY charming effects can be obtained by pegging down Roses. By so doing you not only add very considerably to the amount of bloom produced by any particular Rose bush but also, by forming a series of arches amongst established plants in a bed, you greatly enhance the beauty of that bed.

The principle upon which pegging down depends is that, by bending over the longer stems of the Roses, you induce each of the eyes along that stem to start into new growth and produce blooms on their own. If the growths are not so bent, the sap all flows to the tips and only the uppermost buds spring into active life.

Apart from the ordinary Rose beds, pegging down can be carried out with pleasing results in a variety of places. Say you have a Rose bush in a centre bed in your front garden. The shoots of this Rose could be pegged out to radiate over the whole bed. When flowering-time comes, each "arch" will be smothered with Rose blooms and will make a unique feature.

Again, the idea can be adopted with Roses growing in lines, or round the edge of a bed. By pegging down certain shoots, a continuous chain of hoops or arches could be formed, with striking results.

The Best Roses for Pegging Down.—Bush Roses are the most suitable type for pegging down, especially such varieties as Hugh Dickson, George Dickson, Gruss an Teplitz, Madame Jules Gravereaux, and Zephyrine Drouhin. Other varieties can be used, providing they are vigorous growers, that is, providing they produce shoots sufficiently long to form arches. If you have any Rose with stems about 4 ft. long and $\frac{1}{2}$ in. thick, it will be quite suitable for pegging down.

Certain climbing Roses may also be pegged down though they take up rather a lot of space.

When to Peg Down Roses.—The operation of pegging down can be carried out either at pruning time, retaining for the purpose extra-long shoots which would otherwise be cut right out, or during the summer when the long, waving growths usually removed at summer-pruning time should be utilized.

Of course, shoots pegged down at the end of summer will not produce their flowers until the following season.

How to Peg Down Roses.—If you are pegging down in March choose stout shoots that were first produced the previous year. They should be quite firm, and the tips should not be soft or dying back. If an inch or two of the end is affected, the soft or blackening part may be cut back to hard, green wood. The shoots must also be long enough to bend down without splitting or cracking.

If you are doing the operation in summer choose sappy and pliable growths and, instead of cutting them off in the usual way, allow them to grow until they are long enough to be bent down so that their extreme tips touch the ground.

Only three or, at the most, four, shoots on any bush should be pegged down, the rest of the bush being pruned back in the ordinary way.

Having selected the shoots, stout pegs and some tying material should be produced. The pegs should be at least a foot long, so that they can be driven well into the ground, as there will be considerable strain on them. Raffia, tarred twine, or similar stuff should be used for the tying.

Drive the pegs into the ground at the required places and, gently bending down the growths, tie them securely into place. It is a good plan to make notches in the pegs so that the raffia cannot slip out of place.

If any shoot shows resistance against being bent right to the ground all at once, draw it down a little farther every few days until it is in the required position.

Pegged-down Roses need no other special attention beyond that described, their management, feeding, etc., following ordinary procedure.

It is hardly necessary to add that the pegged-down shoots are not likely to flower satisfactorily for more than one season. Fresh shoots should therefore be pegged down each season, the old pegged-down shoots being pruned each in the ordinary manner.

THE SUMMER MANAGEMENT OF ROSES

A PART from the constant care which must be taken during summer to keep Roses clear of pests and diseases (both of which vastly important subjects are dealt with in separate sections of this book), there are many other jobs falling due during this season which, properly attended to, will ensure that the plants keep strong and healthy and in constant bloom.

Mulching.—A question often asked by Rose-growers in the early part of the summer is whether the trees should be mulched or not. The answer depends on the state of each Rose.

For established Roses and Roses planted in the early winter, a mulch will be of great benefit. The roots will be ready to absorb the nourishment thus supplied to them. If, however, the Rose was planted late and has not yet become established, the rich feeding supplied by mulching would be too much for the tender young roots that are endeavouring to get a hold on the soil.

In short, the rule to work to is to mulch only when a Rose is growing vigorously.

When mulching is possible, apply rotting, strawy manure, but don't put it on the soil until you have first stirred up the top inch depth of earth. A mulch on caked, hard soil is useless.

Put down a layer of manure 2 to 3 in. in depth, circling the stem but not actually touching it, to a distance outwards of about 12 in.

Subsequent rains and artificial waterings will carry the nourishment in the manure down to the roots, besides preventing rapid evaporation of moisture already in the soil.

The best time to apply the mulch is after pruning is finished.

Hoeing.—Throughout the summer, the soil round Rose trees should be constantly stirred with the hoe. Should the soil harden and be allowed to remain thus the leaves will go yellow and the growth weaken, while the buds will remain hard, refusing to open.

Do not go more than 3 in. deep when soil-stirring, or you may damage the roots and cause suckers to form.

Thinning the Shoots.—In the spring, as soon as the shoots have started to grow, it is a good plan to remove all superfluous growth.

On most bushes a shoot or two goes blind. You can see that they are neither going to lengthen nor to bloom. Cut back such shoots half-way, thus causing them to branch strongly and form fine successional flowers. Remove also the weedy inside shoots

that frequently arise where the branches fork, and shoots that, from any part of the bush, cross from outside to centre. They cause congestion where there should be abundant light and a healthy circulation of air.

This is really part of the summer-pruning programme, full particulars of which are given on page 151.

Feeding.—In order to secure adequate growth of wood and a full supply of flowers, Roses must be fed with some kind of artificial manure throughout the summer. Details of the feeding of Roses, however, are given on page 115.

Disbudding.—Disbudding is essential if you desire really fine flowers, and must be done as soon as you can safely remove unwanted buds with nail scissors or the blade point of a sharp pen-knife. Don't rub them out with finger and thumb, or you may tear off strips of tender bark and admit diseases.

Varieties differ slightly in their manner of bud formation, but all have the common characteristic of bearing three buds at the tip of the stem—a central and two side-buds. The side-buds, being the weaker, should be taken out. Certain strong, long-jointed varieties, like *Madame Butterfly* and *Betty Upchurch*, bear side-buds on long stems about half-way down the main stem. These need not be removed unless you propose to exhibit, as they weaken the main flower but little.

Burn all rejected buds in case they harbour pests.

Should quantity and not quality of flowers be your aim there is, of course, no need to disbud.

Keep the Blooms Cut.—One of the most important routine summer jobs is to remove faded flowers promptly, cutting back each stem to within 6 or 8 in. of its base, just above a point. This is the only way to get strong flowering shoots for succession.

From about the beginning of July, certain varieties will begin to push forth pink secondary shoots from the bottom joints of the flowered stems, and from some stems that missed flowering. In a few days some will be showing bud. You will encourage these to develop and other flowering shoots to form by cutting the spent flower stems immediately above the top good leaf. Often there are two or three rather poor leaves a little below the flower. Cut below these.

Certain varieties, such as *Madame Butterfly*, *Ophelia*, and *Mrs. A. R. Barraclough*, bear blooms on long-jointed, sappy shoots, thrown from the base of the bush. These, being soft at the top, must be cut half-way back (immediately above a leaf).

Cutting Blooms for Decoration.—For a similar reason to the

above, you should cut blooms for the house and other decorative purposes as often as possible. There are, however, right and wrong ways of doing even this simple job. Be sure, for instance, to cut each bloom with a good stem—anything up to 9 or 10 in. in length. Apart from the fact that long-stemmed Roses are so much more effective in the vases, the removal of the "wood" benefits the trees. To take good long stems is, indeed, an important aid in securing a good second show of bloom.

Always use a sharp knife or sharp secateurs for cutting the Roses. Anything blunt would bruise the wood and might lead to trouble for the tree. It is quite wrong to snap off the blooms with the fingers, of course; that would be sure to mean a jagged, torn shoot.

Whenever possible, gather Roses early in the morning, while dew is still on them. And gather them before they are fully open; then they will slowly expand in the vases and be beautiful for a long time.

A little slit cut upwards at the bottom of each stem will also help the flowers to last longer.

Attend to the Stakes.—Regular attention to the stakes of standards and weeping standards is necessary. Replace with a substantial round stake (round stakes are preferable to square ones, as being less likely to cause bark bruising) any that have rotted at the bottom. Make safe for the season by replacing defective ties.

Tie in Waving Growths.—Rambler Rose growths must be tied out equidistant, giving each room for proper development. Burn all old ties; they may harbour insects' eggs.

Where weeping standards have recently been planted it will probably be found that the growths, instead of weeping, grow upright. Train them to droop by fixing a wooden hoop to the top of the stake and tying the growths loosely to it. (See also the chapter on "Pillar, Porch and Weeping Roses".)

Keep the Soil Firm.—All the various summer operations—hoeing, etc.—on the Rose beds tend very much to loosen the soil over the roots of the plants. Many Roses are killed during the winter because the soil is too loose over their roots. Go over the beds therefore towards the end of summer and tread down any loose soil, giving the immediate surroundings of each bush a rather firmer tread. Rake out your footmarks after so doing or they will act as catch-pits for rain-water.

Watering Roses.—The question of whether Rose trees should or should not be watered is a much-debated one. Of course, in a summer like some experienced it answers itself; the weather is so

hot and dry that, in naturally dry soils, Roses would surely die if they were not well watered. What should be the procedure in a normal year, however?

My policy (except in the case of late-planted Roses, which need frequent watering) is to postpone watering as long as possible.

If, at the height of the growing season, no rain has fallen for some weeks and the rest of the flowers in the garden are beginning to wilt unless watered, then the Rose trees have their thirst quencher, too. Each tree is given a real good soaking—say, two gallons for a bush or a standard, twice as much for a Rambler or a Climber—and then receives no more for a week. Then comes another similar soaking and so on until the drought breaks.

It is important to avoid frequent dribbles—say a sprinkle from a rose-can or a pint or two from the water-can's spout. Such waterings do more harm than good, encouraging the root fibres to come up to the surface, there to be scorched by the following day's sun.

Roses growing on sloping ground naturally need more water than those planted on level ground. In the case of the former it is a good plan to sink a large flower-pot into the soil just above the Rose and pour the water into that. The water percolates slowly through the hole at the bottom of the pot and so moistens all the soil around the roots. If poured direct on to the surface, much of it would flow away downhill without getting to the roots at all.

Syringing Roses.—It is of great assistance to all Roses to syringe them overhead on the evening following a warm dry day. It is best to do the syringing with an insecticide sprayer. Rain-water or, failing that, sun-warmed water must be used. Tap-water may cause blotched foliage.

END-OF-SUMMER ATTENTION

Towards the end of summer all Rose beds should be thoroughly weeded and carefully stirred over to sweeten the soil. Leaves that have fallen ought to be gathered up. Careful gardeners nowadays make a point of burning these, so that if there has been disease it will not spread to the soil.

At the end of the Rose season one often sees clusters of seed-pods hanging about the trees. It is not a good thing to let these remain; they are only a drain on the trees' vitality.

With bush Roses, a little trimming-up may be necessary, to expose the younger growths to the sun and assist their ripening. Five or six healthy young stems should be kept as the framework

of the bush; any others that are more than two years old may well be cut back to their point of origin.

One or two of the younger growths remaining may have made considerable growth during the summer and be projecting well up beyond the general height of the bush. The ends of the longest of these growths should be cut back to an outward pointing bud, leaving them not more than 2 ft. long altogether.

Weak, whippy growths should be cut off close to the branch from which they spring.

In the case of standard Roses, it is necessary to cut back the overlong growths springing from the head. The correct thing to do is to cut them back to an "eye" or a joint in the stem, to leave them be about 18 in. long. Quite old, and diseased, branches can be cut right back.

LATE-PLANTED ROSES

It has already been mentioned that Roses planted late in the season should be mulched in spring with well-rotted "powdery" manure.

Frequent watering is another prime necessity with all late-planted trees. We hardly realize what a thirsty tree the Rose is and, provided the drainage is good, it is difficult to give it too much. Again, when the foliage is matured, in hot, dry weather, when the sun is low, it should be syringed occasionally, as this helps to keep the tree in a healthy condition, and certainly imparts additional vigour.

Do not let late-planted trees be too prolific the first year; it weakens the trees. For this reason you must disbud as closely as possible and rest content with few Roses. Even these are better cut when matured, and, if not, the moment they die the dead blooms should be removed.

Late-planted trees, as a rule, are more liable to suffer from green-fly and Mildew than those that have been planted early, or that are established and, not having as yet the same vigour, are often seriously affected. But, no matter what the onslaught, avoid using strong insecticides. If the hand or a brush will not remove the scourge, then syringe with half-strength insecticide, and after some hours again with clear water. Such treatment, if applied a few times, should remove the trouble.

Every chance must be given to late-planted trees to ripen new wood, and for this reason in the autumn it is advisable to cut out all growths that tend to cause overcrowding.

ROSE SUCKERS AND HOW TO DEAL WITH THEM

ROSE enemies are of two kinds, those which attack from without and those that assault from within. Of the latter, suckers are the most destructive.

Suckers are growths which grow from the roots of bush Roses and occasionally climbing varieties, and from roots or stems of Standards. Ramblers have suckers, too, but not of the destructive kind. They grow on their own roots, and, of course, the suckers are an integral part of the tree. The other sections mentioned (unless they have been grown from cuttings, when suckers will not be produced, all growths that appear being true Rose growths) don't grow on their own roots, but on those of the stock used for budding, most often a Briar.

Now the stock is so much the stronger partner that if you allow suckers to remain, they will kill the cultivated variety and themselves dominate the situation. In other words, the tree will become all briar, the cultivated Rose blooms that were formerly produced being replaced by ordinary "dog" Roses. It may take two or three years, but all the time the struggle goes on, the Rose gets the worst of it and your display suffers. As a Rose-grower, you serve your own best interests by removing suckers as soon as you see them.

It is particularly important that you should tackle the suckers before the end of summer. If you leave them to autumn the leaves will begin to yellow and fall off, after which identification, though possible, isn't quite so easy.

How to Distinguish Suckers from Rose Growths Proper.—It is not always plain at a glance which shoots springing up from a Rose are unwanted suckers and which are Rose growths proper. If careful examination is made, however, various points of difference will be noticed.

To begin with, no sucker ever arose above the knuckle which you find at or immediately above the soil level of a bush Rose, or at the end of the upright stem in the case of a standard Rose, and no growth belonging to the variety ever sprang from below it. The knuckle shows where the bud was worked or budded into the stock, and ever afterwards each keeps to its own territory.

So, with every growth of which you are suspicious, the first thing is to trace it back to its point of origin. If it arises from the

soil, or from below the knuckle, in the case of a bush Rose, or if it sprouts out from the stem or roots of a standard Rose, it is a sucker. If it shoots from somewhere above the knuckle it is a Rose growth proper.

Here it must be repeated that Roses grown from cuttings produce no suckers. Shoots that appear from the roots of these need not be interfered with. Neither must shoots that appear from the roots of Rambler Roses be tampered with; all such are wanted.

You will ask: If with some Roses ground shoots *are* suckers and with other Roses ground shoots are wanted growths, how then is one to tell which is which?

The answer is that the *appearance* of sucker growths is definitely different from that of Rose growths.

Suckers are thin and wiry, and usually closely set with small thorns which break off easily. Frequently the growths branch at the top like those of a wild Rose, with which indeed they have close affinity. You get exact opposites in true Rose variety growths—thicker stems, fewer thorns, and more equally distributed side-shoots. Further, the leaves of suckers are smaller and a paler green.

Again, with many suckers (those from a *Rosa rugosa* stock in particular) most of the leaves have nine leaflets as compared with the five leaflets of most proper Roses. (Some Roses—Caroline Testout is an example—have only three leaflets.) Also, the sucker's leaves are much rougher than the true Rose's leaves.

Suckers which spring from a *Rosa manetti* stock are different from those which come from a *Rosa rugosa* stock. But they can still be distinguished from the Rose proper by the fact that the growth is thin, and the spines small and dark. Suckers from a Dog-briar stock are also thinner in growth than Rose growths proper, while the leaflets are smaller, the thorns very sharp and hooked.

How to Remove Suckers.—Having made sure which are suckers, proceed to remove them at their point of origin on the roots. This is important. If you cut them off at the soil level, you reinvigorate them. Next season the left-on stem end will throw up not one but several suckers, each stronger than the original parent.

With the trowel scrape away sufficient soil to expose the root. Here you will find the base of the sucker. Cut it off cleanly and at once fill up the hole.

Should any suckers arise between the knuckle and the ground, cut them off flush with the main stem.

It is much easier to make a clean cut through these wiry growths if your Roses are full of sap. Either await showery weather or ensure the right cutting conditions by watering your bushes a few hours before removing the suckers.

With suckers appearing from the stems of Standards the most effective plan is to gouge them out with the point of a knife, not, of course, going very deep.

Suckers commence to appear quite early in the season and are liable to show themselves for the first time any day in the summer or early autumn. Therefore never visit or attend to your Roses without giving them a glance over to see that all is well. If a sucker is seen, get at it at the first opportunity.



FEEDING ROSES

FEEDING is one of the most important items in Rose cultivation. No greater mistake could possibly be made than to think that, because you enriched the ground generously when you first planted your Roses, no further attention need be paid to their manurial requirements. The Rose, no less than human beings, animals, and every other form of plant life, must have nourishment regularly if it is to remain resistant to the attacks of pests and diseases, and make that strong, healthy growth which is so necessary for the production of good-quality flowers.

What Roses Need.—The chief "foods" required by Roses, are lime, nitrogen, phosphates, and potash, and most soils, as a rule, are more or less deficient in these substances.

Lime acts directly on the soil, sweetens it, and improves its condition; incidentally it keeps down pests and fungoid diseases. Nitrogen promotes the development of the foliage. Phosphates encourage root development, accelerate growth, induce fruitfulness (that is, bud formation), and impart strength to the tree. Potash aids in the process of assimilation, which, in the words of an able chemist, transforms the atmospheric carbon into the carbon compounds of starch, sugar, and cellulose, of which latter the cell walls of all plant life are composed.

Liming Rose Trees.—References to the liming of Rose trees will be found elsewhere in this book. In each chapter having to do with planting or management, in fact, the use of lime in one form or another has been recommended.

Let it be said here again that, in my opinion, Rose beds should be limed at least every other year. The best time to apply the lime is in spring if the soil is light, in autumn if the soil is heavy. One form of lime—lime rubble—*can* be applied with manure, but in a general way it is a mistake to apply other lime and forms of manure together, for the lime has the property of neutralizing the good qualities of the manure. Preferably two months should elapse between liming and manuring.

Of all forms of lime I prefer lime rubble for Roses, this giving the trees an ingredient of the exact nature they like. A suitable dressing is a 4-in. potful per square yard of ground. Failing lime rubble, slaked builders' lime will serve. Of this use 4 oz. per square yard.

Builders' lime is now sold by most gardening shops. To slake it—that is, take the fieriness out of it—pack the lumps in a heap, pour a little water over it, and leave it. In due course it will be found to have crumbled down to a powder.

All forms of lime should be distributed evenly over the surface and forked into the top 3 or 4 in. of soil; it should on no account be dug in deeply.

Some Rose experts pin their faith to the crushed oyster shell supplied for poultry feeding. This material certainly is very beneficial, though it comes rather expensive. The dressing is 2 oz. per square yard, spread over the bed and pricked into the surface.

The Three Methods of Feeding Roses.—In order to supply the other manurial needs of Roses, three methods are available—mulching, liquid manuring, and giving artificial fertilizers. Each of these methods has its own particular use.

Mulching.—Mulching has been fully dealt with elsewhere in this book. Suffice it to say here that this form of feeding is best carried out in the early part of the year—from January to March, or immediately pruning is finished—and consists of applying a layer of manure to the soil over the Roses' roots.

The manure to use is rotted stable- or farm-yard manure—quite mellow stuff. This should be teased and shaken loose, and then spread in a 2- or 3-in. thick layer around the stems and as far out as the branches travel. A *thin* layer of soil may be spread over the manure if desired. The manure layer should not actually be in contact with any Rose stems.

How to Make and Use Liquid Manure.—If the material for making it can be obtained, liquid manure is the best of all forms of food for Roses in summer.

To prepare liquid manure you require a tub or tank holding a fair quantity of liquid, so that small quantities do not have to be made up frequently. A useful size of container is one holding about 36 gallons. A peck of horse, cow, sheep, or poultry manure—say, a two-gallon bucketful—is the quantity required for this amount of water.

The manure should be placed in a coarse bag, tied around with cord, and suspended in the water. A brick can be tied to the bag to keep it down in the water. The manure-bag should be allowed to soak for a week; but the time when the liquid will be ready for use can be considerably accelerated by frequently prodding the bag with a stick.

The liquid will be too strong for general application to start with, so when required for use any quantity taken out should be

diluted, until it is the colour of weak tea. Generally two-thirds the amount of water is required.

When the first lot of liquid has been drawn off and used, the tub can be filled up again and allowed to soak for another week. This time, of course, the liquid will be rather weaker and will not require so much dilution. After the second and perhaps third time of refilling the tub, the liquid will probably need no dilution at all.

Many gardeners, however, have no facilities for making large quantities of liquid manure. If the "tonic" is required for only a few bushes at a time, then a little liquid can be made up two or three days before required, or within twenty-four hours, if the manure-bag is stirred about frequently. An old pail to hold two gallons of liquid will do very well. For this, 1 lb. of manure will be required. This will be amply strong enough if diluted with an equal quantity of water.

Liquid manure should be applied fortnightly throughout the summer.

It is possible now to buy dried poultry manure. It is cheap, costing about ten shillings a hundredweight, and, being in dry powder form, is convenient and not unpleasant to handle. It is excellent material for making-up into liquid manure. A handful or two can be dropped into a two-gallon can of water. After a vigorous stirring the manure will all have dissolved and will be ready for immediate use.

Similarly, chemical manures, patent manures, such as Clay's fertilizer, guano, and the proprietary Rose manures, can be stirred into water and got ready for use with equal rapidity.

Rose trees can safely be given a dose of liquid manure regularly once a fortnight from the time the buds first show until the end of the season. It is advisable to discontinue the doses for a while whilst the first batch of buds are colouring up and flowering.

The amount of manure to give each tree will naturally vary with the size and strength of the tree, but, on an average, a gallon per tree for established bush and standard Roses and two gallons apiece for established Climbers and Ramblers would be about right.

Liquid manure should never be allowed to touch the leaves of the Roses and should be applied, if possible, when the soil is wet after rain. If the weather is dry, the soil should be well watered the day before applying the manure; otherwise the roots may be scorched.

Chemical Manures.—I have said above that chemical and patent manures may be used in place of the liquid manures just referred to. They may be applied either in liquid or dry form.

Many Rose-growers pin their faith to proprietary fertilizers, of which, of course, a large number is available. These are admirable in every way and, provided they are used as directed by the makers, give excellent results.

On the other hand, there are growers who would prefer to mix their own ingredients and, in that case, the following is the mixture I recommend for use early in the season:

Take four parts of nitrate of potash and superphosphate, and mix them well. Then add one part of sulphate of magnesia and mix again. Give to each tree 1 oz. of the mixture every fortnight until the beginning of June. It makes shy openers open freely, improves colour, and increases stamina and size.

Sprinkle the mixture evenly on the surface and hoe it in.

As soon as flowering commences, drop this mixture and use alternate doses of $\frac{1}{2}$ oz. of nitrate of soda and $1\frac{1}{2}$ oz. of superphosphate per tree.

How to Apply Chemicals.—Chemical manures, like liquid manure, must never be allowed to touch the foliage of the bushes; otherwise burning may take place. They, even more than liquids, must be applied only to moist soil and, what is more, they must be hoed under the surface immediately after application. If this is not done a great deal of their value may be lost owing to evaporation.

It will be noticed that the amount of chemical to be applied in each case is exceedingly small, and it may be wondered how such a small amount is to be spread evenly over the surface of the ground covering the Roses' roots. The best plan is to mix the required amount of fertilizer with three or four times its bulk of dry, fine silver sand. This can then be easily spread over the surface of the soil with a trowel without any fear of exceeding the dose.

Autumn Feeding of Roses.—When the last of the autumn flowers have faded, of course, there is no further need to stimulate Roses. It would, in fact, be bad for them to do so. The use of liquid manures of any kind, and of chemical fertilizers which are quick in action, must be completely discontinued until after the Roses are pruned in the spring.

In some cases, though, rotted stable manure is beneficial. It depends on the nature of the soil. The effect of a layer of manure on the surface soil when the latter is heavy is bad. It keeps the soil colder and wetter than it would otherwise be. Even on light soil a layer of manure would hinder the entry of air and sunlight and the surface roots would be inclined to perish.

But a little rotted manure lightly forked *into* the soil is permissible in autumn, where the ground is not heavy loam or clay.

Even better for use in the autumn is bone-meal or crushed bones. Both these are very slow in action, and their application to the Rose bed in, say, November, can do nothing but good. Scatter the material over the soil at the rate of 4 oz. to each square yard, then hoe or lightly fork it in—*after* all weeds and other rubbish have been removed.

SPECIAL FEEDING FOR SPECIAL CASES

To Strengthen the Leaves.—If any Rose bushes were very seriously attacked by any of the leaf diseases in the previous summer, it is a good plan to strengthen the resisting powers of the leaves in spring by special feeding. In this case, the following mixture is ideal: Superphosphate, three parts; sulphate of iron, one part. Give each tree 1 oz. of the mixture. Sprinkle it thinly round the main stem, work it in with a hand-fork, and, unless the weather is showery, water well. This mixture also increases the plant's resistance to Mildew.

To Give Roses a Good Send-off in Spring.—There is nothing to equal sulphate of iron solution— $\frac{1}{4}$ oz. commercial iron sulphate (in crystal form) to 2 gallons water, each Rose receiving 3 pints.

To Harden Limp Rose Stems.—Sometimes a Rose's stems are so soft and limp that they are unable to support the blooms, which accordingly hang "upside-down". Interrupt the ordinary manuring programme and feed twice, at weekly intervals, with a solution of $\frac{1}{4}$ oz. sulphate of magnesia to 1 gallon water. Give each tree 3 pints.

For Specially Fine Roses.—Give each Rose 4 pints of quarter-strength liquid manure every ten days. Between each two applications, stir into the soil around each main stem a teaspoonful of superphosphate of lime. The latter keeps the roots moving, intensifies the colour of the blooms, prevents double centres, and makes it impossible for the liquid manure so to soften the blooms that they wilt quickly in bright sun.

For Rambler Roses.—Ramblers, being of different construction and habit to ordinary Roses, respond generously to a special form of feeding. At five-day intervals from mid-May to the end of the flowering period, give each tree 2 gallons of quarter-strength liquid manure. Between each two applications (that is at ten-day intervals) give 2 gallons of half-strength soot water, in each gallon of which $\frac{1}{4}$ oz. of sulphate of potash is dissolved. The quantities

mentioned are, of course, for well-grown and established specimens; for smaller plants, reduce quantities accordingly.

When Roses are Frost-bitten.—When Roses are severely crippled by frost during the winter, they should be given a dose of special food as early as possible in spring. For this purpose, there is nothing to beat a solution of sulphate of ammonia (1 oz. dissolved in a gallon of water), given quite independently of the general feeding programme.



THE WINTER MANAGEMENT OF ROSES

SOME Rose-growers are apt to lose interest in their Roses with the fading of the last blooms in autumn. Such people will never obtain real satisfaction from their Rose trees, for winter, apart from being the main Rose-planting season, is also the season for all manner of important cultural operations, each of which must be attended to if the best results are to be obtained.

The Mulching Question.—The first question that arises is: Shall Rose beds be mulched in winter?

Elsewhere in this book it has been said that to apply a thick "poultice" of manure to the beds in autumn is a mistake, that spring is the time to do this.

But the mulching referred to now is not the mulching which is applied to feed the trees but to keep the ground over the roots warm and safeguarded against frost. To repeat the question, then: Is such a mulching necessary or advisable?

The answer really depends on whether the soil is pesty or not. If pests are present, then it is better to leave the ground uncovered and so let the frost play its part in killing off the surface grubs.

If the ground is clean, then it is worth while to place a mulch around the finer Roses, at any rate, some time in November or December. The mulching material then protects the stems, and the parts below the mulch level seldom suffer, even in the most severe weather.

If you decide to mulch, what material, you may wonder, should be used? A strong or heavy manure should *not* be used on any account. Instead of doing good, this would have an adverse effect on the soil, rapidly causing it to go sour.

The very best mulch to use is light strawy or littery stuff, composed largely of straw with a little manure in it. Ferns, bracken, rotted straw, and spent hotbed material are also good. These are infinitely better than ashes or old potting soil.

Of course, it is only in cold districts or in exposed gardens, or where the soil is cold and heavy that soil mulching is required. In normal gardens there is no likelihood of even the hardest frost penetrating to and damaging the roots.

Protecting Roses for the Winter.—The next question to be decided is: Do Roses need to have their top growth protected?

The answer is yes and no.

It is entirely unnecessary and definitely inadvisable to provide protection for all Roses indiscriminately, as some authorities advocate. This will be good news to you for all protective devices have to be dried after heavy rain or thawed snow, and it is no light task to go around, haul off the material, dry it, and then replace it.

Some Roses, however, *do* need protection. Choice standard Roses are among them. These bear the full brunt of a frost, and they should therefore be assisted by twisting a few fronds or dry bracken or some tufts of straw among their branches. The litter should, however, be removed directly rainy or muggy weather comes along.

Tea Roses, which are more tender than the others, should similarly be protected.

Wall Roses known to be susceptible to frost or growing in a cold and exposed situation should be safeguarded by hanging straw mats or tiffany over them during frosty spells.

There is one form of protection that can be given to all bush Roses and it will undoubtedly save many winter losses.

The weakest part of a bush Rose is the "collar"—that point where the Rose proper was budded or grafted on to the briar or other root stock. It is at this point that frost can cause the greatest injury. Obviously the thing to do, then, is to give that point additional covering, and the way to do it is to draw up soil, with the hoe, around the stem. Don't earth up too high; just a little soil up to the collar is all that is necessary.

Some growers take even more care to protect the collars in the case of newly planted Roses. They wrap a wisp of straw, or mound-up leaves, round the point of union.

PREPARING ROSES FOR THE WINTER

Some time in autumn it is necessary to overhaul the bush and standard Roses and remedying any defects that may be discovered.

Start off by cutting back any long runaway shoots there may be. These might be broken off in winter gales or by the weight of snow; in any case, by waving about in the wind they tend to loosen the trees in the soil.

Securing Stakes and Ties.—Next examine the stakes and ties of all standard and other Roses which are supported. Replace all stakes that are broken. Firm all stakes that are loose or wobbly. Give new ties where these are needed. Take particular note of the manner in which a standard is tied. The stem must not be

coupled to a stake in such a manner that it chafes against it, or, alternatively, so tightly that the twine is cutting into it and strangling it. The correct procedure always is to encircle the stem with a strip of cloth and to let the twine pass over the cloth. The cloth serves the purpose of acting as a cushion between stem and stake and also prevents the twine from chafing the stem.

Check the hold on the soil of every Rose tree, bush, or standard. If any tree is loose, tread the soil against its stem, afterwards bringing more soil to fill the depression made by your shoe.

If, by blowing about, a Rose tree works a hollow round its stem, that hollow will collect rain-water which, in times of frost, will freeze. A block of ice at its foot cannot possibly be good for a Rose tree!

Cleaning up.—As you are examining your stakes and ties, note all seed-pods and any spent flowers that remain. Clip off these at the first opportunity. They harbour diseases and pests and also would have a weakening effect on the ties if allowed to remain.

The next operation is to tidy up.

Start by gathering up all fallen leaves from the ground and picking out any accumulation of leaves from the branch forks. These lie damp during the winter; also they harbour disease.

Next pull up all weeds and whilst at that work watch for suckers. Any of the latter that are seen must be promptly removed. (See the chapter on "Suckers".)

Burn the seed-pods, fallen leaves, weeds, and suckers. The fire is the best place for material having such disease and pest-harbouring possibilities.

Cutting back Overlong Shoots.—Often in late summer vigorous varieties of Roses, particularly Madame Butterfly and Hugh Dickson, start producing long new growths. Such growths rise considerably above the average level of the others. Ripe Rose growth should not be cut back in winter, but the ends of this long stuff are not ripe. Frost will kill the soft shoots if they are left in—and perhaps start an outbreak of Canker—so cut them back to the hard, ripe part, which probably means shortening them to about half-length. This treatment, in addition to its hygienic value, will reduce the possibility of wind wrench, to which overgrown Roses are exposed.

Long shoots are likely to be snapped by winter gales, anyway, and it is better to shorten them of one's own accord than have the shortening done perforce.

Digging the Beds.—When all trampling over the beds has been finished then is the time for the annual digging.

This digging must not be the digging you give to the vegetable garden or to an ordinary flower bed. You must not use a spade or you are certain to damage some roots. A fork is the only tool to use. When roots are cut by a spade the almost inevitable sequel is a crop of suckers.

Turn over the soil to a depth of 6 in. as far as the branches spread and to a depth of 9 in. in the open spaces between. If your fork meets any roots, withdraw it at once and plunge it in elsewhere.

If you decide to manure your bed, the time to dig in the manure is at digging time. (See chapter on manuring.) After digging, apply the mulch if mulching is to be done.

Liming the Beds.—If Rose beds are to be limed, the lime should be spread on the surface after digging—provided manuring has not been done—and pushed into the surface. (See the chapter on "Feeding Roses" for kinds and quantities of lime to use.)

Basic Slag for Rose Beds.—Digging time is the time to apply basic slag to Rose beds.

Basic slag is not exactly a manure or a food, but it is definitely very beneficial to Rose beds. It is always cheap to buy and easily obtainable. Its chief purpose is to strengthen leaf and stem and impart quality to the blooms.

Lime and basic slag must not be applied together. Give slag one year and lime the next. Apply the slag at the rate of 2 oz. per square yard. Dress it over the bed before digging so that it will be worked into the surface during the digging.

TRANSPLANTING ROSES

When Roses have been a failure, probable causes are that the positions they occupy do not suit them or that the soil in which they are growing is exhausted. In either case, transplanting is the remedy, and the best time to carry out the job is in November.

Choose the new position carefully, making sure that the Roses will get sunshine to ripen their wood, are free from cold draughts, and not so close to the foot of a wall that the roots are deprived of moisture.

The soil should be well prepared for them, of course. Dig it deeply and make it open throughout, mixing rotted manure or decayed garden rubbish with the lower layer.

Your greatest difficulty will be in moving the Rose to its new home, especially if it is a fairly large Rambler or Climber, or spreading bush. A simple way to deal with the plant is to wind

a length of stout string round the whole of it, starting at the bottom and working upwards, thus keeping all the branches together and making the plant a neat "parcel".

The correct way to lift the Rose for transplanting is to dig a trench all round it, not less than 2 ft. out from the centre. The garden fork should then be gradually eased under the roots and manipulated until the plant can be levered up.

Try to keep a ball of soil around the roots so that the fibres will not be damaged. If you should break or tear any of the thicker roots, cut them back to a sound part and they will come to no harm.

Lift the Rose with its ball of soil out on to a sack, and immediately carry it over to the new position, then plant it in the usual way.

REPAIRING WINTER CASUALTIES

Even with the smallest collection of Roses, a winter casualty or two is not unlikely. Have a thorough examination of the trees in February or March and make the necessary replacements. At this time also, varieties which failed to please you the previous summer, either on account of poor colour or perfume, or lack of vigour, may be rooted out and their places taken by other varieties, if this was not done in November.

The ejected plants may be good enough for less conspicuous parts of the garden, but not pleasing enough to retain a place among the Rose collection itself. So transplant them to other quarters if they are worth it, and fill the blanks with good new trees.

Away with Diseased Trees.—Badly diseased Roses should be dug up and burned. It is rarely worth while keeping such plants in the hope of doctoring them, for they are a danger to other Roses because of the rapidity with which some fungoid diseases spread as soon as growth becomes active in spring. The Rose that shows obvious signs of disease can be so cheaply and easily replaced that the wise course indicated should be followed without hesitation.

Help for Frost-bitten Roses.—When the tips of Rose growths are frost-bitten, they must be cut away, for a shoot left with a crippled end may die right back. This applies to Roses of all kinds, of course—standards, bushes, Ramblers, and so on.

The pith inside the frosted shoot will be brown instead of white, sufficient indication, if you are undecided, that its removal is necessary. Cut back that shoot until white pith is revealed, this indicating perfectly sound growth.

In the case of a standard or bush, make the cut close to a dormant bud that points outwards. Similarly, cut back a Rambler to a bud, the main stem itself, if frosted at the end, further being shortened until that healthy white pith is definitely apparent.

ROSE TROUBLES TO REMEDY IN WINTER

There are certain "mechanical" troubles of Rose beds and Rose trees which require special treatment, usually in winter.

Sour Soil.—The commonest of those troubles is sourness of the soil, usually caused by overmanuring or by allowing the soil to go a long while without digging.

In regard to overfeeding, if the soil was rich to begin with and you apply overdoses of artificials during the summer, the result will inevitably be sour soil and the production of brittle, bluish foliage and tiny, lustreless blooms.

The way to put right this evil is to dress the soil with freshly slaked lime as advised in the chapter on "Rose Feeding". Apply the lime at the rate of 4 oz. per square yard of bed and rake it into the top 4 in. of soil.

Mossy Soil.—The presence of moss on a lawn is so generally accepted as being an outward and visible sign of something wrong with the turf that moss itself is regarded with suspicion whenever and wherever it may chance to appear. Up to a point that reasoning is quite sound, for moss only grows under persistently wrong conditions. It may point to a waterlogged bed if it appears amongst the Roses. But it may also be just a *temporary* growth after a few mild, moist weeks of autumn and early winter, and if left to itself would disappear with the coming of drier weather.

In any case, if the moss is a sign of anything seriously wrong, the Roses themselves will soon begin to hand out signs of distress. Here and there the tip of a shoot will turn black and die, and this die-back trouble will creep farther and farther down the stem. That *would* point to something radically wrong with the soil drainage, but unless and until die-back shows itself, there is no need to worry.

If you dislike the presence of the moss, however—even though the plants may not be affected—what you should do is to take advantage of a mild, drying day and stir the surface soil lightly, so as not to disturb the roots.

Follow up the stirring by giving each plant a heaped teaspoonful of crushed charcoal, sprinkling this evenly on the soil over the roots. This would be followed up by a second stirring—again on a mild, drying day.

Keep a sharp eye open for signs of die-back and if any affected shoots are seen, cut away the blackened parts immediately.

If there has been Disease among the Roses.—Few Roses escape Mildew and many are attacked by Black Spot disease every year. It is always a good plan, therefore, during the winter overhaul, to take precautions against such ailments being carried over to another year. To this end you should spray the bushes with Bordeaux mixture. This is a compound of bluestone (copper sulphate), lime, and water, but don't attempt to mix it yourself; the ingredients can so easily go wrong and do more harm than good. Buy a ready-mixed supply at your garden shop. By spraying the bushes and the soil, too, you will kill the Black Spot and Mildew spores, which, if left undisturbed, will sleep securely until the following season's sunshine wakens them to their destructive work. Use a fine-nozzled syringe and let the spray fall like a gentle shower.

If a Rose Bed is Infected with Soil Pests.—A number of wire-worm or cockchafer grubs in a Rose bed can cause serious injury to the plants, gnawing the roots. A good method of cleansing the ground of soil pests is to put on a dressing of equal parts naphthalene and freshly slaked lime at the rate of 2 oz. per square yard and fork in 4 in. deep. The mixture gives off a poison gas which, penetrating into the soil, kills off all insects.

BUDDED versus OWN-ROOT ROSES

THERE is now a great interest on the part of growers in the matter of the root system of their Roses, and many of them are not content to accept anything without an actual knowledge of what kind of stock has been used for the budding of the plants they are about to purchase and grow. It has been the practice, in the majority of cases, to bud Roses upon what are loosely termed "Briar" stocks. There are, of course, other forms of stocks such as *rugosa*, *polyantha*, *laxa*, and *moschata floribunda*, as well as some others. Those in general use were various forms of Briar or *Rosa canina*, and they were raised principally from seed and occasionally from cuttings, and also *R. rugosa* and *R. Frobélii*, wrongly named *laxa*. When we consider these forms of stocks we are immediately confronted with the fact that, with the exception of Briar stocks that have been propagated by means of cuttings, seedling Briar is a hopeless mixture and there is absolutely no uniformity in their root system. In fact the *canina* are a very mixed group. *Rugosa* comes true from seed and so does *R. Frobélii (laxa)*.

Leaving the Briars aside for a moment, we have to consider the use of *rugosa* and the so-called *laxa* as stocks. *Rugosa* is a vigorous species with a very fibrous but shallow root system, and it is very bad for suckering. *Laxa* is quite a good stock and comes from seed and thus gives uniformity in its root system. It is a splendid stock for light and medium soils. Prior to the war in 1939 immense quantities of Roses were budded on *rugosa*—it was cheap and could be easily procured—in the form of bushes as well as standards. On the other hand, few nurserymen used *laxa*—it was dear and scarce—but some of them had great faith in it. *Laxa* and *rugosa*, if we accept cutting Briar, were the only stocks that gave a uniform root system. *Polyantha* and *moschata floribunda* did the same thing but they were very seldom used.

When we consider Briar, which was the form most commonly used for the provision of stocks, we are confronted with the fact that the majority of the stocks derived from it were raised from seed, and the plants were imported principally from Holland. That means that the majority of Roses purchased from nurseries had no uniform root system whatever.

It is an old story, because from the time when *R. canina* was first used as a stock, probably about 1824 because prior to that

PRACTICAL POINTS IN ROSE GROWING

WHEN NEW ROSES ARRIVE

Roses which have travelled some distance may be very dry at the root. Planted thus they will be slow to re-establish themselves. The plants should be put into a bucket or tub of water and left for a few hours to soak up moisture.



If the plants cannot then go into the ground straightway—because the sites are not ready, the ground is too wet, or for some other reason—they should be heeled-in in a corner of the garden. The quickest method is to scoop out a small trench, stand the roses in it and push back the soil over their roots.



PRE-PLANTING PRUNING

When roses are planted in late spring it is usual to prune them before they go in the soil. Also, whenever planting, any broken roots should be trimmed back and pieces of thick, fibreless root cut off.

It is specially important when planting late to give the roots a good soaking as recommended on the previous page. They are likely to be particularly dry; the soil may be very dry, too. Without the soaking new roses may hang fire for weeks.

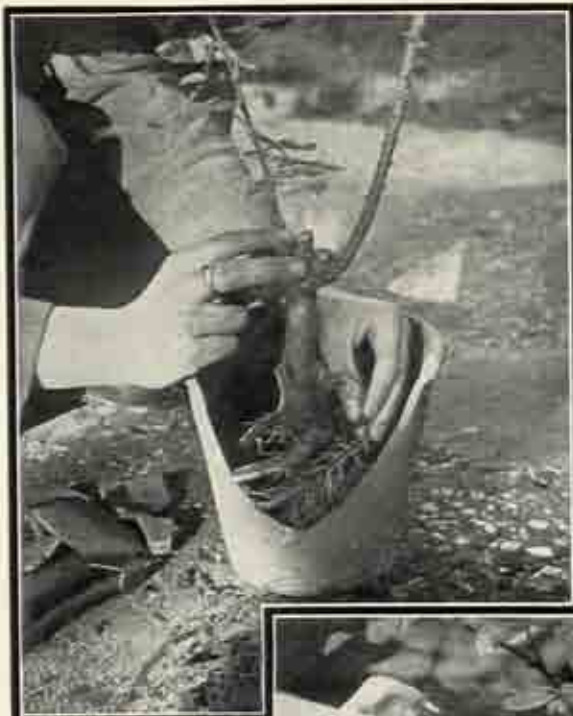


PLANTING ROSES

Of first importance is to make the planting hole the right depth. When planting is finished and the soil smoothed over the rose should stand at the same depth in the bed that it did in the nursery—as indicated by the soil mark on the stem.



Another point in the planting is to see that the roots are spread out as evenly as possible. They should not be crammed into the planting hole, nor should they be left twisted or crossing each other. When the roots are nicely spread a little fine soil should be thrown over them, to work its way among the small, fibrous roots. Then the hole should be filled in gradually and firmly.



PLANTING ROSES IN POTS

Roses potted up and given the protection of a greenhouse, even an unheated one, produce blooms of very high quality. The plants can be lifted from the garden or suitable varieties purchased. Early autumn is the time to pot up the plants, 8-in. pots generally being used.

A good rich compost should be prepared and the pots well drained. Put in a little soil over the drainage, spread out the roots evenly (after any necessary shortening of the roots has been done) and then fill in firmly. Leave room at the top of the pot for feeding and top-dressing.

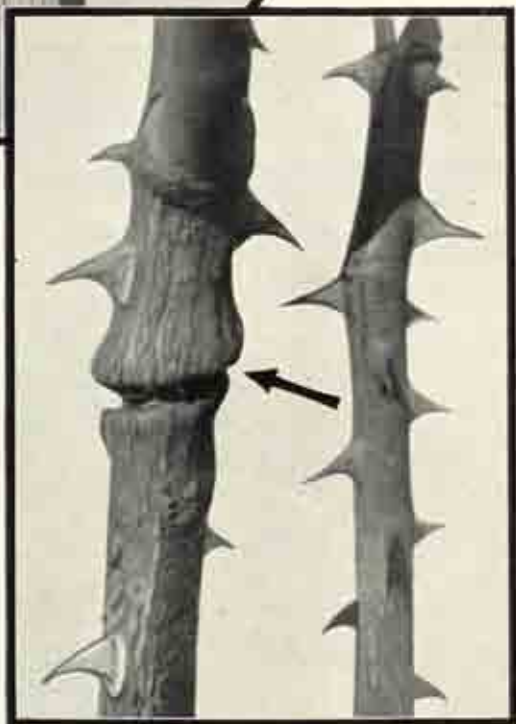




SUPPORTING STANDARDS

Every standard Rose needs the support of a stake, stout enough to keep the plant safe however high the wind. A strip of sackcloth or other material must be wrapped round the stem to prevent chafing.

The string must not be tied too tightly or this sort of thing may happen. The correct method is to loop the string two or three times round the stem and stake and then to tie the ends so that the knot comes against the stake, as above.





NEW GROWTH

The new young shoots (such as the one marked X) that grow on ramblers and climbers are succulent and likely to be damaged if left at the mercy of the wind. They should be carefully tied in to the support. If a new shoot should be broken and it is considered worth while to try to save it, binding with raffia, as below, will often prove effective.





PESTS AT WORK

Among the pests which attack roses are the maggots that penetrate the buds at an early stage and disfigure them. The eaten leaves are the work of various caterpillars that find a home on roses. Constant war must be waged on these and the numerous pests which attack roses, spraying, dusting and hand-picking being among the control measures which the gardener must use.



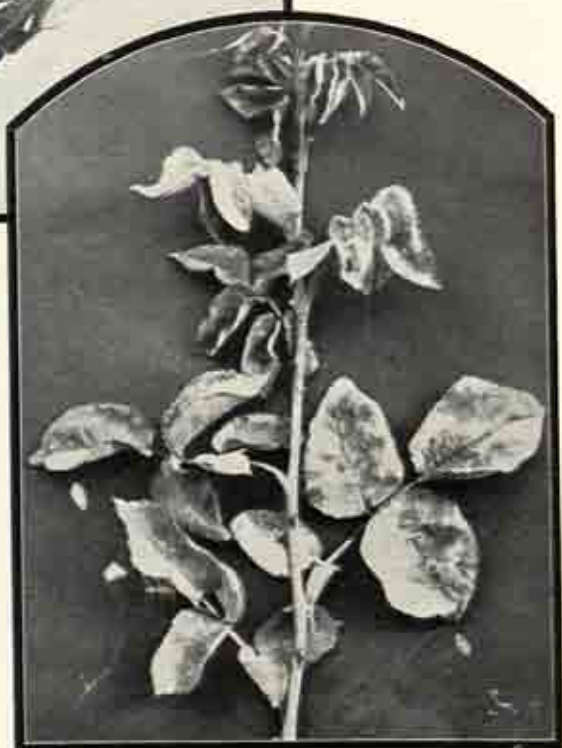


GREENFLY

Greenfly are the worst of the rose pests. They appear early in the season and soon shoots and buds may be covered with them. Unless the early attacks are dealt with—fortunately there are plenty of good insecticides for the purpose—the leaves begin to turn yellow, shoots are distorted, the flowers come spotted and deformed.

MILDEW

This is probably the most common of the rose diseases. It is particularly troublesome in early summer and early autumn. First isolated spots of white mould appear on the leaves. Unless treatment is quickly given the whole plant will soon become involved. Dusting with flowers of sulphur or spraying with liver of sulphur solution will usually check the trouble.



ANTI-PEST MEASURES

The soft young tips of Rambler Roses are much favoured by greenfly. A simple method of disposing of the enemy is to dip the shoot tips into a pail of insecticide.

Where leaves have been rolled up by one of the leaf-curling sawflies spraying will not be effective. There is nothing for it but hand-picking.





USEFUL EQUIPMENT

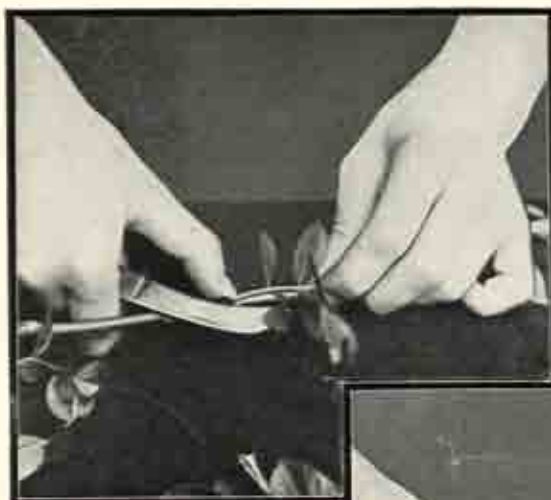
For the correct application of insecticides and fungicides, a proper sprayer is needed. This can be a simple piece of apparatus costing a modest sum or something quite elaborate. The point is that the sprayer will drive out the fluid in the desired fine mist that will cover all parts of the plant being treated.

Powders are being used considerably now in the fight against pests and diseases—an application of flowers of sulphur, for instance, being a recognized cure for mildew. To apply the powder efficiently again a proper dusting apparatus is required, various types being available at reasonable prices.

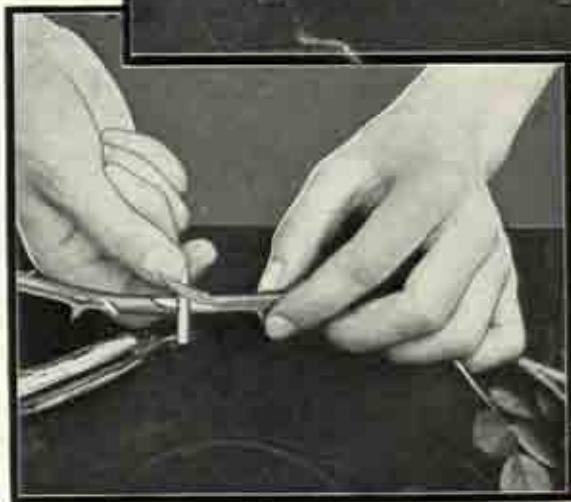


LAYERING ROSES

Layering is an accepted method of increasing roses, particularly Climbers and Ramblers. Briefly, part of a stem (or number of stems) is buried after preparation, while still attached to the plant. Roots emerge from the buried part, and in due course the new plants are detached from the parent.



In detail, young shoots are chosen—preferably in summer. Each growth to be layered is released from its support and about 15 to 18 in. from its tip, a slit some 2 in. long is cut. To keep open the "tongue" thus formed a match-stick is inserted. Then the growth is bent down, buried in prepared soil and pegged to keep in place.

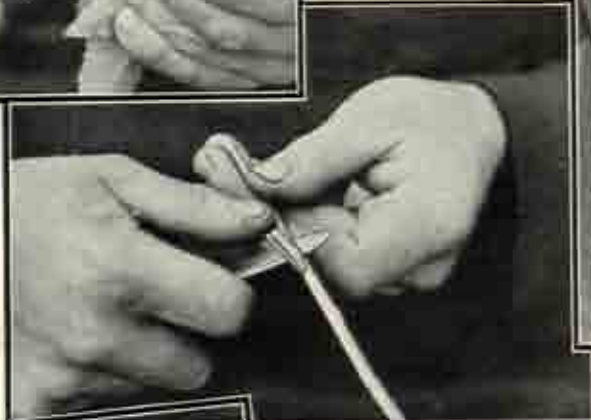


HOW TO BUD ROSES



1. First comes the preparation of the bud. A good shoot should be taken from the selected variety—one containing a shoot bud which is plump but not starting into growth.

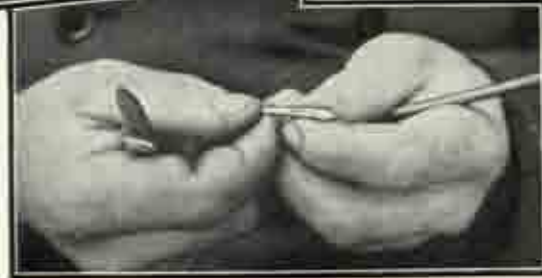
2. The leaf spray is shortened to a mere stub, then the bud cut out. The knife blade should be pressed in about an inch above the bud and come out about half an inch below it. The cut should go into the shoot a third or a half of its depth.



3. The next thing is to remove the piece of wood beneath the bud and to trim up the tail of the "shield".



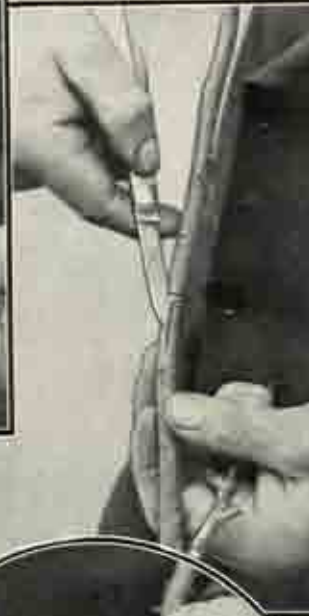
4. This leaves the bud all ready for insertion into the stock. The latter, a young Briar or other suitable stock, should be planted in autumn for budding the following July or August.



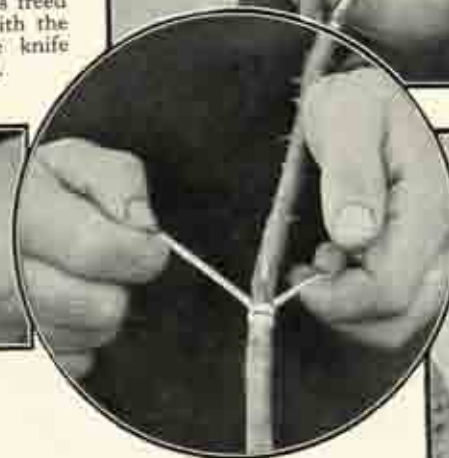
5. Now the briar must be made ready. For a start a section of the stem is freed of thorns with the back of the knife blade.



6. Then a T-shaped cut is made in the bark. For bush roses one bud only is inserted, at the base of the stem. For standards three or more buds are worked in.

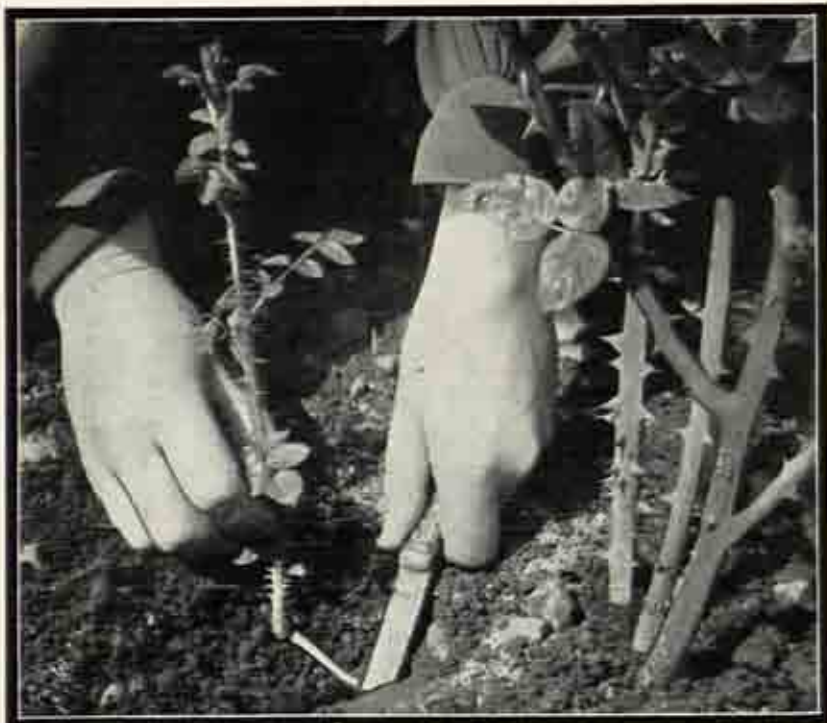


7. The edges of the T-cut are slightly raised so that the bud can be slipped in neatly and cleanly as shown below. A little trimming may be necessary to secure a good "fit".



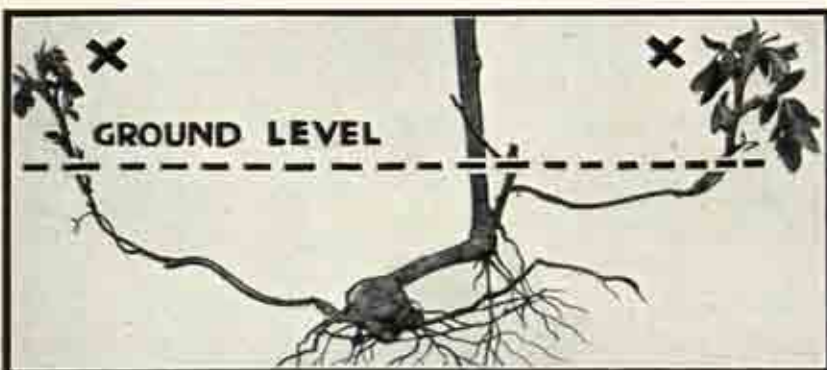
8. Finally the bud has to be held in position with raffia. This is wound round in such a way as to close the edges of the T-cut on the bark of the bud shield and so hold it comfortably in position. Too tight tying must be avoided. The budded Briar is then left alone until the autumn, when the growths in which buds have been inserted are cut back.





REMOVING ROSE SUCKERS

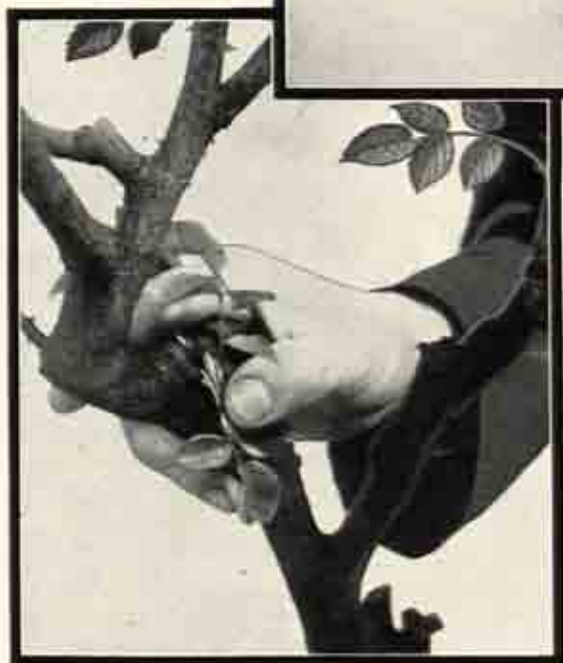
Budded roses often throw up numbers of suckers, or Briar shoots, from below the budding point in the case of bush roses, from roots or stem in the case of standards. These suckers weaken the cultivated variety and should be promptly removed.



Suckers which spring from the roots may grow up at some distance from the roots, as shown here. To cut them off at ground level would merely strengthen them. Soil must be scraped away so that they can be traced back to their point of origin on the roots and there be cleanly cut off.

UNWANTED GROWTHS

Sucker growths which appear below the point of budding on the stem of a standard must be cut off—the earlier the better, since while they remain they are taking nourishment from the parent plant. Sucker production is often very free on standards recently budded, as this specimen shows. If at all large they should be cut right out with a sharp penknife.



Suckers that are dealt with while still small can usually be rubbed out with the thumb. However dealt with they must be completely removed, otherwise they will soon grow again.



DISBUDDING ROSES

For ordinary garden display it may be desirable to remove a few of the weaker side-buds (arrows) from the sprays of the bushes. For exhibition work much more severe disbudding is desirable, all the side-buds (assuming the main bud is of good quality) being removed.



The unwanted buds should be cut out with a sharp pair of scissors, all the stalk being clipped away. This is a little job to be done with care, otherwise the buds one wishes to retain may easily be damaged.



SHOW ROSES

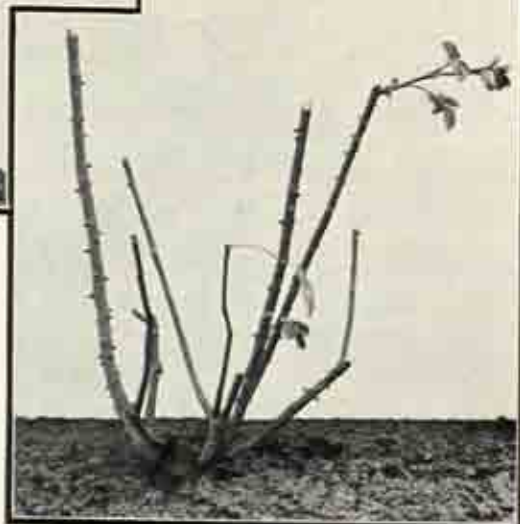
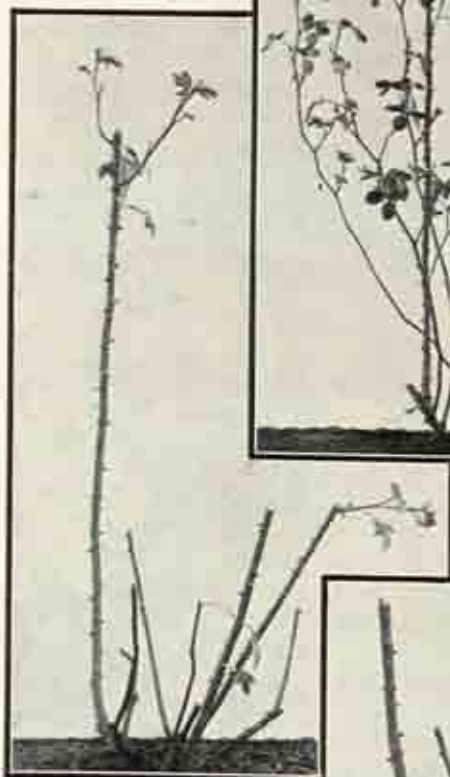
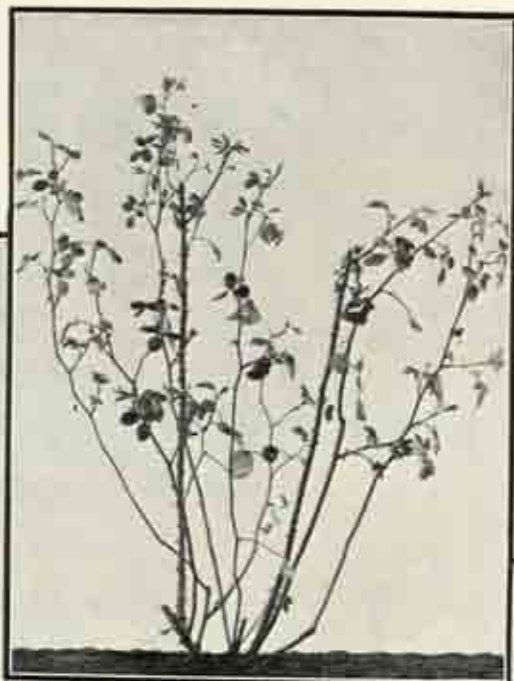
Roses intended for exhibition are all the better for shading. The shade safeguards the blooms against sun-scorch and the consequent marring of colour, and it also affords protection against heavy rain. The shading must be done with care; too heavy or too long shading may spoil delicate-coloured blooms just as inadequate shading may result in, say, red blooms assuming a purplish tinge.

Exhibition roses should be cut the day before or on the morning of the show. Use a really sharp knife or scissors and place the blooms in water straightway as they are gathered. Each bloom should be cut with a good length of stem to facilitate arrangement on the show bench.

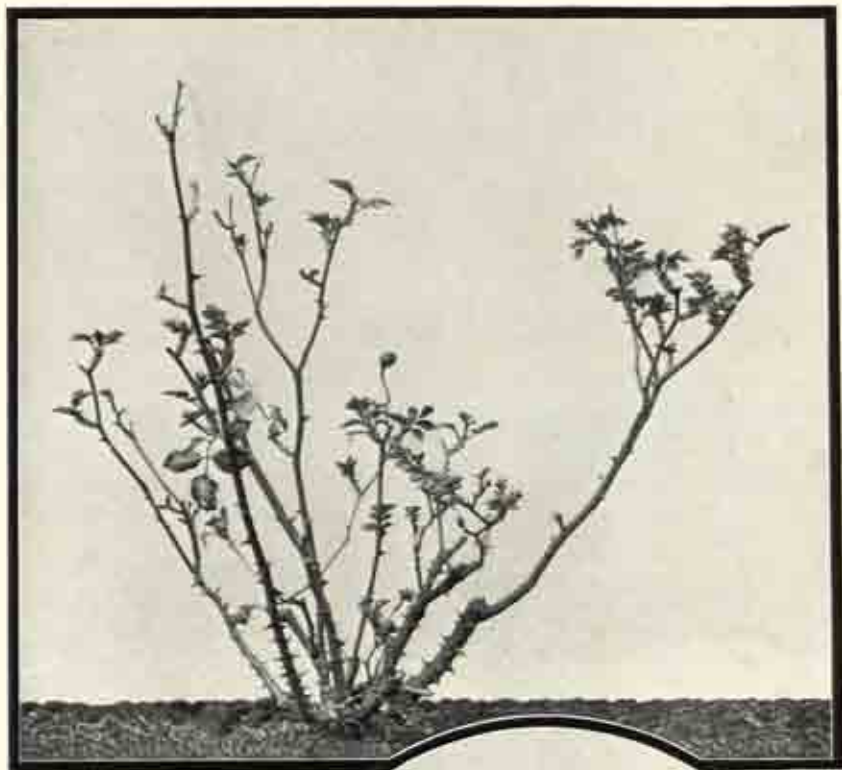


PRUNING NEW H.T.s

Hybrid Teas take a season or two to become established and during their first year may produce a number of weak shoots.

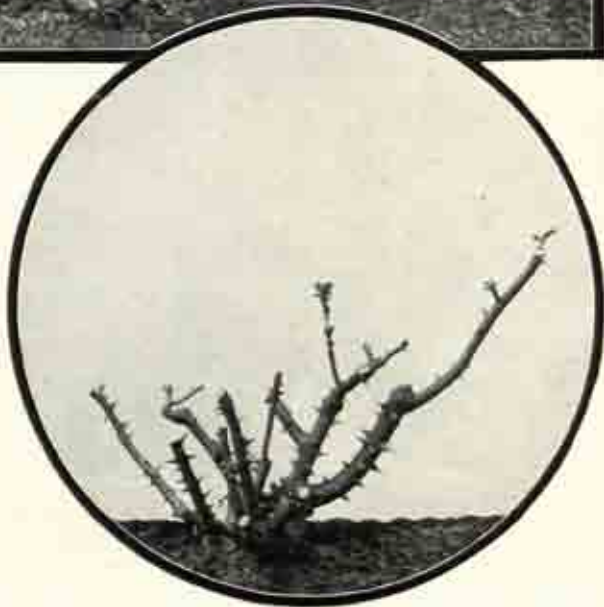


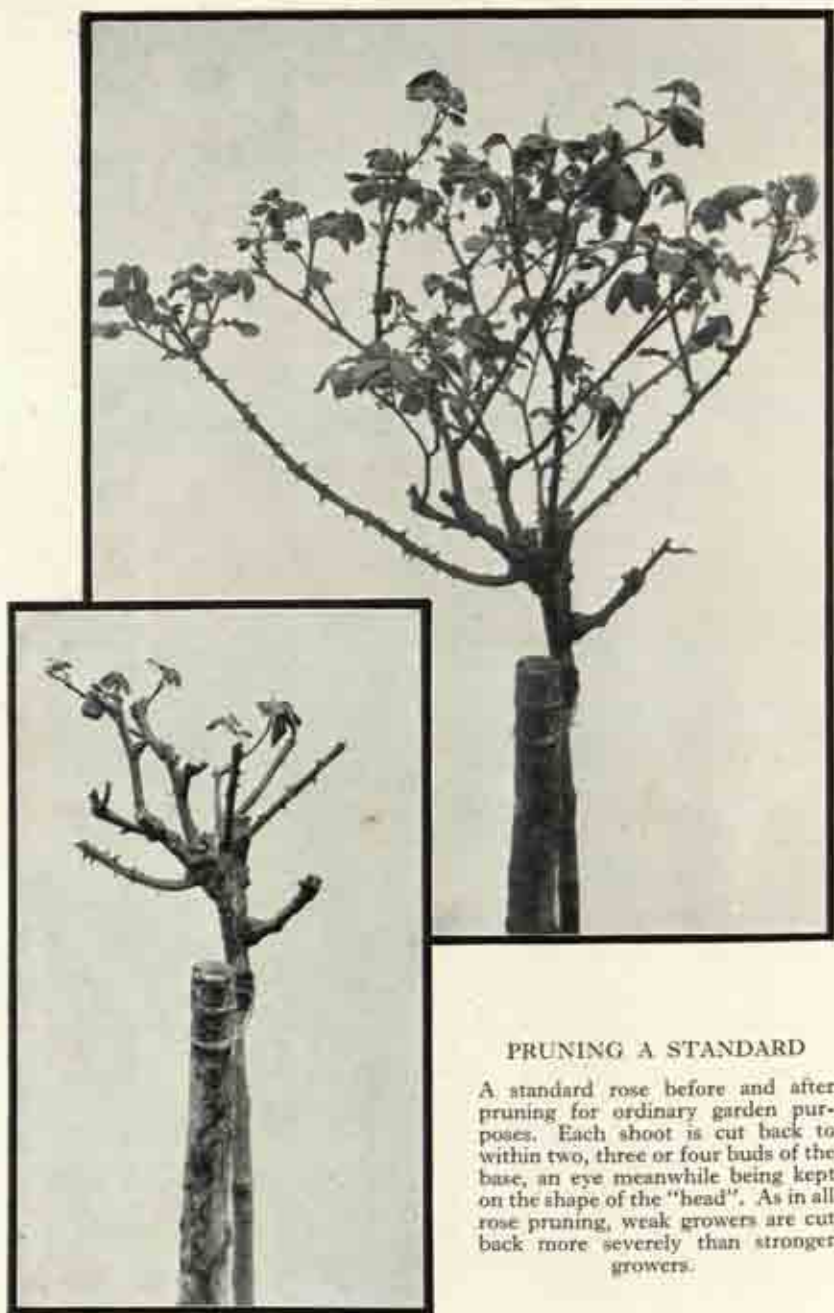
The weak shoots should be taken out and the remaining stronger growths cut back to four or six good "eyes".



ESTABLISHED BUSHES

These photos show a typical established H.T. before and after pruning. Points to note are that each cut is made to an outward pointing bud, that the cut is made immediately above the bud and with a slight slope. Horizontal cuts hold rain and may start canker.





PRUNING A STANDARD

A standard rose before and after pruning for ordinary garden purposes. Each shoot is cut back to within two, three or four buds of the base, an eye meanwhile being kept on the shape of the "head". As in all rose pruning, weak growers are cut back more severely than stronger growers.

PRUNING THE RAMBLERS

Ramblers are pruned as soon as the flowers have fallen, usually in late July or early August. The best method is to release all the growth from the support and then to cut out most or all the just-flowered shoots, according to the vigour of the plant. Then retained shoots can be tied back, being spaced out evenly over the support.



The old unwanted shoots should be cut out as near the ground level as possible



PRUNING A CLIMBER

Climbing roses are given their proper pruning in the spring. The main framework of the plant is retained though any growth which has become old and exhausted should be removed.



The side-shoots springing from the main branches are shortened to the third "eye". Angle growths—those coming from where branches fork—should be cut out completely; rarely do they bear flowers.



POLYANTHA ROSES

The weaker varieties of Polyantha roses need vigorous pruning, otherwise they produce a lot of weak, flowerless growths. In the case of the stronger sorts, such as *Gloria Mundi*, it is sufficient to remove one or two of the older branches, to prevent congestion, and then to shorten the shoots by a third to a half.



PRUNING POT ROSES

With these roses quality of bloom is the chief consideration. Therefore, the plants should be cut back rather hard, which will mean finer if fewer blooms. The shoots can be pruned back by about two-thirds, each cut being made to a good "eye" or bud. Here is a typical pot rose pruned in the manner suggested to produce quality blooms.

date Roses were always on their own roots, until 1834, it was generally supposed to be the best for that particular purpose, and it held its sway until the introduction of Manetti in that year. As long as Hybrid Perpetuals and Bourbons were the popular Roses, Manetti was the favourite stock, but with the advent of the Hybrid Teas, from 1876 onwards, it declined in popularity and rightly so. Modern Roses that are budded on Manetti are short-lived.

Seedling Briar, then, was the principal stock in general currency. But thinking rosarians began to ask the question—why cannot we get a stock with a uniform root system such as we have in the case of our Apples on Paradise stocks and our Pears on Quince? Little research work in that respect has been done with Roses, although in an attempt to obtain uniformity some enterprising nurserymen did use selected forms of Briar such as Brog's, Deegen's, Kokulensky, Senff, and others. These are selected forms of *canina* that are known to come fairly true from seed.

To-day there is a great interest in Rose stocks, and good stocks are now regarded as essential for the production of choice flowers and satisfactory bushes. During the war years the importation of Rose stocks was prohibited, and in many cases all sorts of substitutes were used for the production of plants.

This substitution and its subsequent repercussion has led some enthusiastic rosarians to ask if Roses would not do better on their own roots rather than on a conglomeration of incompatible stocks.

If we study the history of Rose growing and examine the records of the days when stocks and the art of budding were in less request than they are now, we find that the old growers rooted their Roses in large quantities. In many old gardens in this country some of the ancient plants still exist, and they are fine big bushes giving a wonderful display of flowers. The aristocratic old Tea Roses are an example. Varieties that were budded seem to have had a precarious and limited existence, but plants on their own roots have survived. Examples of fine specimens of Chinas, Albas, Teas, Damasks, Moss, and many climbing Roses can still be found all thriving well despite their age.

Coming down to modern times we often find plants of Roses in gardens of recently rooted Hybrid Teas, Hybrid Perpetuals, and Hybrid Polyanthas, and all of them have been propagated from cuttings. Every sucker from the base is a part of the Rose and there is no Briar or other form of stock growth to bother the grower.

Full particulars as to the striking of cuttings are given in this book in the chapter on "Growing Roses from Cuttings".

All Roses, it should be remembered, will not strike satisfactorily from cuttings, and sorts such as Madame Edouard Herriot where Pernet blood predominates should be avoided. This particular type of Rose is nearly obsolete because so many of the Pernet kinds have been interbred with the Hybrid Teas and others and have consequently lost most of the Persian ancestry that was originally inherent in them. All the Hybrid Teas, Hybrid Perpetuals, Hybrid Polyanthas, nearly all of the old Roses and the species, and climbing Roses and ramblers will strike from cuttings.

In these days of dear Roses, and when good plants are very scarce, many amateur growers will be glad to try their hand at the rooting of cuttings. A lot of research work remains to be done in connection with stocks, and we are still a long way from the ideal one for Roses.

In order to give growers an idea of the complexity of the stock question, the following tables show the various strains of *R. canina* used in this country, and also other forms of stocks that are occasionally used:

R. canina Linn., Briar stock from seed and cuttings:

Brog's canina.
Deegen's canina.
Jägerbataillon.
Kokulensky's canina.
Senff's canina.
Schmidt's Ideal.
Schmidt's Special.

These selected forms come fairly true to type from seed.

Other stocks:

R. rugosa.
R. polyantha (Sieb. and Zucc.).
R. moschata floribunda (Hort.) and various forms of *R. multiflora* (Thumb.), *R. Frobellii* (laxa) and *R. Manetti*.

ROSE DISEASES AND HOW TO RECOGNIZE AND TREAT THEM

THE Rose is subject to a number of diseases; in all there are at least a dozen. It stands to reason, therefore, that the Rose-grower has to be continuously on guard to keep his charges free from attack.

As with ills of all kinds, prevention is infinitely better than cure and the way to prevent disease among Roses is to keep their powers of resistance at a constantly high level.

General Precautions.—The healthier and stronger the Rose, the greater its powers of resistance to disease, so that unfailing attention to cultural details is the first safeguard. Give the trees and bushes plenty of water when they need it, food to keep them growing, hoeing to keep the soil fresh and well aerated over their roots, protection in the winter and early spring to safeguard the shoots from frost and all the other attentions detailed in this book; then, and then only, will you have trees into which disease will find only a very difficult entry. Neglect these simple precautions, however, and the first germ that comes along may find the trees easy prey.

To Prevent the Spread of Infection.—As with all kinds of disease, whether human, animal, or botanical, sanitation plays a chief part in preventing the spread of infection from one tree to another and carrying it over from one year to the next. The spores or "germs" of disease may come from a neighbour's garden or from wild Roses growing near by, or from diseased leaves or wood of the previous year.

You cannot doctor a neighbour's trees or hedgerow briars, but you *can* ensure that your own trees spread no infection. The leaves should be collected and burnt as soon as they fall and all diseased wood should be cut out as soon as noticed and also consigned to the fire.

Incidentally, when pruning a diseased tree, it is a wise plan to dip the knife or secateurs into a tin of strong disinfectant to avoid risk of carrying trouble to other trees.

When a whole bed of Roses has been badly diseased, a clean sweep can be made of all trees by removing the surface soil to a good inch in depth, and redressing with new soil procured from another and healthy part of the garden.

Hints about Spraying.—In most of the following diseases it will be noticed that the recommended method of control is to spray with one or other of the fungicides.

The chief object of this spraying is not so much to destroy the disease itself—a thing rarely possible, in fact—but to prevent its spread to so far healthy parts of the tree. Consequently it is of first-class importance, when spraying, to see that every portion of the foliage and wood receives its adequate coating of the fluid. Use a really good sprayer—one which has a fine nozzle and delivers the spray in a fine cloud—and direct it to every part of the plant under treatment, the under-side of the leaves, the joints of the various branches, the stem itself, each receiving their just quota.

Remember that any spray is only efficacious so long as it remains on the plant for a reasonable time; if a shower of rain comes along before the fluid has had a chance properly to do its work, there is nothing for it but to spray all over again.

Now to give the specific remedies for the different diseases.

Mildew.—Rose Mildew is most troublesome at two particular seasons—the early summer and early autumn—but trees can never be said to be entirely free from danger.

The first signs of Mildew attack are isolated spots of white mould on the leaves. When the affected leaves are not quickly removed, or due precautions taken, the trouble spreads until the whole plant is infected.

Whenever a spot of Mildew is seen on the Roses it should be at once gently rubbed between the finger and thumb after these have been dipped in flowers of sulphur. This will kill the fungi and prevent the spread of infection.

This method is not practicable if the trouble is widespread. Nor can it be practised with Rambler and climbing Roses. Dusting with flowers of sulphur from a sprinkler-tin or powder-blower, after the foliage is wet from rain, or a spraying with clear water or from dew, is the method here.

Another effective Mildew check is to spray the Roses with liver of sulphur (otherwise potassium sulphide) solution. The recipe for this is given at the end of the chapter. Repeat the spraying in a week or ten days' time.

Black or Downy Mildew.—This is a more serious disease than ordinary Mildew and, although it is most often seen on Roses growing under glass, it is also quite common on garden varieties.

The plants begin to wilt for no obvious reason and the leaves fall very freely. Brown or purplish-brown spots will be found on

affected leaves, on the upper surface, and below there will be small whitish-grey, "downy" patches. Later the trouble spreads to the stems, on which sunken, dark patches appear.

When this form of Mildew once appears, it is likely to spread with great rapidity, especially with greenhouse Roses. Hence the importance of taking prompt steps to check it.

Remove and burn all dead and affected leaves. Then spray the trees very thoroughly with liver of sulphur solution and, if indoors, ventilate freely. Another method which is often successful, is to vaporize some sulphur in the greenhouse by burning it on some hot coals or with special sulphur coals to be bought for the purpose.

Black Spot.—Caused by a fungus, this malady—apart from the untimely falling of the leaves—may be diagnosed by the presence of large purple or dark brown areas which appear on the upper surface of the leaves. These areas have a curiously fringed border.

Pick off and burn affected leaves and spray repeatedly with liver of sulphur solution or Bordeaux mixture. Also water the ground around the trees with permanganate of potash solution, colouring the water to a pale pink, to kill off spores of the disease in the soil.

Recipes for these sprays will be found at the end of the chapter.

This is really all you can do during the summer to check the spread of this very destructive Rose disease. Later on—in the winter—you must complete the work by clearing off all the fallen leaves and by giving a dose of sulphate of iron—1 oz. to the square yard of bed or border. When pruning in spring you must see that all wood carrying the characteristic patches is cut clean out.

Rose Rust.—This is one of the commonest diseases. It may be recognized by masses of orange spores which make the foliage look "rusty". Later these masses merge until the whole leaf is affected and drops off.

Carefully remove and burn all infected leaves, and spray with a potassium sulphide or liver of sulphur solution.

If only single branches are affected, the trouble can often be checked by sponging with methylated spirit and water, half and half. Very badly diseased growths should be cut out altogether.

Crown Gall.—When galls, or swellings, appear on the stems of Roses, a disease known as Crown Gall is present. Though this trouble is most frequent at the point where the stem meets the ground, the swellings occur also on any part of the stem or root and sometimes on the branches. The swellings become hard and woody, and more or less cracked on the surface.

Most varieties of Roses are susceptible to this trouble.

The galls should be cut away carefully, the wounded surface

then being painted with white lead paint, to prevent reinfection or attack by any other disease.

Leaf Scorch.—This disease attacks only the leaves, on which small yellowish-green patches occur. The patches increase in size, become definitely yellow, then change to pale brown, with a dark reddish or purple line around them.

When young leaves are attacked the brown patches generally fall out, leaving a hole. Where this does not happen and the leaves do not fall, whitish spots later appear in the brown patches.

Gather all affected leaves on the tree and on the ground and burn them. Clean the ground by drenching it with Cheshunt compound (see the end of this chapter). Spray the trees with liver of sulphur solution.

Sooty Mould.—This is not a very common disease, but when it does appear it shows in the form of a black sooty layer on the leaves. This layer may peel off in flakes during hot weather.

The fungus does not subsist on nourishment derived from the leaves; it lives on the "honey dew" deposited by Green-fly. If, therefore, Green-fly are kept in check this disease will not appear, or not persist after the Green-fly are dealt with. (For methods of dealing with Green-fly see next chapter.)

Chlorosis.—This is a kind of Yellow Jaundice which sometimes afflicts Rose trees (standards, bushes, Climbers, and Ramblers alike). The leaves may assume a decidedly yellowish tinge or they may show only a slight veining of yellow, or they may go brown-looking, almost as though scorched, where there should be no colour but full green.

The remedy is to water the soil around the plant, and also spray the foliage, with a solution of sulphate of iron— $\frac{1}{2}$ oz. per gallon of rain-water, the solution being made in a wooden vessel for fear of its reaction on metal.

Use about one gallon of the solution per plant each time, and apply it first of all as soon as the trouble is noticed and again a month later.

Do not let the fluid touch your clothes because it is corrosive and will burn them.

Die-back.—In severe cases of Die-back, long shoots—5 or 6 ft. in length in the case of Ramblers—may be completely lost, the shoots dying and turning black. In other cases the leaves turn yellow and drop; then there are dead patches on the shoot. Finally the whole shoot is affected back to ground level. It is believed that infection takes place through the dead tissue of buds killed by frost.

All diseased growths must be cut out, back to sound "wood" if only part is affected, back to the roots or stem if the whole of the shoot is dead. In autumn spray any trees which have so suffered during summer with strong Bordeaux mixture and with ammoniacal copper carbonate (see the end of this chapter) in early spring.

Stem or Brown Canker.—This disease may attack any portion of the stem or branches. It first appears in the form of raw umber-coloured patches sometimes surrounded by a purple border. Later these patches develop and rapidly produce the characteristic lesions.

All cankered wood should be cut away and burnt. Then the wound should be painted over with Bordeaux and plugged with a paste of clay and manure. In autumn spray the tree with ammoniacal copper carbonate mixture.

Crown Canker.—This form of Canker usually occurs at the point just above the union of scion and lock. It shows first in a slight discoloration of the bark, this rapidly deepening to black. The bark appears as though soaked with water and there is gradual swelling which later results in cracks in the bark. The diseased wood has a powdery consistency, but this is more noticeable when the seat of the trouble is underground.

There is no definite cure for this disease, but it can usually be prevented by sterilization of the soil. Sterilization should always be done if new trees are to be planted in ground where diseased trees have been growing. It is also less common when the graft union is kept above ground level.

Bronzing.—With certain varieties of Roses—especially with young plants grown under glass—the leaves sometimes show bronze-mottled patches with a yellow border. This is called Bronzing and affected leaves usually drop off.

The chief cause of this is overfeeding, so that, in cases of attack, more care in this direction must be observed in future. Affected leaves must be collected and burnt and the trees sprayed with liver of sulphur solution.

ROSE DISEASE REMEDIES

The recipes for making the various remedies advised in the foregoing are as follows:

Liver of Sulphur Solution.—This is sometimes called potassium sulphide solution. It is made by dissolving 1 oz. potassium sulphide (liver of sulphur) in 2 gallons of water and adding 3 oz. of soft soap to each gallon of the mixture. This solution is best

mixed and used immediately as exposure to the air causes depreciation of its fungicidal properties.

Bordeaux Mixture.—The standard solution is made up of 5 lb. copper sulphate, 5 lb. stone lime, and 50 gallons of water, or smaller quantities *pro rata*.

Using a wooden or earthenware vessel, first dissolve the copper sulphate in a small quantity of water and add more water to 25 gallons. The lime should then be slaked slowly and mixed with a further 25 gallons of water. The lime-water is then poured over the copper sulphate solution and stirred to ensure thorough mixing.

The mixture should be carefully strained before spraying and constantly stirred during use.

Readers who do not wish to go to the trouble of making Bordeaux mixture can buy the preparation in the form of paste which only needs diluting with water to be ready for use.

Cheshunt Compound.—To make this take 2 parts copper sulphate and 11 parts *fresh* ammonium carbonate. These should be crushed to a fine powder, mixed, and stored in a *tightly corked* glass or stone jar for twenty-four hours. One ounce of the mixture should be dissolved in warm water and added to 2 gallons of water.

The mixture should not be put into iron, tin, or zinc vessels.

Ammoniacal Copper Carbonate.—The formula is 5 oz. copper carbonate, 3 pints strong ammonia, and 40 gallons water. The copper carbonate is made into a paste with a little water and the ammonia, after being diluted to 1 gallon with water, is added in small amounts, stirring all the time. The remainder of the water is then added.

As the solution loses strength with age, use immediately after making is recommended.

ROSE PESTS AND THE REMEDIES AGAINST THEM

As every Rose-lover knows to his cost, there are innumerable pests which prey upon the Queen of Flowers—pests which must be fought tooth and nail if the Roses are to bloom to that perfection which gladdens the heart of any keen gardener.

The spring is the time to begin this campaign; to combat the early hordes and so ensure that there is no danger of the pests shortly gaining the upper hand by sheer weight of numbers. To delay in opening the war on pests means not only much harder work later, but numbers of spoilt bushes which might have been saved had energetic measures been taken earlier.

As in the case of diseases, so with pests—much can be done by keeping the trees under good cultural conditions. So maintained in good health, they will be enabled to develop their own powers of resistance to attack, in many cases escaping damage which would cripple less healthy plants.

Care with regard to watering, whenever a dry spell occurs, regular and forceful syringings, all are important. The syringe is particularly valuable. If your Roses develop a load of Green-fly early in the season, whilst the foliage is too young and tender to resist the scorching influence of even diluted insecticides, the syringe and clear water will be sufficient to clear away the pests.

Again, if any tree contracts Red Spider (the signs are the reddening or browning of the foliage) syringing with clear cold water is the way to cleanliness.

Spraying with insecticide is the leading method of pest control. As *prompt* spraying is essential on any occasion when signs of attack are seen, it is necessary always to keep a stock of insecticide by you. There are a number of first-class proprietary spraying fluids on the market, and if you want something ready for use, you can safely buy one of these and be certain that it will do its work thoroughly well.

For the benefit of those who would like to make up their own spraying fluids, below are given the formulas for a number of those which are best known and most generally useful in the Rose garden:

Quassia and Soft Soap.—This is most useful as a preventive of Aphis (Green-fly) attacks. It is made up from: Quassia chips, 1 lb.; soft soap, 1 lb.; and water, to 8 gallons.

The quassia chips are soaked in water for a couple of days and simmered over a slow fire for two or three hours after the soaking—to extract the bitter principal. The strained liquid and the dissolved soap are then mixed and churned up together thoroughly. This can be bottled and diluted in quantities as required. The quantities given will make 8 gallons of safe and useful wash.

Bitter Aloes and Soft Soap.—For those who do not wish to take the trouble of soaking quassia chips, the following mixture is recommended. It has the same effect and may be used for the same purpose as the above-given mixture: Bitter aloes, 2 oz.; soft soap, 1 lb.; and water, 4 gallons.

In both cases it is necessary to allow the protective spray to dry on the foliage to which it is applied.

Paraffin Emulsion.—One of the best formulas known for a general-purposes paraffin emulsion is the following: Paraffin, 1 quart; soft soap, 1 lb.; and soft water, 2 quarts.

The soft soap is dissolved over the fire in the 2 quarts of water. Then the solution is taken off the fire and the paraffin added gradually and stirred briskly in. The mixture is then bottled for use as a stock solution. It must be kept closely corked and given a good shaking occasionally—always before use.

To use this stock solution in summer you add 1 part of the soap-paraffin to 49 parts of water.

An efficient killing spray for Red Spider is Nicotine solution. This is made by dissolving 1 quart of tobacco extract and $\frac{1}{2}$ lb. soft soap in boiling water and diluting with water to 3 gallons.

Now to deal particularly with each pest.

Green-fly.—The first pest in the year to attack Roses, and probably the worst of them all, is Green-fly. It will appear first of all as a fat Aphis, usually on the younger leaves. But these isolated insects multiply themselves with amazing speed, given nice weather and something good to eat. And the latter is provided by the succulent tips of the young shoots. Very soon after the pioneers have appeared you will find colonies of the Green-fly clustering on the tips of the shoots.

As a result, leaves will take on a yellow look and be covered with a sticky exudation; whilst the shoots themselves may be distorted and the flowers will open spotted and malformed.

Serious results such as this can only be prevented by beginning to spray in good time with a mild insecticide—say, quassia solution or paraffin emulsion at half-strength. Later on, when leaves and shoots are stronger, you can use nicotine emulsion or paraffin emulsion at full strength.

Whatever you use, remember that it *must* be applied forcibly and that all parts of the leaves and branches must be wetted. The early morning or the evening is the best time for the job—not when the sun is at full power.

An hour or so after the spraying has been completed, the trees should be syringed with clear water. This prevents any danger of the foliage being burned, as sometimes happens when the insecticide is too strong or when the spraying must be done in the sun-shiny hours.

Also, the clear water washes away the dead Aphides and leaves the trees nice and clean.

Each spraying should be followed three days later by another spraying to kill the insects which were in the egg stage at the time of the first spraying.

If any tree is rather backward or, at the beginning of the season, when the leaves and shoots are still young and tender, the paraffin or nicotine should be entirely omitted from the spraying fluid and only soft soap and water used until the leaves are stronger.

An excellent plan for dealing with clusters of Green-fly on the end of a shoot is to turn the shoot down into a basin filled with the insecticide. Another good idea, where badly infested shoots are concerned, is to dip the fingers in the fluid and run them along the shoot.

But it won't be enough to give one or even two sprays and then consider the plague definitely done with. A constant watch right through the summer will be necessary, with the ready use of the sprayer if further signs of attack become obvious.

Scale Insects, Mealy Bugs, and Rose-leaf Hoppers.—The remedies against these pests are the same as for Green-fly above.

Frog-hopper or Cuckoo-spit.—This insect, which is sometimes also called the Spittle-fly, sucks the sap from Rose shoots and deposits it in bubbles as a covering round itself, thus forming the blobs of frothy substance so familiar to all Rose-growers.

Squeezing between finger and thumb, although a messy job, is the most effective way of dealing with these pests. When there are a great deal, however, vigorous syringing with insecticide is a quicker method. To make assurance doubly sure blow the blobs of froth, before syringing. This allows the insecticide to penetrate easily.

Leave no heaps of loose material lying about, as they encourage the pests.

The greatest damage comes from this pest when, from about the middle of July onwards, the adult insects begin to hatch out from

the frothy larvæ. At this second stage insecticides are of more use and the trees should be thoroughly and regularly syringed.

Red Spider.—This minute, almost invisible red insect congregates on the under-sides of the leaves and, by sucking the sap, considerably weakens the plant. It is particularly addicted to greenhouse Roses and Roses growing on fences and walls, but is by no means uncommon on all varieties. In case of attack, the foliage has a sickly look, or it may be reddening or browning.

It exists most happily in very dry conditions and so the first step in its control is to keep the atmosphere of greenhouses moist and syringe all Roses, indoors and out, with clear water. Paraffin or nicotine emulsions are effective against this pest, but, when infestation becomes extra severe in the greenhouse, fumigating with nicotine fumigant is the best method.

Beetles.—There are six kinds of Beetles which attack Roses—the common Rose Beetle (coppery green with creamy marks on the wing-cases), the Cockchafer (sometimes called "May-bug"—black head and thorax, reddish-brown, hairy wings, black and white marks on sides of abdomen), the Summer Chafer (smaller than the Cockchafer and reddish brown), the Garden Chafer (same size as the Summer Chafer only the body is green with brown wing-cases), Weevils, and Raspberry Beetles (very small brown insects).

With all these pests, the best remedy is to spread a white cloth under the bushes in the evening, or at any time on a cool dull day, and give the bushes a gentle shake—not a vigorous one or they will fly away. When they drop on the sheet they can easily be seen and dealt with by picking them up and dropping them into a jar of paraffin.

In winter, if your Rose beds are much troubled with beetles, the soil should be treated with a fumigant—naphthalene, vaporite, etc.

Leaf-cutter Bees.—This pest cuts semicircular areas from the leaves of Roses, some bushes being entirely defoliated in a few days unless steps are taken to prevent it.

The only way to do this is to coat the leaves with something distasteful to the Bees and, for this purpose, there is little to beat quassia solution.

Saw-flies.—Of these there are four varieties which attack Roses—the Leaf-curling Saw-fly (which causes the leaves to roll up), the Rose Slugworm (which eats only the outer skin of the Roses, leaving the lower skin intact), the Rose Emphytus (which eats the whole of the Rose leaves, leaving only the mid-rib), and the Rose Shoot-borer (which bores down the pith of Rose shoots for from $1\frac{1}{2}$ to 3 in.).

With the Leaf-curling Saw-fly and the Shoot-borer, the only remedy is hand-picking and the destruction of all affected foliage and wood. With the other two, however, spraying with paraffin or nicotine emulsion is very effective.

Moths.—The Caterpillars of quite a number of familiar garden moths have a liking for Rose trees and, in exceptional cases, are found on the plants in considerable numbers, causing havoc to the foliage. In the ordinary way, however, hand-picking suffices. Caterpillars usually lurk on the undersides of leaves and that is where they should be looked for when suspiciously damaged foliage is noted.

Some other Pests.—There are certain other pests likely to give trouble from time to time. The best measures against these can most conveniently be given in chart form:

| <i>Pest.</i> | <i>Signs attack.</i> | <i>When attack commences.</i> | <i>When attack finishes.</i> | <i>Remedial measure.</i> |
|--------------------------|---|-------------------------------|--------------------------------|---------------------------------------|
| Rose Root Aphis | General drooping | May | October | Apply naphthalene (1 oz. per sq. yd.) |
| Mealy Bug (on pot Roses) | White patches on stems | December | When Roses are placed outdoors | Dab colonies with methylated spirit. |
| Thrips | Leaf-bleaching | Mid-May | End-Sept. | Spray with insecticide. |
| Rose Slug-worm | Leaves blotched white | Early June | End August | Spray with insecticide. |
| Red-legged Weevil | Gnawed buds and shoots | June | September | Shake weevils on to sacks after dark. |
| Oblong Weevil | Bored buds | End May | Early June | Shake weevils on to sacks after dark. |
| Red Bug Maggot | Shrivelling of bud just after budding in | July | August | Soak binding raffia in linseed oil. |
| Rose Leaf-miner | White tracks in leaves | Mid-May | Mid-Sept. | Nip off and burn affected leaflets. |
| Black-fly | Black wingless insects on young shoots and leaves | End June | End August | Spray with insecticide. |

PRUNING ROSES

ROSE-PRUNING is not by any means just a matter of cutting off a growth here and there to make the tree or bush look tidy. Before you make a single cut it is essential to consider what effects you wish to produce and what will be the results of each cut made.

Why Pruning is Necessary.—The important thing to remember is that by pruning you control the vigour of growth. That "growth follows the knife" is an old horticultural saying which is very true of Roses in particular; so, while a light pruning will serve where vigorous growers are concerned, weak growers must be cut back harder in order to get all the vigour possible into the few resulting shoots.

Unless this principle is gripped at the outset, the advice to prune lightly in some cases, and to cut back hard in other, loses point.

Then, pruning again controls not only the *number of shoots* that the bush will carry throughout the ensuing summer but also the number and quality, both as to size and colour, of the blooms that will greet the summer sun.

If you cut a branch back at pruning time to so many "eyes", you should expect each of these "eyes" to produce a shoot and each shoot a flower. The fewer shoots there are, the more vigorous will they get and the finer the blooms they carry. There you have one of the great secrets of producing the finest quality Roses.

On the other hand, if you leave a lot of "eyes" you will get more shoots and more flowers, but the latter will be of inferior quality.

When to Prune.—No hard-and-fast rule can be laid down as to the actual date to start pruning Roses, but, broadly speaking, the following are good dates to go by: Hybrid Perpetuals, Hybrid Teas—standards, half-standards, and bushes generally—Moss Roses, Japanese Roses, and weeping standards, in all parts south of the Trent should be pruned about March 12th; between Trent and Tweed, a fortnight later (March 26th); north of the Tweed and south of Inverness, three weeks later still (April 2nd); in North Scotland, a week later yet (April 9th).

Teas, Polyanthas, and Bourbon Hybrids are a little later and, being more tender, it is risky to cut into them before danger of really severe frost is past. In their case wait another week beyond the time given above for your area.

Climbing Roses growing on south and west walls south of the

Trent should be pruned as near March 21st as possible. It is never wise to cut them before then. On east and north walls prune a week later (March 28th). 'Twixt Trent and Tweed defer these dates one week (March 28th for south and west wall Climbers, April 4th for north and east wall Climbers). South of Inverness delay another week (April 4th and 11th respectively). In northern Scotland delay a week later still (April 11th and 18th respectively).

The Tools to Use.—Unless you are skilled in the use of a knife, it is safer to use secateurs for Rose-pruning. With them the erst-while prickly job becomes easy and a pleasure. But let it be a good pair of secateurs, with blades nicely adjusted, central rivet or pivot oiled, and so on.

Also invest in a pair of gloves which, while stout, are yet quite flexible. Heavy gloves of the usual gardening type are too cumbersome. Gloves save you many scratches and much unpleasantness.

How to Make the Cuts.—Every cut made in pruning must slant at a fairly acute angle, and must be made just above an "eye", bud, or joint. Horizontal cuts hold rain, and start Canker; little tips of jointless stem above the bud, having no sap to support them, die and are apt to set up Canker. In every case, make your cut to an outward-pointing "eye" or bud; otherwise the top growth will proceed towards the centre and produce hopeless congestion.

An "eye" is a small protrusion on the stem which, when growth starts, will become a shoot. An "eye", bud, or joint is the same thing.

Pruning Hybrid Perpetuals.—Without exception, H.P.s are vigorous growers and if you prune them too severely, you will only increase that vigour. You don't want to do that; it would mean waiting until autumn for a flower at the end of an ungainly growth and, even then, frost might be in before you.

Cut back your Hybrid Perpetuals half-way, therefore (say, above the fourth or fifth "eye").

Pruning Hybrid Teas.—When you start to prune H.T.s, you will find that the different sorts show great variation in vigour. You have strong growers like Madame Butterfly and Lady Forteviot, medium ones such as Hadley and Betty Uprichard, while those of the Christine and Mrs. Henry Bowles class are decidedly weaker.

It is important to consider carefully this matter of relative vigour, for on it the whole art of successful pruning rests. Examine your Roses, and in a few minutes you will be able to classify every variety as strong, medium, or weak.

If you are to have Hybrid Teas of good size, pure colour, and perfect finish, you must encourage growth of medium strength. Weaklings can't help bearing washed-out blooms; over-fat growths rarely flower at all. The point at which you put in your pruning-knife governs the strength of the resulting shoot.

You will get fine flowers in rich abundance if you prune each shoot of every strong grower half-way back (say, to the fifth or sixth "eye"), medium growers to four buds or "eyes" from the base, weaker ones to within two.

Pruning Tea Roses.—Tea varieties, including such exquisite Roses as Harry Kirk and Mrs. Foley Hobbs, can almost be counted on the fingers of both hands. Teas are not now regarded as being the tender and miffy Roses they were reputed to be. If grown on their own roots many of these grand old Roses will form large bushes if left alone and are only pruned very lightly. Hard pruning is necessary the first season after planting in order to obtain strong growth, but when once established only very light pruning is necessary.

If Tea Roses are to be grown for the production of exhibition flowers, pruning must be done in the orthodox fashion, that is, in the same way as Hybrid Teas are pruned.

In addition to the general pruning, cut out entirely very weak growths, which usually arise towards the base of the branches. Remove also shoots that grow towards the centre of the bush.

Pruning Standard Roses.—These are pruned, to all intents and purposes, in the same way as bush Roses, each according to its particular class (H.P., H.T., or T.). Briefly, each shoot is cut back to within 2-4 eyes of the base. To keep the tree to good shape, prune weak growths more severely than strong ones.

Pruning Rugosa or Japanese Roses.—Rugosa, or Japanese Roses, are the thorniest of all; there is scarcely a thornless spot of stem anywhere. If you have a Rugosa Rose you will have noticed its tendency to top-heaviness, and where the bushes are left unpruned for years—as is sometimes the case—a heavy snowfall may break them to pieces.

The best way to get a shapely, free-flowering specimen is to cut back the strongest growths to within 4 ft. of the ground, the weaker ones to 18 in. In this way perfect balance is produced. In addition, remove weak and centrally pointing shoots.

Pruning Moss Roses.—All Moss Roses show a tendency to make overcrowded growth, and your first job must be to cut out the old and weak branches. Don't stop until you are sure that sun and air can circulate freely round remaining growths.

Remove the unripened tip from each of the retained growths. Then look at the base, and you will see fat young shoots arising, sometimes from below ground, at others from the base of the main stem.

Cut each back to five or six "eyes". It is these growths that maintain eternal youth in your Moss Rose and enable you to make an annual clearance of old, unwanted wood.

Pruning Penzance and Austrian Briar Roses.—The only pruning needed by Penzance Briars is to thin out weak, crowded growths and shorten, as required, any that have rambled beyond a reasonably symmetrical outline. Severe cutting back makes Penzance Briars flowerless and unmanageable.

If you have an Austrian Briar, thin out the crowded shoots only and shorten the tips of the remainder. If there are any very strong growths, bend them over slightly and peg them down to restrain vigour.

Pruning Weeping Roses.—In pruning weeping standards, you must provide for the present and future years. An abundance of flowers is ensured for the season immediately following pruning by cutting off as much of the end of each drooping shoot as will take you back to sound, ripe wood—wood that feels firm rather than snappy to the touch.

Arising as uprights from the top of the head, you will find a number of weak, twiggy shoots. Remove these entirely. Then select two moderately strong shoots—one on each side—and cut them back to within 6 in. of their base. This treatment will stimulate the formation of fine growth for blooming the following season.

Pruning Dwarf Polyantha Roses.—You must not prune summer-flowering Polyantha Roses at all severely, except in the case of very weak sorts such as Katherine Zeimet, where the main shoots are cut back to within two buds or "eyes" from their base. With these weaklings this is the only way you can cause strong flowering growths to come forth. If you just tip them, they complicate their own branch system by producing a hopeless forest of puny twigs whose weakness forbids them to bloom. Moreover, when the top is congested like that, you get none of the basal growths by means of which Polyanthas to a large extent renew themselves annually.

By far the greater number of Polyanthas, however, of which the glorious Gloria Mundi is representative, bear much stronger growth. To prune them severely would mean an over-vigorous crop of strong shoots whose season of flowering would be too long delayed, if, indeed, it ever dawned at all.

The following is the correct procedure:

There will probably be one or two old exhausted branches through which young, vigorous ones weave their way. This old stuff is unwanted; it is merely a drain on the strength of the tree. It must be cut off at the ground-level. At the same time cut away whippy inside growths too weak to be useful.

Having eliminated the ultra weak and the redundant, you are left with a shapely, uncongested bush. All the pruning that remains to be done is to shorten each side-shoot on the main branches one-third to one-half the way back, according to the vigour of the kind.

Pruning Hybrid Polyantha Roses.—The Hybrid Polyantha Roses actually resent hard pruning, and medium pruning gives the best results. This class is essentially one for the production of masses of bloom for bedding and other purposes in the garden, but several of them are also grand for cutting for decorative work. Karen Poulsen, for example, makes a brilliant display in a vase and lasts long and retains its colour when cut.

Light pruning will result in early flowers; fairly hard pruning means autumn flowers, and medium pruning will ensure a neat, even growth. The best method is to leave no wood over two years old in the bush. When you buy plants from the nursery in autumn they will be covered with growths that were made during that season, and these should be pruned in spring. Medium pruning is best, removing any weak growths in the process. In the following season the shoots will have developed two or more new growths on each, and there are certain to be some strong basal shoots. You will thus have two types of growth to deal with. The two-year-old growths ought to be pruned back hard; the year-old growths should be pruned lightly by cutting out the old flower-heads down to the first eye.

In effect you have two types of wood on your plants, and the proper way to prune is to cut out all two-year-old wood right down to two or three eyes at the base, and all one-year growth should be lightly pruned.

Pruning Bourbon Hybrids.—Many gardeners have a few of the lovely Bourbon Hybrid Roses such as the silvery pink Zephyrine Drouhin. The flowers know little of form in its best sense, but their delicious perfume, and the amazing freedom with which they are produced, make them a source of unending pleasure.

In pruning these don't shorten a single shoot unless by any chance it is a straggler which in the interests of shapeliness *must* be cut back. In the ordinary way, simply cut out all the dead, and

enough of the weaker, shoots to give every one that remains a chance to develop properly.

Your aim with the Bourbon Hybrids must be to give every side-shoot plenty of sunshine and air, for it is on them that your hope of flowers rests.

Pruning Climbing Roses.—Climbing Roses, unlike Ramblers, are given their proper pruning in the spring, though sometimes side-shoots are shortened in autumn to facilitate ripening.

Climbers make a number of angle growths where the branches fork. Rarely do these growths flower; never do they bear good flowers. Therefore your first job in the spring pruning is to cut them out. Some of the side-branches on the main stem are so weak as to be useless. Cut these out also.

Occasionally a stem becomes so old and exhausted that it is obviously losing ground. If there is sufficient young wood to fill the wall or trellis space, the tree will be better without it. After you have cut it out, paint the cut surface with white lead paint to prevent the entrance of Canker spores.

Now you have left a number of main stems on which arise vigorous laterals, or side-shoots. If these were cut back half the previous autumn to facilitate ripening, cut back farther to within three good "eyes" of the base in spring. If no pruning was done in autumn, let the spring pruning still be the same—cut each side growth back to the third "eye".

Sometimes at pruning time it is noticed that the branches of Climbers have developed a thick, hard, growing point. In this case, the branch will not extend, but will expend itself in producing a cluster of short, soft, flowerless growths. It needs a new start, and this you can give it by cutting off about 3 in. of the branch extremity, and paving the way for the development of a vigorous young shoot.

It is always an advantage to take down a Climber from its support for its pruning. You can work better then, and you dislodge any pests that may be lurking in the ties, or between the stems and the support. When tying up again, leave sufficient room to allow for stem expansion.

Pruning Newly Planted Roses.—If you planted Roses at the normal time (November), by the following March the sap will be running and, though the buds will not have developed quite as much as those on established bushes, you will be able to see by their plump, pink appearance that they are thriving. Prune them exactly as advised for established bushes, but a week later.

With late-planted Roses (that is to say, Roses planted in March),

the roots will be taking hold when pruning time comes, but there may be no sign of growth in the buds. Wait until you see it; then prune. Don't imagine that because a Rose is newly planted it should not be pruned; the need for pruning is even more urgent.

Some nurserymen prune the Roses they sell in spring before delivering them. This is often an advantage.

Pruning Greenhouse and Pot Roses.—This matter is dealt with in the special chapter devoted to these Roses.

HOW TO PRUNE RAMBLER ROSES

Rambler Roses are different from all other Roses in that they are pruned in the autumn instead of spring, the best time being as soon as the flowers have fallen at the end of July or early in August, though it may be done as late as November.

The main idea in pruning Ramblers is to cut out all the just-flowered shoots. They are of no further use to the trees; they will never bloom again. If they are left on, they drain the soil of valuable food, weaken the new young shoots which will produce the next year's flowers, and, by keeping off sunshine, they prevent those young shoots from ripening.

The first step in pruning is to release all the old growths from their supports and tie the young ones loosely in. In this way you prevent that tearing of the young growths which is inevitable when you prune without making the separation.

In every garden, every year, there is a great difference in the amount of progress made by different Ramblers; therefore, the pruning of each specimen must vary slightly accordingly. Here are the methods to adopt in each case.

The Vigorous Growers.—Perhaps you have a very vigorous Rambler, one which has never looked back since you planted it and which has gone on making more and more growth every year. Every one of its seven or eight strong shoots comes from below the ground. That is the perfect Rambler, and your course is clear.

With a pair of tree pruners (or, if you haven't got them, a small tenon saw—ordinary secateurs are not big and strong enough in many cases), you have simply to cut off all the old growths (those that have borne blooms during the summer) at the ground level.

Should you have mulched previous to pruning, clear away the mulch so as to enable you to cut well back. Dying branch bases are a fertile cause of disease.

The Weak Growers.—The next type of Rambler is the one which, being weaker than the above, has made only two or three

new growths during the summer. You know at once that if you cut out all the old wood, there is not going to be sufficient material left for a respectable tree.

Look towards the base of the old branches, and you will see a number of fairly strong young growths springing from them. Their unbranched condition and light green stem enable you to identify them at once as new shoots. This material can and should be used to supplement the new growths coming from the ground; the two together will make a well-furnished Rambler.

So with a sharp pruning-knife cut back the old growths to $\frac{1}{4}$ in. above the point from which its best young growth springs. Never cut flush with the young growth, or it may bleed to death. To make sure that no disease spores enter, paint the cut surface with white lead paint.

When No New Growths are Made.—A third type of Rambler is the one which, for the first year after planting, gives no bloom and makes no young growths. It has formed a few side-shoots, that is all.

In a case like this you have to apply a special method. First cut out the weak, twiggy growths that arise where the branches fork; they have been holding back development all along. Then cut 5 or 6 in. from the tip of each main branch. Finally, water weekly with diluted liquid manure until the end of September, to encourage the fibrous roots that will put the tree into form for a better effort the following season.

Overgrown Ramblers.—Even Ramblers which haven't been touched for years and are nothing but a mass of tangled growths, can be brought back to perfect condition by timely pruning.

There are sure to be one or two young basal growths, but there will be a great many more long, young side-branches arising all over. After releasing the tree from its support, cut out sufficient of the old branches to give the young a fair chance to ripen and develop.

Some may have to come out at the ground level, others half-way up, and so on. But consider nothing save where to make the best cut in the interests of future flowers.

Having received this treatment, your overgrown Rambler should resume normal growth the following year and require normal pruning.

Should New Growths be Tipped?—When you have pruned a Rambler, the first thing to do is to tie in the retained growths. First the strongest and then the weaker shoots must be fastened into position, the whole being spaced out evenly, at 5 or 6 in. apart, to cover the fence, arch, or whatever the support may be.

It is sometimes suggested that the tips of the young growths may well be cut back. It is better not to do this, but to tie them in at full length.

The effect of shortening any young growth is to cause buds that ought to remain dormant all winter to start to make growth at once. That will not only shorten directly the next year's flower "crop", but it will cause to develop a lot of "wood" which will never ripen and may be cut up badly by frost.

All the growths must be tied in, however short they may be, for safety's sake.

The Late Pruning of Ramblers.—It may happen that press of work in other parts of the garden causes you to neglect Rambler Rose pruning at the correct time. Alternatively, you may find, on taking over a new garden in the spring, that the Ramblers have not been touched. Such trees can be taken in hand even in February, but pruning must be done before the sap rises very high in the spring; otherwise it will do more harm than good.

The same rules apply with winter-pruned Roses as with those pruned at the normal time. You can tell which are the old growths and which the young by the fact that the latter are greener and fresher-looking; also the former, even at this late date, will still bear signs of having flowered the previous year; their stems, too, will probably be blackish.

Cut out all the old shoots down to ground-level if they bear no strong young branches towards their base. If they do, cut them off to just above their new branch-growth. Then tie in the remaining branches evenly over their support.

REMEDIES FOR ROSE-PRUNING MISTAKES

When you look over your bush and standard Roses a month or so after pruning, you may find that a little more cutting back is necessary, perhaps to correct some oversight on your part at the main pruning. For instance, you may find here and there that instead of making a clean cut when removing part of a shoot you crushed the end of the wood. To put that right, cut back to the next good bud pointing away from the centre of the tree. There may also be a dead branch or two to come out. Perhaps these branches were left in in the hope that they would "pull round". But they have produced no buds and so should come out.

Then the dormant bud to which you pruned back will in some

cases have failed to grow. Cut back farther to where growth is really being made.

Any young growths, too, which are growing inwards, to the centre of the bush or standard, should be rubbed out. These growths, if allowed to remain, would crowd up the centre of the tree and make it an easier prey to fungoid diseases and insect pests.

Shoot-thinning.—In some instances a vigorous Rose may be sending out too many new shoots, while other less vigorous specimens may be producing a number of very poor-looking growths. In each case the unwanted shoots should be rubbed off, for the tree will be happier without them.

"OUT-OF-SEASON" PRUNING

In Summer.—During the summer months, long whippy shoots are produced on some Rose trees which cannot possibly be expected to produce flowers that summer. Moreover, unless something is done with these shoots, the real flowering wood will have very little chance to do its job properly and produce a second crop of blooms. Cut back these long new shoots, then, so that they are not more than two feet long. If they are only that length to begin with, pinch off their tips.

That temporarily holds up their growth and allows side-shoots from the older wood to make another effort to flower before the summer is over.

Of course, even with bush Roses that have grown normally, there is always a need for a certain amount of summer pruning. Nevertheless, this need not be a very strict procedure and so long as you cut the flowers in the right way—that is with as long a stem as possible—that will be pruning enough.

In Autumn.—Autumn also brings its quota of knife-work to the Rose grower, and there will be some long, vigorous shoots rising far above the heads of their fellows.

To leave such long shoots on the Roses all winter would be to run a grave risk—that of having them broken off at the base through gusts of wind catching them.

In any case, long growths, acting as sails, are likely to cause the whole tree or bush to sway and work loose in the soil. If this happens, along come other troubles, such as the breaking of fibrous roots, water getting down to the roots and rotting them, and the chafing of bark by supporting stakes.

Shorten these long shoots, then, to approximately the length of

the others. Cut them back with a sloping cut pointing upwards and outwards to an "eye" or bud.

Autumn Pruning of Weeping Roses.—The long shoots of weeping Roses should be treated similarly, unless they are growing straight up, when they should be arched over and tied to the umbrella-framework, being bent down more and more until they have the proper drooping habit.

When you go over a Rose, shortening the over-long shoots, keep a look-out for any dead or worn-out wood. Shoots that have obviously "had their day" and are too old to produce strong new shoots are best out of the way. So remove any dead wood altogether and cut worn-out shoots hard back.

Autumn Pruning of Climbers.—Amongst the Climbers you will probably find a considerable number of dead or useless shoots which should be removed. Untie the plants, lay them out on the ground and then set to work with the secateurs. When the pruning is finished, tie the climbers back again in position.



BUDDING AND GRAFTING ROSES

THE propagation of Roses by budding or grafting is so interesting that it is a matter of surprise to me that amateurs do not more generally take it up. The pleasure to be obtained from any bought tree is never the same as if you had "made" that tree yourself.

I will deal with budding first. Budding, it may be explained, consists of inserting a bud from one tree into the stem of another. You can produce either bush or standard Roses by budding.

Obtaining Stocks for Budding.—Before the actual budding job can be carried out there is a certain amount of preliminary work to be done. The first thing, of course, is to secure the requisite number of stocks into which the buds are to be inserted. You can either buy these from a nurseryman and plant them in your garden in autumn or you can obtain them by digging up strong young Briar growths from the hedgerows in October and November.

They can also be raised from cuttings taken from Briar hedges or from seed. Other stocks are Manetti, De la Grifferaie, Laxa, Polyanthas, and Rugosa.

Briar stocks, seedling or cutting, but preferably cutting from selected Briars, are best for growing Hybrid Teas, Hybrid Perpetuals, Dwarf Polyanthas, Hybrid Polyanthas and most other Roses. Teas will thrive on cutting Briar, but are actually best on their own roots. Some nurserymen favour Polyantha stock for Ramblers and Climbing Roses. Manetti is not now advised for use as a stock.

Preparing the Stocks.—A certain amount of preparation of the stocks will be necessary before budding can commence. For instance, since they were planted, the Briars will have made a number of side growths. Most of these—all of those low down on the stem—have to be rubbed out, leaving only a few at the top.

Later on a final selection is made. Two good shoots near the top of the main stem will do in which to place the buds; three will be the maximum number to be left for Standards.

So in this case the unwanted ones are taken out—preferably being rubbed out. Those which are too tough for rubbing out are cut back close to the main stem.

The shoots which are to be budded must not be cut back or shortened in any way.

Preparing the Roses.—The best time for the actual budding is July or August.

The stocks having been prepared, the Roses from which the buds are to be taken need attention. The best buds are obtained from shoots that have flowered in the current season and *have not been cut back*, so take care to leave a few of the old shoots unshortened.

Choosing the Buds.—Plump, dormant buds are wanted—not thin, half-starved ones, or those which show signs of starting into growth. Good buds can usually be obtained about half-way down young shoots which have flowered but have not been cut back.

Preparing the Buds.—When the bud has been selected, the green leaf blades must be removed and only about one inch of the leaf petiole or stalk which connects the blade with the stem, left standing as the bud guard. This guard also serves as a convenient “handle”.

Invert the trimmed shoot in the left hand and, commencing from above the bud (below the bud as the shoot grows), a *full inch above* cut the bud out, finishing about half an inch below it. The cut goes into the shoot for one-third to half of its depth. The cut-out bud consists of the guard (stump of petiole), the bud, a sliver of bark (technically the “shield”), and a sliver of wood attached to the bark.

By using the first two fingers and thumb of each hand the sliver of wood is next pulled out from the bark, leaving the base of the bud inside the bark uninjured. That is highly important.

Then the sliver of bark is trimmed a little to leave it three-quarters to one inch long below the bud and about one-third inch above it. Your prepared bud is now complete.

To keep the shoots fresh and the buds plump whilst you are at work, plunge the shoots in a pail of water.

The Cuts in the Stocks.—The cuts in the stems of the stocks for the reception of the buds are all T-shaped, the cross-stroke of the T being uppermost. The bark is raised on each side of the down-stroke of the T to permit of the prepared bud being pushed in.

For bush Roses the bud (one only) is inserted on the main stem, slightly below soil level. For standards and half-standards on Briars the bud goes in on the young side branches (left for the purpose), right in the angle they make with the main stem. Have one bud to each branch.

Where *rugosa* is used as a stock, three buds are inserted on the main stem.

Inserting the Buds.—The prepared bud is slipped into place under the bark of the cut *from the top*, and cut off along the cross T line at the top so as to let it cleanly into the stock and make a good fit.

The bud has then to be tied in to hold it securely. All that is necessary is to tie raffia round the branch or stem, as the case may be, in such a way that you keep the lips of the wound flaps upon the bark of the "shield", tying just tightly enough to keep them in place.

Finally, no branch upon a standard Briar upon which a Rose bud is inserted must be shortened. It must just be allowed to grow through the rest of summer. Similarly the stock of a bush Rose must be left intact.

The After-care of Budded Roses.—In the autumn, when all growth has ceased for the year, all growths in which buds have been inserted must be cut back, making the cut about 6 in. from each bud that was put in.

Early in the following spring, the growth which the inserted bud has made should be supported, especially in the case of standard Roses. This should be done before the shoot is more than 6 in. long, otherwise a sudden gust of wind may blow it clean out of its socket. The lower end of a small stake should be tied to the stem of the Rose, the bud growth being lightly looped to it.

Do not leave on the Rose a shoot in which a bud has failed to "take", with the idea of placing another bud in it the next summer. If you do, it will grow strongly and leave the other buds short of nourishment.

Budded bush Roses should be treated in much the same way. That is, the top growth should be cut off 6 in. above the topmost bud. The growths will not require staking, though, as they are below the soil.

GRAFTING ROSES

Grafting is an even more interesting operation than budding and is an excellent means of increasing stocks of favourite varieties of Roses. Grafting consists of joining buds, or eyes, from the chosen Rose variety on to the stem of another Rose—usually a Briar. The operation is practically the same as performed with fruit trees.

There are several methods of grafting known respectively as Whip-grafting, Rind-grafting, Cleft-grafting, and Wedge-grafting. The first-named is the one most commonly practised.

Grafting is best done in December, January, or February. It

is usually carried out in a heated greenhouse, the necessary stocks (the Briars, etc., to which the grafts are to be joined) being planted and grown on in 3- or 3½-in. pots.

Securing the Stocks.—Hedgerow Briars, as secured for budding, can be used for grafting, but it is more satisfactory to obtain a supply of Briars from a Rose nursery.

These should be ordered in autumn. Do not order too few; it is far wiser to secure more than you require and to select the best of them, planting out the remainder for budding purposes.

When the stocks arrive, pot them up in 3- or 3½-in. pots, using good compost and packing them firmly round the roots.

When potting is finished stand the pots in a sheltered position in a bed of ashes, sink the pots right to the rims in the ashes, and be sure to water the ashes as required. The Briars can remain in this position until November, never being allowed to dry out.

Come November, the Briars will be well rooted and can then be taken into the greenhouse for grafting.

Securing the "Grafts".—Naturally you will select your grafts (or scions) from a variety of Rose that you particularly like or is otherwise worth propagating.

For the grafts you use 1- to 2-in. long pieces cut from mature growths—from the branches that the selected Rose has made during the earlier part of the summer. Each piece must contain an "eye" (that is, a little point such as would produce a shoot the following spring) but no more than one eye. You can probably obtain twenty or more grafts from any chosen tree without cutting it about too severely.

Every graft you cut will be usable—if not by one method then by another; waste none.

As already mentioned, there are four different methods of grafting employed. I will deal first with the commonest, Whip-grafting.

Whip-grafting.—To begin with you must prepare your stock (the Briar) for the reception of the graft.

To do this, take the Briar in your left hand and, with a good pair of secateurs, cut off its head at a point 2 in. above the soil level. Then, with a keen-bladed budding knife shape the cut so made to a sharp slope; in other words, cut the stem of the Briar in such a way that it becomes wedge-shaped. Try to do this in one stroke; if unsuccessful pare down the wood until it is of the right shape.

Now take one of your grafts and shape one end of this to correspond with the slope on the Briar. The slope on the graft and

the slope on the Briar should be such that the two will fit flush together. This means that the slope you cut on the graft should be equal in length and width to the slope you have cut on the Briar. You will see from this that it is necessary for graft and Briar to be to all intents and purposes equal in circumference.

Now to join graft and stock. Start by placing the graft against the stock, sloping cut to sloping cut. The two surfaces must come flush together and the bark at the edges of the graft must exactly meet the bark at the edges of the stock. If properly positioned, the graft will look as if it were a continuation of the Briar stock, the bark of one, meeting the bark of the other, forming what to all appearances is a complete circle.

The next thing is to tie the graft in position. Use raffia. In tying, place one end of your length of raffia down the stem, leaving enough well below the graft to be tied into a knot when all is finished. Starting at the extreme top of the union, wind the raffia round and round the united graft and stock. Finish winding well below the union and finally tie the end you have been winding to the other end which was left for the purpose.

The raffia will be easier to work with if you wet it.

If your graft fails to "take", that is, to join up with the stock, make a fresh cut and try again.

Rind-grafting.—I have explained about that for Whip-grafting it is necessary that graft and stocks must be of approximately the same diameter. But very often it is found that many a graft tapers off to such slender size that no Briar can be found to fit it. It is in cases like this that one employs the Rind-grafting method.

Rind-grafting differs from Whip-grafting in that, instead of the cut surface of the graft being placed against the cut surface of the stock, the graft is inserted beneath the bark of the stock.

To prepare the stock, cut off the top 2 in. above the soil level. Instead of cutting on the slope—as for Whip-grafting—cut straight across.

The grafts are prepared exactly as for Whip-grafting, that is, their ends are cut to wedge-shape.

To insert the graft, make a short slit in the bark of the Briar, just sufficient to accommodate the sloping end of the graft, push the graft into the slit, cut surface to the wood of the Briar, and bind up securely with raffia.

Cleft-grafting.—Cleft-grafting—and also the remaining method, *Wedge-grafting*—is employed when the stock is too large in circumference for either of the two foregoing methods to be employed.

In this case you use grafts containing two or three "eyes" but no more than 2 in. long.

Start by cutting off the top of the stock, to leave a stump 2 in. high. Make the cut straight across. Now, with a sharp budding-knife, cut out from one side a tiny wedge of bark and wood in the shape of the letter V. Do not let the cut be deep enough to reach the pith of the stock; its width should be regulated by the size of the graft to be inserted.

The all-important point to remember is to get the inner bark (that is the skin beneath the green bark proper) of the graft and stock to meet—no easy matter and one that requires sound judgment and a sharp knife. Cut your cleft in the stock first and then pare down your graft to fit, trying, as far as possible, to fill the cavity exactly. When graft and stock are as good a fit as you can get them, bind up securely with raffia and then cover the grafted part with grafting wax to keep out air and moisture. Grafting wax can be bought from most horticultural sundriesmen.

Wedge-grafting.—This method is more simple than Cleft-grafting. You cut your stock level at the top, as before, but instead of taking a piece out of the side, you split it down the middle to a depth of about an inch.

Then you cut your graft in the shape of a fine wedge and insert it in the slit, bringing bark to bark and binding as before, afterwards covering the top of the stock and exposed cut parts with grafting wax.

If it is found impossible to get both sides to meet bark to bark, at any rate make one side sure; but practice will make perfect and soon there will be left very little to be desired.

The After-care of Grafts.—After grafting, bring all your stocks into the greenhouse and, if possible, place the whole batch in a propagating frame. Keep your house at an even temperature of not over 60 degrees and let the atmosphere be moist.

Should you not possess a propagating frame, then keep your greenhouse well shut up, avoiding excessive ventilation and all draughts. It can always be taken that a close house is like a propagating frame; thus so long as the temperature is maintained and very little ventilation is given, the growing stocks will be quite safe until March. As the days grow warmer, ventilation will have to be increased, starting about an hour earlier in the mornings each week.

When the shoots have attained a good size, inspect the root growth and if a good supply of young roots has been formed, carefully re-pot and grow the trees on until they go out into the open ground about the middle of May.

GROWING ROSES FROM CUTTINGS, LAYERS AND SEED

A PART from budding and grafting (described in the previous chapter) there are three other ways of propagating Roses—by cuttings, by layers, and by means of seed. Tackled in the right way and at the right time, these operations are simplicity itself and form interesting and profitable ways of increasing one's stock of favourite varieties.

The cuttings method is the one that will appeal to most.

Bush, Climbing, and Rambler Roses can all be grown from cuttings but not, of course, Standards; for, with a cutting, one cannot get a long enough "leg" for a Standard.

When to Take Cuttings.—Cuttings may be taken in July, August, September, October, or November, or in the spring, at pruning time, the prunings then being used for the cuttings.

March and May are the best months for taking cuttings of Roses which are growing under glass.

Cuttings taken during spring or in July or early August will form a good supply of roots before the winter sets in and the following year will develop into sturdy little plants ready for planting in their flowering quarters the next autumn. Cuttings taken in the autumn are naturally slower to root.

Taking and Preparing the Cuttings.—The chief thing about taking the cuttings is to choose the right shoots. They must be taken from shoots which have borne flowers; they must be fairly stout and, while the sap should not have gone from them, they should not be too green and soft. Small, semi-succulent shoots such as are freely produced in summer would be of no use to stand out-of-doors during the winter months. Of course, all the shoots to be obtained in spring will be properly ripe.

Rose cuttings should be at least 9 in. long after they have been cut off, straight through, just below a joint.

All the lower leaves should then be carefully removed, leaving only two or three at the top. When removing these leaves, avoid damaging the little buds found in the axils. These buds will all produce growths.

If the selected shoots tend to be unripe, cut off the top, using only the lower part of the shoot for the cutting. This part must be 9 in. long.

Rooting the Cuttings.—Select a sheltered position in which to plant your cuttings. The aspect may be east, west, or south, and if it is at the foot of a wall or fence, it will be all the better.

To get the soil in the best condition possible, surface it with an inch-layer of sand and a little leaf-mould, then dig the soil over to a foot deep, thoroughly mixing in the sand and leaf-mould.

Afterwards rake over and smooth the surface, and press down on the soil with your feet to make it fairly firm.

With a few cuttings, these can be planted individually, being inserted to two-thirds their length in holes made for them with a flat-bottomed stick.

Where many cuttings are to be planted, the best plan is to make a little straight-sided trench, in depth equal to two-thirds the length of the cutting (6 in.), and sprinkle a little sand on the bottom. Make one side of the trench very firm with the spade.

Stand the cuttings against this side, 6 in. apart, their bases resting on the sand, then sprinkle a little leaf-mould in the bottom of the trench. Fill in with soil and also make that very firm against the buried part of the cuttings.

If you have more than one row of cuttings, make the rows 12 in. apart.

The After-care of Cuttings.—After planting the cuttings give the soil a good watering and, a few days later when the soil is fairly dry, tread all the cuttings in very firmly, as they are sure to have worked loose. Place a foot either side of each cutting and press down.

If you can get a hold of any coco-nut fibre refuse (or bulb fibre will do), place a mulch of this on the soil around the cuttings. It will make them quite safe even in the worst weather.

Some attention will be required during winter. After a thaw, for instance, you will notice that the soil has "lifted" and carried the cuttings with it. Promptly go over the bed and restore them to their original position by treading them carefully back with the heel.

Raising Rose-cuttings in Water.—Rose cuttings may also be rooted in plain water. Take an ordinary cutting, prepared in the way already described, and stand it in a jar containing about 4 in. depth of water. Stand the jar on the greenhouse shelf or in a sunny frame or in a warm, light room and, as the level of water sinks, add more.

Roots will appear a few weeks later, and when these are about $\frac{1}{2}$ in. long, take the cuttings from the water and very carefully plant it in very sandy soil, containing leaf-mould, in a 4-in. pot.

Water-in the cutting and stand the pot in a wooden box with a glass lid, putting the box in the greenhouse or frame or again in the warm, light room.

Keep the box closed for about three weeks and then gradually give more and more air until the pot is filled with roots. Then transfer the small plant to a 5-in. pot containing good loamy soil, leaving it there until it can be planted outdoors in the spring.

LAYERING ROSES

Nearly all kinds of Roses grow well from layers, but this method of propagation is more usually adopted with Climbers and Ramblers. Although layering *can* be carried out successfully as late in the year as November, the best time to do it is during the summer months.

Suitable Shoots for Layering.—The best shoots to choose for layering are young ones—either those that have not flowered or the best of those which have just cast their blooms. Old or hard-wooded shoots are of no use for layering purposes. In any case, choose clean, healthy shoots; Red-Spider-infested or Mildew-ridden specimens have lost much vitality to root well, if, indeed, they root at all.

How to Layer.—Having selected your growth, release it from its support, take it sideways, and bend it gently down to the border at right-angles to the other branches.

At a distance of 15 to 18 in. from the top cut a longitudinal slit in the branch. Use a sharp knife, allowing the blade to pass through the outer skin to the middle, then turn and cut lengthways for 2 in.

To keep the slit open, put a small pebble, or a matchstick, in it. If the cut passes through a joint, so much the better, for rooting will then be quicker and more certain.

Where the cut part of the shoot meets the ground, fork over a patch of soil 9 in. square to the depth of the hand-fork, mixing sand freely with it. Now peg down the shoot so that the cut part comes into this loosened soil and is buried by it. Fasten with a hooked wood peg having a 6-in. long stem. Your layer has to undergo considerable strain and, as it must not move during the rooting process, such a really substantial peg as advised is essential. You can make plenty of pegs out of a tree branch or Pea sticks.

After making the layer secure, cover the cut part 4 in. on all sides and 4 in. above with ordinary garden soil reduced to a fine tilth—sand being added if necessary. Make the mound firm, water it thoroughly, repeating when necessary.

If there are any leaves on the part to be thus buried, snip them off. Other leaves must be left on, as they assist rooting.

Vigorous varieties like American Pillar and Excelsa produce their best layers towards the base of the two-year-old branches. These are half-ripened side-shoots anything between 18 and 30 in. long. Prepare and treat them in exactly the same way as described above. In order to layer them properly, release the branch from its support, bend it back, re-tie, and cut it off immediately above the layer after the flowers fade. When re-tying, there must be no pull on the layer.

Tip-layering.—A method of layering Rambler Roses much favoured by some growers is that known as tip-layering. It consists of bending down one of the new growths produced during the current summer and plunging its tip, "head foremost", for about 6 in. into the ground, pegging it thus to hold it securely into position.

The shoot tip will send out roots, making that shoot self-supporting.

Tip-layering can be done any time in the later summer or early autumn.

To Tell when Layers are Rooted.—The question of how long Rose layers will take to root cannot be answered definitely. If the autumn is favourable, a good supply of roots will have formed by the following March and the layer can then be severed from its parent and transplanted to where it is required to flower. If the autumn is cold and wet it would be advisable to postpone severing and transplanting until November of the following year.

Severing the Layers.—When layering is done in the ordinary way severing is a perfectly straightforward business; merely cut through the stem at the part where it enters the ground.

With growths that have been tip-layered, cut through the stem about a foot from the ground.

Do not dig up the layers until a week after they have been severed from their parents, so that they may become accustomed to being self-supporting before any disturbance takes place.

Rooting Layers in Pots.—With some Roses, particularly bush Roses, it is difficult to find a sufficiently long shoot to be bent down to the ground. In such cases you may layer your chosen shoots in pots.

Break away a V-shaped portion from the top of the rim of an average-size pot. Fit the pot on to a stick jammed into the drainage hole, and push the stick into the ground until the pot

is at the right height for the selected shoot. Fill the pot as far as the gap with good soil.

Now, if you bring the shoot over to the pot, you will find that the stem will fit into the gap in the pot, with a little manœuvring.

In the part of the stem that actually passes over the soil in the pot, make a slit (as described for ordinary layering) with a sharp knife. Alternatively you may peel off a $\frac{1}{2}$ -in. wide circle of bark. Whichever plan is carried out, bury the treated part of the shoot under about 1 in. of sandy soil and peg it down securely to prevent it rising.

Place some moss or a piece of turf on top of all, and give a good watering. The turf or moss will keep the soil moist for a considerable time; without the moss it would dry out very quickly.

GROWING ROSES FROM SEED

The seed-pods which develop on Rose trees during autumn can be picked, stored through winter, and sown the following spring, in due course to make nice little Rose bushes.

When sowing time comes, prepare a compost of 2 parts sandy loam and 1 part made up of equal quantities of leaf-mould, fine charcoal, and silver sand and pass a quantity of this through a $\frac{1}{8}$ -in. sieve.

Obtain a shallow box, put in an inch of cinders, cover these with a layer of the compost siftings, then put in sufficient of the compost itself to bring the level to within $\frac{1}{2}$ in. of the top of the box. Press the compost moderately firm and then set the Rose seeds in it, spacing them 1 in. apart and covering them with a $\frac{1}{4}$ in. of the sifted compost.

Slightly firm the soil over the seeds, water well, cover the box with a sheet of glass, and place it in a greenhouse where a temperature of round about 55° F. is maintained.

Soon the seedlings will appear and when they have formed three leaves, pot them up singly into 2-in. pots, using a compost of 2 parts loam, 1 part leaf-mould, and a little silver sand. Grow them near the roof of the greenhouse until the pots are filled with roots; then transfer them to 3-in. pots, using a similar compost with the addition of a little bone-meal—a handful to each gallon of soil.

At the end of May take the pots to a cold frame and in a month or so the seedlings will commence to bloom. In little more than six months you will have a batch of miniature home-grown Roses in full flower, the plants being ideal for standing about your living-rooms.

HYBRIDIZING ROSES

The only way of raising an entirely new Rose is by the process of hybridization, which consists of crossing the pollen of one Rose tree with that of another and sowing the resulting seeds.

Hybridization can only be carried out in a greenhouse with pot Roses, the climate of this country being such as to make chances of success out-of-doors very remote. Pot up the Roses upon which you decide to work, then, and bring them into the greenhouse in November.

Prune the trees about three weeks after bringing them in and do everything in your power to induce them all to bloom together as near March as possible.

Fertilizing the Blossoms.—Starting when the blooms are little more than buds, remove the stamens from the Roses destined to provide you with your seed, this to prevent self-fertilization. Then cover each bud with a paper bag, tying it securely to the stalk below the bud to prevent insects from carrying in "foreign" pollen.

Three or four days after this, the pollen from the other parent Rose can be introduced. This is done by gently touching the stamens of the pollen-bearer with a camel-hair paint brush and then applying it to the pistil of the seed-bearer. The paper bag must, of course, be removed for this purpose, but should be replaced immediately and left for at least eight days.

Gathering the Seed.—In about three weeks, the seed-pods will begin to swell. They should be allowed to remain in place until just about to drop off, when they should be gathered and stored, with their stalks in sand, until sowing time in November.

Sowing the seed and the care of the seedlings is the same as that recommended on the preceding page.

Keep the seedlings under glass until June is well advanced; then harden them off gradually and plant in a sheltered but sunny spot in the open in July. By October, they will have become quite strong plants when buds or grafts should be taken in the manner detailed in an earlier chapter.

In-arching.—Normally, rather a long time must necessarily elapse before a Rose-grower can tell what the results of his hybridizing efforts are going to be. This waiting period can be considerably shortened, however, by a simple process known as in-arching, this system giving sure proof of the new Rose's worth within a few months of germination.

As soon as the cotyledons, or first leaves of the seedlings, are formed, prick off the plants into 2-in. pots, planting them close

against the side of the pot. About three weeks later, knock the seedling out of its pot and, keeping the soil-ball round the roots carefully intact, place the whole thing on a piece of sacking about 5 or 6 in. square.

Add a little more fresh soil and then wrap roots and soil together in the sacking, tying securely with raffia. The seedling will then be growing in a sacking "pot".

Tie this little bundle to a vigorous Laxa or Briar stock, bringing the two stems close together. Then, making an incision in the bark of the stock, as in budding (see the chapter on "Budding and Grafting"), insert the stem of the seedling and bind securely with raffia.

A union will soon be formed, when the head of the stock should be cut back to where the seedling joins it. At this time also the seedling can be severed from its little "pot".

About two months after in-arching, you will have a good-sized tree which will very shortly produce flowers and determine the value of the hybridization. Further, there will be a good supply of grafts or buds for early grafting or budding should you wish to propagate the variety in one or other of these ways.

GROWING ROSES IN POTS

THE growing of Roses in pots is such a delightful hobby and so thoroughly easy that I advise every greenhouse owner to go in for it. Not only does it enable one to have home-grown Roses to cut months before the outdoor blooms are open but the Roses—unspoiled by weather—are of rare quality. Pot Roses are also delightfully ornamental for the decoration of the house.

Pot Roses also add variety to the greenhouse's own display.

Just the ordinary greenhouse owned by so many amateur gardeners will grow pot Roses perfectly. You do not need great heat. (Indeed, a greenhouse which is entirely unheated will suffice, only, of course, flowering will be a little later though still considerably earlier than with outdoor trees.)

The great art of forcing Roses lies in the changing of the seasons for the trees concerned, without in any way damaging the tree; to turn their winter into spring and their spring into summer, to make summer their autumn and autumn their winter; to do this we start forcing Roses in pots at the end of December.

Long before this, though, you will have to start making preparations.

The Best Varieties for Potting.—The first thing is to choose the trees you intend to pot, and in this the list given in the chapter on Choosing Rose Collections will help you.

Lifting the Roses.—You can either buy suitable trees or you can take them from the garden. In the latter event, choose from the outdoor beds Roses of a low, bushy habit, branching out at the ground level. If the root-growth is too extensive to permit a plant to be fitted comfortably into a pot, cut back the tap-root and shorten the large fibrous roots.

It is best to do the lifting and potting round about September.

If you have to buy the Roses, get them from a reliable nursery. When they arrive, release them from their package and plunge the roots in water. If any roots have been bruised or broken, cut them back cleanly immediately above the damaged portion. Each bush will probably have one or two long thick roots or throngs. Shorten these to 6 in.

Preparing the Compost.—The compost for potting should be prepared some months ahead. The reason for this is that the materials may have an opportunity to become well mixed together

and properly weathered. To this end they should be heaped up, exposed to the sun and air, and turned frequently.

A good mixture for potting Roses is: One barrowful of turf loam, half a barrow of leaf-mould, one-sixth of a barrow of burnt ash, half a barrow of old and well-rotted stable manure, and about a sixth of a barrow of sand. In the case of certain varieties, such as the H.P.s, the compost will have to be varied a little by a slight increase of loam, while some of the Teas or the more delicate-rooted kinds will require a lighter soil. But for all-round purposes the mixture I have given will be found to answer the purpose.

Many gardeners pass the whole lot through a sieve, but this is not necessary. If you *must* sift your mould the sieve must be a very coarse one. Without sifting, the soil can be well chopped up and picked over to remove sticks and stones. Roses thrive better in a coarse soil than in a fine.

Potting-up the Roses.—For potting-up the trees, use 8-in. pots. Do your potting early in autumn. You may find that many of the trees have long roots that will not go well into the pots. These may be shortened. Never cram roots into a pot; a cut-back will soon throw out good fibrous roots from the part cut.

See that every pot has good drainage; one crock is not enough; you want at least a 2-in. layer.

In filling your pot, remember never to fill up with soil too close to the rim, for you have to feed your trees with liquid manure and often top-dress with more soil. Room must therefore be left at the top of the pot for this. Pack in the soil firmly and keep the trees well up in the pots. The roots will always strike downwards; there must therefore be plenty of soil beneath them.

Where to Stand the Pots.—When potted-up, the trees should be stood outdoors in a sheltered position. Either bury them in ashes or plunge them in the soil. I say they should have a sheltered position but also they need an airy situation. A good place is under a north wall or in some corner sheltered from too much sun or cutting winds.

It is wisest to place a piece of slate under each pot and well dust down with soot and lime, to keep worms from getting into the pot; also, the slate helps to prevent the roots of the plants from growing through the hole in the pot.

In dry weather a little watering will be necessary, but as the plants are exposed to the elements they should get their share of rain and dew.

Protection from Frost.—Seeing that the pots will have to stand outdoors from the time of potting until November or December,

it is quite likely that frost may come along during that time. In that case some sort of protection must be given.

What you must do, then, is protect the pots by wrapping a good thickness of straw, hay, or even sacking around each.

That will keep the frost at bay.

Housing the Roses.—The plants must be taken into the green-houses late in November or early in December. Before doing so, however, the outside of the pots should be thoroughly washed.

Arrange the pots neatly on the shelves and never allow them to get dry. Water whenever the pots, when rapped with the knuckles, give out a hollow ring.

Pruning Pot Roses.—The Roses must be pruned a week after they go indoors.

Cut back each Hybrid Tea shoot to within two or three buds or "eyes" from its base. Choose an outward-pointing eye as the topmost one on each branch. Cut out entirely all weak shoots. Should you have potted-up Teas or Hybrid Perpetuals, prune these similarly.

Polyanthas need little pruning. Just cut out shoots that are obviously too weak to bloom, also any that grow towards the centre of the bush, and finally cut back the unripened shoot ends.

When the Roses are in the Greenhouse.—Now comes the all-important point—the temperature of the house. This should be raised gradually, starting with 50 to 55°F. by day and 40°F. by night. When the trees have started well into growth, raise the temperature to 75°F. by day and 50°F. by night.

Days will vary very much as the spring advances. The temperature of a house will often advance 8 to 10 degrees in an hour, in which case, if the weather is mild, the ventilation will have to be watched; if cold, cutting winds prevail, again temperature will need careful watching.

A point here is to open ventilators on the sheltered side of the house, so keeping out the cold winds.

With the consideration of temperature we must also consider the equally important problem of correct moisture in the atmosphere of a house. To keep a house too dry is to court insect pests, such as Red Spider, Thrips, and Aphis, while if too moist there is the great danger of Mildew.

I think that two syringings a day—that is, in the morning and afternoon—are sufficient, in addition to the watering of the trees.

Ventilation is of supreme importance, for careless ventilation to my mind is the principal cause of Mildew. Plants get checked

in growth very easily, and this is bad for them when they are growing strong.

Your aim should be to give your trees plenty of fresh air. Do not open your house in frost or fog, and avoid as far as possible cold, cutting winds. On the other hand, when the days are mild give plenty of air. At all times watch the thermometer, and in the event of sudden falls or rises give less or more air as the case may be.

In the watering and syringing of all trees see that the water is of the same temperature as the house; this is one of the secrets of the successful culture of the Rose under glass.

Feeding Pot Roses.—In feeding the trees, I would advise the use of artificial manure as described in the chapter dealing with the subject; but this should not be applied until the trees are making strong growth and are showing bud; even then I should not advise too strong a preparation.

Regular watering and feeding is most necessary. Do not let the soil get sodden, else when your flower-buds are forming they will damp off.

Disbudding.—It will be necessary to do a certain amount of disbudding when the flowers begin to appear. Big, well-formed Roses will not be obtained if there are several buds crowding together at the end of a shoot.

Examine your plants and you will find that there are usually several very small buds clustering round the top, or crown, bud. If this top bud is quite sound and shapely, remove the surrounding smaller buds. If it is not well formed, choose another bud to leave for development. If this operation is carried out so that there is only the crown bud left on each stem, some fine blooms will be obtained.

If your Roses are chiefly required for decorative purposes, drastic disbudding is not necessary.

When Flowering is Over.—As soon as the blooms are cut or have faded, remove the trees at once to a cold frame or unheated greenhouse to harden off until they can all be safely stood out in the open once more, which will be some time in April or May. You *must* harden off as soon as the forced blooms are over; if you allow your trees to start further growth, you will spoil your flowers for the following year.

After hardening off, place the trees back in their old position under a north wall to ripen their wood and recoup for the next season under glass. Top-dress each pot with well-rotted manure, and water regularly. About the first week in October they should all be reotted.

Clean all pots, re-crock and add fresh compost, but do not disturb the soil round the main ball of roots; only rub off the surface soil which may have got soured.

Pot up firmly as before and water well; place the pots in their old position, where they can remain until the end of December. They can then be brought into the house, pruned, and forced on as before.



GREENHOUSE ROSES

GIVEN a reasonably good greenhouse, Roses can be grown to flower from February to June. Provided ordinary care is taken, the smallest grower can be as successful as the grower with a large house to attend to.

The Best Type of House.—First let us consider the greenhouse, its construction, and its heating.

A good Rose-house is a good house for most flowers and fruit, and its construction is quite on the ordinary lines.

For light and ventilation, a greenhouse is better if it stands out in the open, but for the conserving of heat and general utility a three-quarter span against your garden wall is hard to beat. It is far better than the lean-to, if only because of the additional light that comes through the back roof.

Good widths for a three-quarter span are either 10, 12, or 16 ft.; the back wall should be about 7 ft. high for a house 12 ft. wide, and about 9 ft. high for a house 16 ft. wide. A house of this kind should face south.

When considering a greenhouse, look on it as an investment, not from the point of view of spending money. Few garden expenses give such a useful return as a greenhouse. Houses can be had from almost any price. Of course, the type you buy will depend upon what you are prepared to spend, but the Rose is not exacting and unless you are going out in a large way to grow Roses for the market, your outlay is likely to be quite small.

A cold house may suffice for your needs, but this will not secure you Roses very early in the year, or be of much service to you in the winter. If you possibly can manage it, provide your house with heating apparatus. The economic heating of a house used to be a real problem and a continual source of worry to the grower; but to-day everything has been made easy, boilers being available at very reasonable prices.

I do not intend to write at length on house or boiler construction, for there are many reliable firms to-day who will supply all the details a grower requires; but before considering the culture of the Rose under glass, I wish to impress the Rosarian with the facts that half the causes of failure arise out of faulty houses or bad heating.

Given the best, you will have little trouble and great pleasure; given the worst, Rose-growing under glass is a source of continuous anxiety, for the bad ventilation of an ill-constructed house, together with sudden falls and rises in temperature, will always be bringing you trouble in the shape of attacks of Mildew, and also that checked growth which is the sure precursor of Aphis and other pests.

Roses under glass can be grown in two ways—apart, of course, from the production of pot Roses described in the previous chapter. They may be planted either on the greenhouse staging itself or in borders. Let us consider each method in turn.

Roses on the Staging.—When Roses are to be grown on the greenhouse staging, the staging should be constructed on the narrow side. It should not exceed 5 ft. in width, and 4 ft. is better, especially where many trees have to be attended to.

The sides of the staging should be 6 in. deep and when filled with soil, the top of the soil should come level with the bottom of the glass in the sides of the house.

A 4-ft. wide bench will take four rows of trees planted 16 in. apart and they may be grown for several years on such a bench without being disturbed.

Before planting the trees the benches should have a good coating of limewash.

The soil should be brought into the house in a fairly dry condition. Before putting it down spread a layer of shingle or cinders to ensure good drainage and so guard against over-watering.

Plant your trees in line and firm the soil carefully round the roots with a piece of wood, leaving a slight hollow or hole near the stem so that watering can be done without wetting all the soil in the bed.

When all the trees are planted give a good soaking to settle the soil all round and then do not water again until the soil is on the dry side. Syringe freely several times a day, however, and damp down the floor to maintain a humid atmosphere.

Avoid the over-watering of the soil on the benches, or it may become sour. Every now and again rake very carefully over the surface to aerate the soil and conserve the moisture.

As the plants grow, increase the supply of water and watch very carefully the ventilation of the house.

The pruning of these Roses follows the same lines as with ordinary Roses out of doors, except that it is done earlier—in accordance with when you want your blooms. December is a good average time for pruning.

Roses in the Border.—Although it is possible to grow all kinds of Roses in the greenhouse border just as on the staging, it is more usual to plant Climbers in this position and train them up over the house roof or wall.

It must be remembered that, as these Roses, once planted, must be left undisturbed for a number of years, proper and careful preparation of the soil is of the utmost importance.

The Best Roses to Buy.—Select your Roses for growing in the greenhouse border from the list given on page 58, and, if possible, stipulate for Roses growing in pots. You will thus ensure that they have to undergo the minimum of root-disturbance when planted in the border, and will suffer less damage in transit. Ask also for strong growing Roses so that they start into growth soon after being planted and go right ahead.

Preparing the Soil.—The best time to start preparing the sites is in October. Give each Rose at least two clear feet of good soil to grow in, so start by taking out the soil to that depth. If it is heavy clay you have to use to fill in the bed, you will have to use gritty matter to make it more porous; if it is light, the addition of clay (where obtainable) will be beneficial.

Divide the soil into two heaps. To the first add wood-ashes and, if obtainable, mortar rubble in generous quantities. To the second heap add some broken-up heavy clay and manure. This second heap goes into the bottom of the planting site, the soil in the first heap being placed above it.

Finally, scatter lime over the surface. There is no need to dig the lime in, as it has a natural tendency to sink. Allow the soil to settle for a few weeks before starting to plant.

When and how to Plant.—You can plant at any time as soil and weather conditions do not have to be considered in this case. The best time, however, is in November. If the soil in the border is on the dry side, give a good soaking before planting. Also see that the soil in the pot in which the Rose is growing is moist.

Dig out a planting hole sufficiently deep to take the Rose at the same depth as it is in the pot. Remove the Rose from its pot, extract any corks from the ball of soil and loosen most of the roots, spreading them out. Cut any long and fibreless roots fairly hard back, using a sharp knife for the purpose and making clean cuts. As you plant, train out the roots at their respective levels, covering them with finely sifted soil.

Press the soil firmly. Firm soil means firm growth and this, in turn, means finer Roses and less straggly growths.

Allow a depression around the Rose for the retention of water

and give a thorough soaking after planting. Should the soil get caked, loosen it with a hoe.

Tying-in the Growths.—Do not tie up the growths to the wall for several weeks after planting as there will be a natural tendency for the soil to sink, and, should the growths be tightly tied, you will have the Rose more or less hung up, so that some portions of the roots will not be touching the soil.

As soon as you see that the soil has finished settling, however, you can tie in the growths. Don't use string or raffia for this job as it is liable to cut or strangle the shoots. Instead use 2-in. wide strips of felt and, wrapping these loosely round the stems, nail the ends, both together, to the wall.

Pruning Greenhouse Climbers.—The pruning of greenhouse Climbers varies according to the class to which they belong.

Maréchal Niel, for instance (the most commonly planted of all greenhouse Roses), Climbing Niphetos, Fortune's Yellow, and Wm. Allen Richardson should be pruned after flowering. The flowered wood must be cut hard back to induce the formation of long growths. These will be well ripened during the summer and, in autumn, should be trained in for flowering the following spring.

All cutting back must be done gradually and the house should be kept warm and humid to encourage the formation of new growth as early in the summer as possible.

With Climbers in a cold house, pruning is also done after flowering, but the cutting back should be more moderate.

Keeping the Roses Clean.—As soon as the first warm days of spring arrive, greenhouse Roses, no less than their outdoor relatives, are apt to become infested with pests. Unfortunately, however, control indoors is by no means as easy as it is in the open and, although spraying with one or other of the regulation insecticides is effective to a certain degree, "gassing" is really the best way of dealing with the trouble.

This "gassing" may take the form of fumigation with tobacco shreds, or a fumigating cone, the vaporization of a liquid preparation of nicotine. You can get all forms of greenhouse fumigants from the sundriesman. Yet another fumigation scheme is by means of calcium cyanide.

You need $\frac{1}{4}$ oz. of calcium cyanide per 1,000 cubic feet of glass space. Just sprinkle this on the *slightly* damp floor of the closed house at nightfall; that is all you have to do.

Next day throw the door of the house open for a few minutes before you enter, to allow the air to clear. Then take your syringe and give your Roses a good, hard spraying—not a mere spraying—

with clear water. The washing, following on the fumigation, will clear out all the pests.

Calcium cyanide is poisonous and on no account should you linger about the greenhouse once you have put down the stuff over the floor. Get out of the house and close it up as soon as possible.

With all forms of fumigant it is necessary to have the house thoroughly leak-proof. If you have any cracked or broken windows paste a piece of newspaper over them.



GROWING EXHIBITION ROSES

EXHIBITION ROSES! What visions are conjured up before the mind of an old exhibitor—memories of happy days, although of strenuous labour! But it does not do to dwell too much upon the past, and few of us who are interested in any particular subject care to be regaled with the reminiscences of others unless we are able personally to benefit from their experience.

Now, I have much to say on the subject of exhibitions and exhibiting which, I think, will not only be of interest, but also helpful, to many a grower of exhibition Roses, whether for the show tent to compete for prizes and to give pleasure to others, or for his own garden, to be a joy to himself and to his personal friends. But before proceeding to discourse upon the actual culture of the exhibition Rose, I think it is necessary to deal with the selection of most suitable varieties.

Ah! how the mention of that word selection makes one wish that one were rich enough to grow all varieties, rich enough to maintain a huge Rose garden with a bed devoted to each lovely Rose in existence! But what a stupendous task it would be to collect and keep every known variety going. Actually, I believe it would be impossible to obtain all varieties in existence—including those old-stagers which are at times to be seen in ancient gardens. Consult the catalogues from our leading nurseries and you will find that in most of them are lacking names of old friends—Roses that have won high awards in the past but have now gone out of commerce.

Why do old Favourites go out of Culture?—Why do tried favourites go out of commerce? I will tell you. It is the result of trade competition, which finds its standards of perfection confined within the narrow limits of admirable and necessary rules laid down by the National Rose Society, in conjunction with the fact that certain important classes which command the premier awards embrace too wide a field.

The Rose shows themselves are also, in a way, to blame.

The Hybrid Tea, taking nearly every post of honour by its size and colour, dismisses from the show tent—except in the case of small classes devoted to them—the Hybrid Perpetual and the Tea Rose. The result of this is patent to all. The public views over and over again in various exhibits the same varieties and, naturally enough, confines its new purchases to those varieties. Then comes

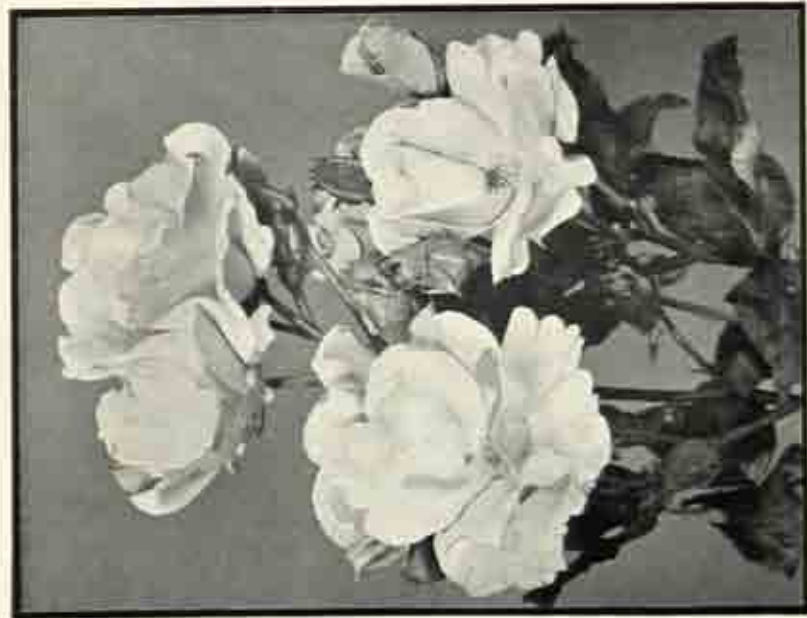
BEAUTIFUL ROSES, NEW AND OLD



Photo J. E. Downward.

PEACE

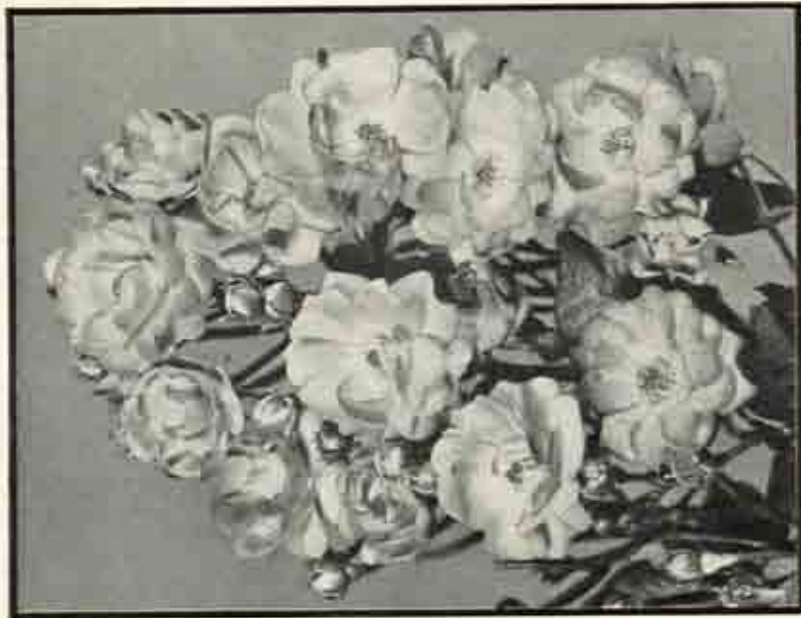
This rose was originally raised on the Continent under the name of Madame A. Meilland. It has reached this country via America under its new name of Peace. It is a Hybrid Tea with beautifully coloured blooms—yellow with a tinge of pink at the top—and is a strong grower.



Copyright Photo.

ELSE POULSEN

A charming Hybrid Polyantha, with semi-double rose-pink and carmine flowers. The trusses are large and long lasting. (See also *Colour Plate*.)



Copyright Photo.

PAUL CRAMPEL

Probably the most popular of all the Dwarf Polyanthas. Its blooms are the deep orange-scarlet of the well-known Paul Crampel Geranium.

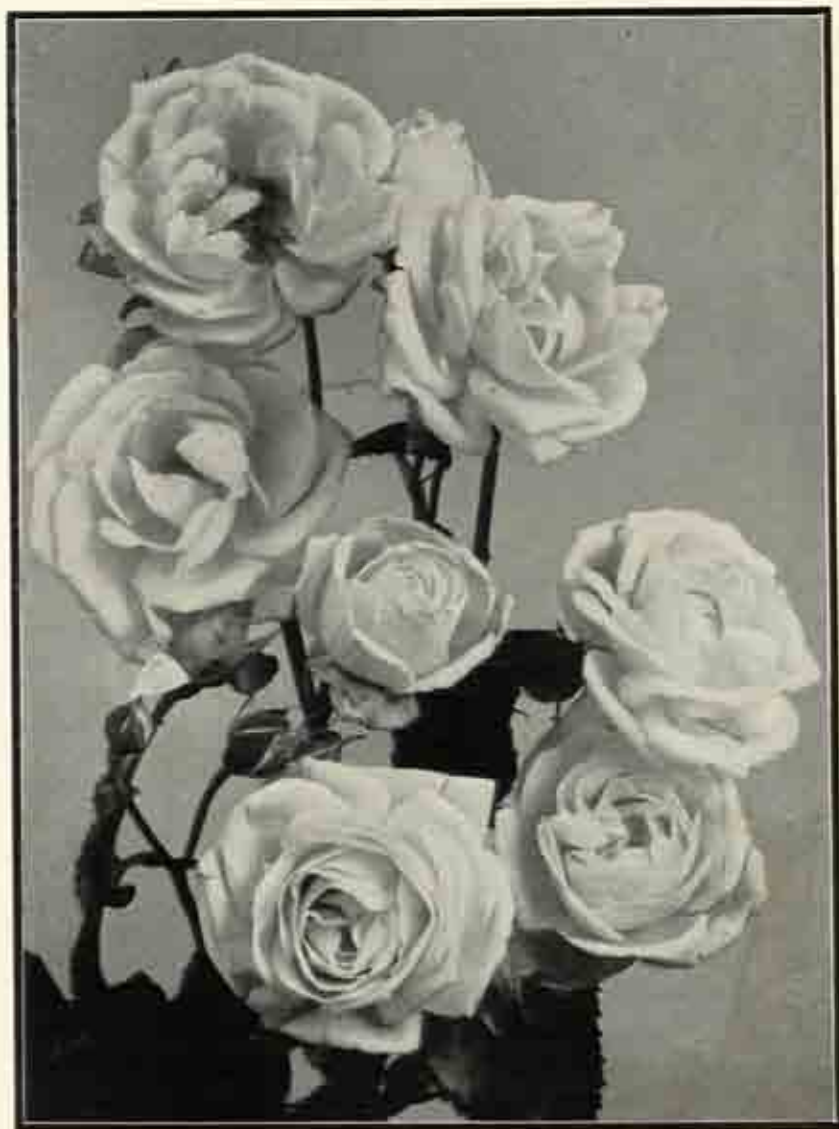
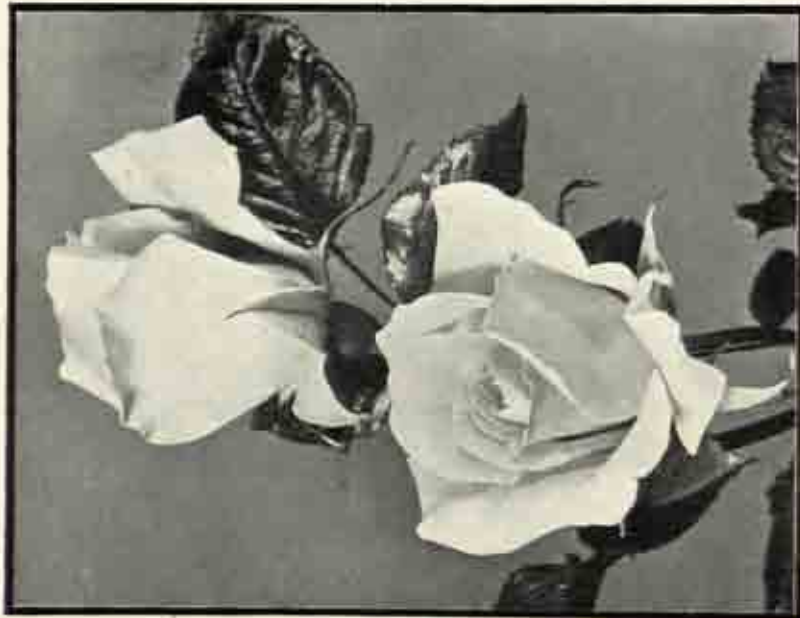


Photo: J. E. Downward.

FASHION

A new Hybrid Polyantha. It is distinctive in colour—a salmon-pink of a new and lovely shade. A very fine grower.



Copyright Photo.

EMMA WRIGHT

An attractive bedding H.T. on which the flowers are very pure orange colour, without shading, and are borne in profusion.



Copyright Photo.

PRESIDENT HERBERT HOOVER

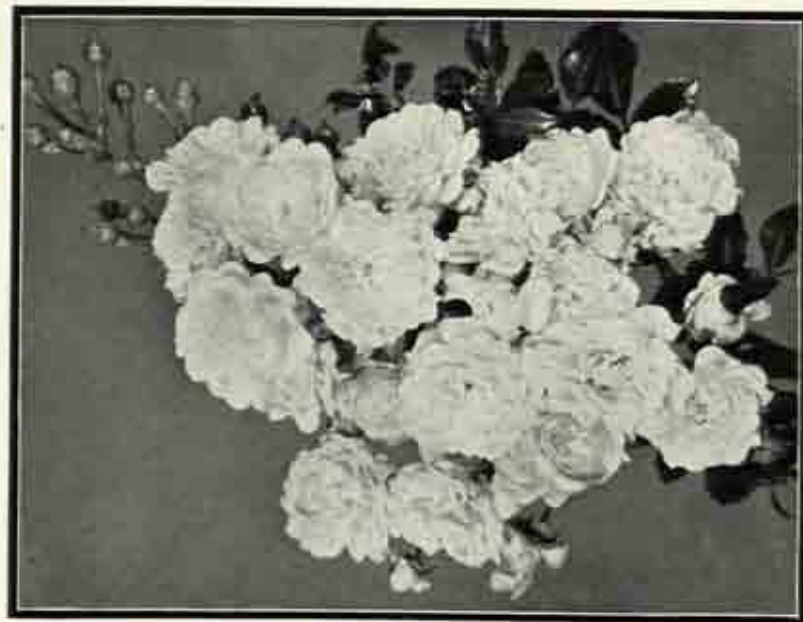
A rose delightful in colouring—orange-yellow shaded scarlet and pink. This Pernetiana is nicely fragrant and a vigorous grower.



Photo: J. E. Downward.

FANTASIA

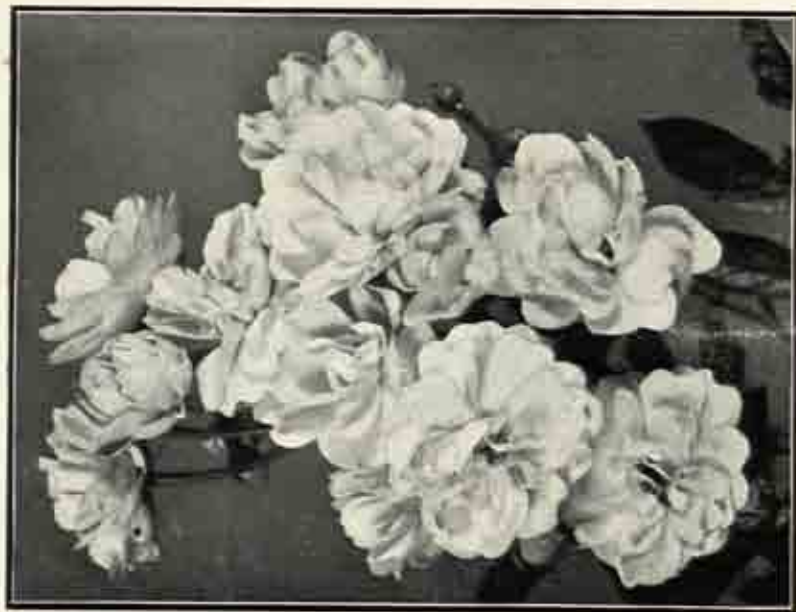
A very fine bright golden yellow is the colour of this rose. The buds are beautifully formed and are produced very freely. The fragrance is that of the wild rose. This rose, an H.T., gained an R.H.S. Award of Merit in 1947.



Copyright Photo.

LITTLE DORRIT

This charming Dwarf Polyantha has coral-salmon flowers which are borne in large sprays.



Copyright Photo.

THE FAIRY

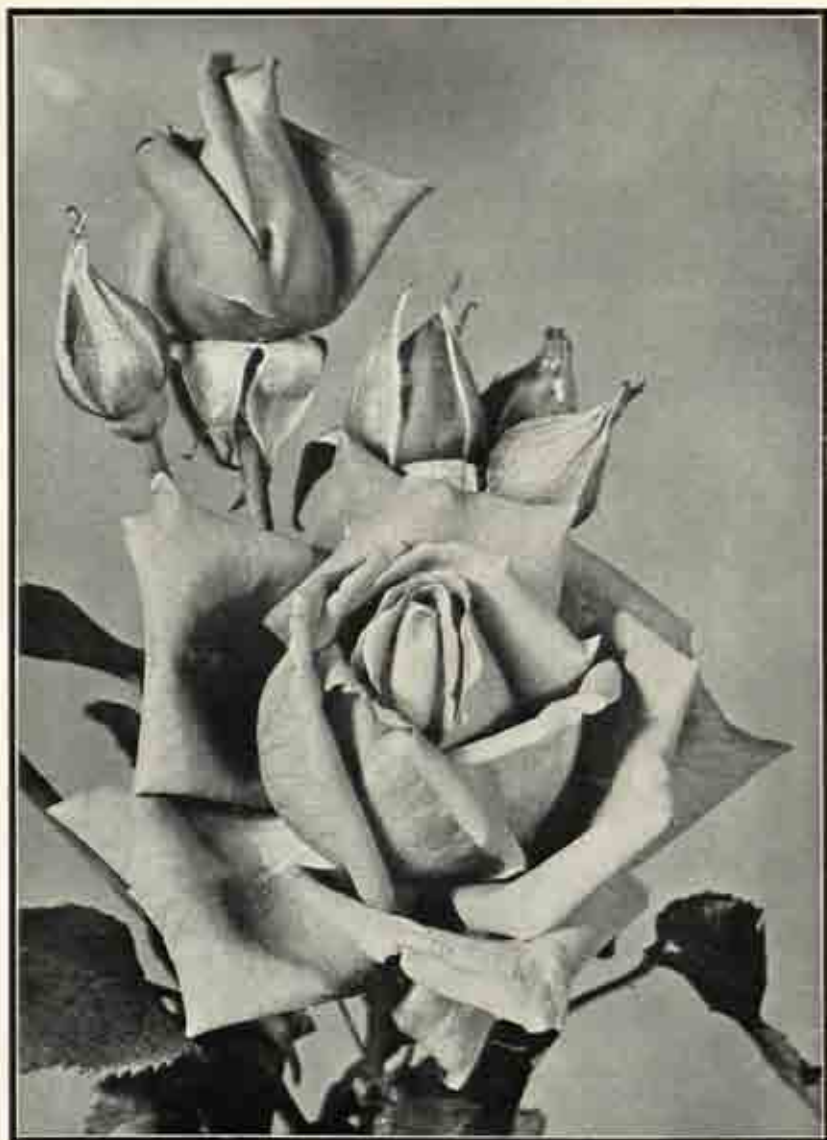
Another Dwarf Polyantha with small double flowers of an appealing pink.



Photo: J. E. Downward.

DUNKIRK

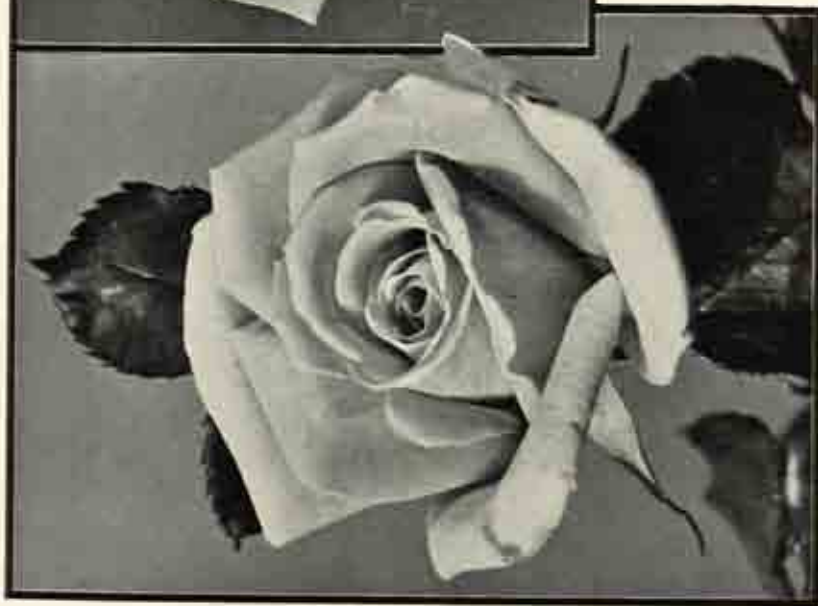
This introduction was awarded the Clay Gold Cup by the R.H.S. in 1947 for the best new scented rose of the year. It also gained an N.R.S. Certificate of Merit. The bold flowers are deep bright rosy red, the dark green foliage is very handsome.



Copyright Photo.

W. E. CHAPLIN

A very free-flowering H.T. The blooms are deep crimson deepening to carmine crimson. The large, pointed flowers are sweetly fragrant.



Copyright Photo.



Copyright Photo.

DAME EDITH HELEN (above)

A very popular variety—hardy, vigorous, free-flowering and fragrant. The flowers are a pure glowing pink. It is an H.T.

KATHERINE PECHTOLD (left)

An H.T., bearing well-shaped, slightly fragrant flowers, in colour coppery-orange flushed rose and gold. An excellent bedding rose.



Copyright Photo.

PAUL'S SCARLET CLIMBER

A most popular choice for pillars and pergolas. Its fine large clusters of semi-double flowers are vivid scarlet shaded with crimson. The growth is very vigorous.



Copyright Photo

DOROTHY PERKINS

One of the best-loved of the Rambler Roses. The small rose-pink flowers are produced in large clusters, the growth is very vigorous, the foliage a glossy green.



Copyright Photo.

MERMAID

Another attractive Climber. The flowers are sulphury-yellow with prominent deep amber stamens. It has good foliage and makes a pleasing picture when trained over a wall or fence.

a year when a fresh Hybrid Tea Rose is born possessing all the virtues, and out of the list goes a Hybrid Perpetual or a Tea Rose to make room for it. The deposed one may remain in mind for a while—perhaps its scent and shape are of outstanding merit—for it can be exhibited in its special class—Hybrid Perpetual or a Tea—but these special classes are generally small at all shows and in the end the inevitable happens—it “fades out”.

The only cure seems to me to be one which I have long wished for—namely, to put on an equal footing Hybrid Perpetual, Hybrid Tea, and Tea classes, making the number of varieties exhibited the same in each section, and the awards of equal value. The result would be that more varieties would be put before the public, and many a good Rose would be resuscitated from the dust. Further, the trade and amateurs would begin to specialize far more, and not only would this result in better business but better Roses would be put before the horticulturist.

There is the other point: without doubt, numbers of fine Roses would be saved from extinction if amateurs would take the trouble to visit some of our large Rose nurseries and there inspect the great selection of varieties. In every nursery varieties are to be seen growing by their hundreds and by their thousands. I am confident that thus the lists, too often compiled under present conditions, in the show tent, would be considerably altered, and the “trade” would wake up to the fact that what the amateur wanted was what the “trade” in reality would far rather grow and sell—namely, a tree that does well, a free bloomer, and a sweet-scented, rosy Rose. The general public wants flowers, not chance blooms, and it likes to see a bush, not two or three sticks with half a dozen leaves.

The large grower may like to procure any new, although possibly shy, variety, but the general public does not; it wants Roses that are Roses; that is all.

Here I feel it incumbent upon me to say that if amateurs, when buying Roses in blissful ignorance of what are the most suitable varieties, show or otherwise, would leave the selection to the nurseryman with whom they are dealing, they would be far safer, and they would get their trees far more cheaply.

Even when his object is to attempt to score successes at the Rose shows, I would always advise the Rose-grower to include in his selection of trees a proportion of old varieties, even though rather difficult to find, and by making those sorts that will keep his garden in constant flower. When, as an exhibitor, having a show to attend, he is searching his Rose beds for varieties to make

up the required number to enable him to compete in some class, he will live to bless the day of the introduction of those "old-timers" into his garden.

Again, when the amateur has given up exhibiting and is growing only for his own pleasure and that of a few friends, he will find that many a sturdy old variety will give far better results and greater satisfaction than other sorts which to-day are being introduced and which show a marked lack of stamina.

The Lost-Perfume Problem.—While I am dealing with the "shortcomings" of the modern Rose show there is another point that must be mentioned. A few years ago it seemed almost impossible to think of a Rose other than as a flower possessing the sweetest scent, but to-day varieties abound having absolutely no perfume or giving but a poor apology for the sweetness we expect. And these "apologies" for Roses are found just as freely on the show bench as the others.

There has been considerable discussion amongst Rose-growers of recent years as to the desirability of giving special points for scent when judging Roses at shows. The idea is good but it is not practical; as we all know, the perfume of a variety oft-times varies according to the stage of its development when it is cut, and also, to a large extent, to the methods of cultivation. Again, the judging of exhibits is already no easy matter and takes far too long as it is. What it would come to if judges with highly developed or defective olfactory powers were to discuss the varying amounts and qualities of perfume, goodness only knows. I am afraid it would lead to judges giving all known scented varieties an extra point, and thus we should get oft-times most doubtful adjudications.

The only way to restore Rose perfume to its proper place is to encourage the "trade" to study the real wishes of the general public, and to interest all growers in each new Rose that is scented, as indeed many nurserymen now do.

That no one wants Roses to develop increased beauty at the expense of lost perfume is proved by the behaviour of visitors to the shows. At all shows it is most noticeable the way even connoisseurs will bend down to smell some exquisite flower, and I have repeatedly witnessed looks of surprise and disappointment at the finding of no scent, while I have ever noticed the great pleasure evinced when the perfume came up to expectations.

I honestly believe that if the Rose-loving public (and I include exhibitors) could vote upon the matter it would be found that perfume in a Rose would be ranked first, colour second, shape and size first.

Why is it that *La France* and *Maréchal Niel* have remained such favourites, together with many others, such as the old *Glorie de Dijon* and *Tom Wood*? It is simply because of their fragrance, for, as we well know, many of the later introductions of similar habit are equally beautiful and even more attractive in colour. What keeps *Madame Isaac Pereire*, *General McArthur*, and *Maiden's Blush* as popular Roses? Not their shape or size, not their colour or habit. No! it is their wonderful perfume which, when once noted, is never forgotten. Like many other varieties that could be mentioned, they are starred in the lists of the amateur before the majority possessing many other qualities and recommendations purely and simply because they are deliciously fragrant.

Let us exempt the "trader" from blame for the prevalence of non-scented or faintly scented Rose varieties. He finds it hard to secure novelties with that high degree of perfume found in many of the older sorts. Novelties the public must have, and he takes the easy road to procure them, choosing those varieties that, being loose-petalled and not quite so full, seed more freely and are more productive in new kinds.

There are even some nurserymen who are concentrating upon the production of new varieties with a pronounced scent, and to them all honour. Honour, too, to those public-spirited traders, horticultural enthusiasts, newspaper proprietors, and others who, following the lead of Messrs. Clay & Son (of fertilizer fame) who, back in 1914, presented a challenge cup for "a new Rose, not yet in commerce, possessing the true old Rose scent", have, by means of prizes and other means, stimulated interest in the restoration of the Rose's lost perfume. The public realize that the Roses that are winners and competitors for perfume trophies are worth growing, and their names are committed to memory as useful additions to the garden.

What the pioneers have done should be followed up. Both cups and medals should be awarded at the various shows for scented Roses. I venture to prophesy that then the "trade" would bestir itself and compete largely for such awards.

I think, too, that awards for perfume would result in a return to favour of the H.P. Rose, and that a larger percentage of new varieties would be of this class, since in proportion to varieties there are certainly a greater number of scented Roses in this class than in any other. Unlike the H.T. and T. Roses, the H.P.s also possess a greater range of perfume.

An increased popularity for H.P.s would not be amiss in

another direction. I have often wondered what would be the effect on the Rose gardens of England if ever we had a severe spell of very hard frost, such a frost as we used to get many years ago. Undoubtedly it would be disastrous to the average Rose gardens of to-day, containing as they do a majority of Teas and Hybrid Teas of none too robust a constitution.

SOME PRACTICAL ADVICE

But enough of digression. Let me now get back to the purpose of the chapter—to inform readers about those little matters attention to which makes all the difference between success and failure at the show.

Selecting the Trees.—The growing of show blooms commences with the purchase of the tree, for everything depends upon the quality of the standard, bush, or climber that is to be planted.

Every tree should possess, at planting, well-grown, clean young shoots of one year's growth, that spring from a base well incorporated with a stock which, in its turn, is well supplied with clean, undamaged, fibrous roots. The variety selected should be budded on to a stock most suited to its habit of growth, and also to the nature of the soil in which it is to be grown.

As regards actual varieties, those who don't know much about Roses are advised to leave the selection in the hands of their nurseryman, telling him the nature of their soil, and whether their situation is exposed or sheltered, cold or warm.

The Best Stocks for Show Roses.—Manetti was long regarded as the best stock for Hybrid Perpetuals, but experience has proved that it is a most unsatisfactory one and its use is now confined to certain propagating work on the part of nurserymen who wish to raise plants of a new variety quickly. Manetti certainly gave vigorous growth, but the plants gradually degenerated and subsequently died out. The best stock at present is undoubtedly either seedling Briar or Laxa. (See chapter on Budded versus Own-Root Roses.)

For H.T.s, without a doubt, the Briar cutting is the best stock that can be used. It seldom fails to make good, permanent plants, with a quantity of fibrous roots.

For T. Roses I have always had a preference for the seedling Briar, which produces later blooms than the Briar cutting and maintains a greater vigour to a later period of the year. However, both these latter stocks are excellent, and H.T.s and T.s should, according to the time of flowering of the variety, be grown on each.

Spring Attentions.—Whatever the tree, it will always be noticed that it is the young, sturdy wood that produces the show bloom, and gives to it the substance so essential for its remaining a considerable time in perfection. As all likely shoots develop, they should receive the lion's share of the grower's attention, and such pests as green-fly, caterpillars, and the like should not be so much as named in their presence.

The surface of the soil around the tree must be kept well forked and a generous supply of water given to the tree every two or three days. A little fertilizer of some kind may be added as the buds begin to swell, but with newly planted trees there should be enough in the well-prepared border for every shoot grown in the first year.

No Rose tree that is to give a show bloom should receive any food after the first petals of the show specimen have started to unfold.

The average amateur seems to be afraid to disbud sufficiently; nearly always he leaves far, far too many buds on his trees. It cannot be too strongly emphasized that more buds do not necessarily mean more Roses—for many will not develop—but they do mean smaller blooms and often a weaker tree.

In the case of a large number of varieties, without disbudding, they are of small value; with disbudding they provide blooms which inevitably command the judge's attention.

With nearly all Roses the initial buds on a shoot are produced in pairs or threes. With most varieties it is wisest to remove from each cluster, as soon as possible, all buds except the centre one. In a few varieties which are rapid and coarse growers, the disbudding operation should be done at an even earlier stage of development—when the buds are only just visible—to prevent too much sap from being turned too rapidly into a channel unable to receive and assimilate it and causing the chosen buds to be misshapen and ugly.

If one misses disbudding such Roses in the very early stage of the buds' development, then it would be wiser to remove the unwanted buds when those to be retained are somewhat advanced in size.

Another rule: When there is a large number of buds to remove, thin them out by instalments. The idea would be to take off just a few on each of every few days, giving strong-growing trees longer intervals between the disbuddings than is allowed with weaker trees; every five days in the case of strong trees.

Never disbud and feed Roses at the same time. Let a week elapse between the two operations.

There is another point that needs to be mentioned: Perhaps a grower has many shows to attend. In that event he does not want all his buds to be in the same stage of growth, so that they all flower at the same time. What is he to do? Well, he should try to keep buds in different stages of growth on all trees, and disbud earlier or later, as the season or shows require.

When Shoots Appear after Disbudding.—Many varieties, and particularly La France, will put out a great number of thin, whippy shoots the moment disbudding is started. These will have to be stopped early, for if allowed to grow too strong before removal the sudden check of sap will harm the root growth. By stopping such early, strong, and forward shoots—that is, pinching them right off—a fine second bloom will be secured and the first blooms will be of better quality. Remove only a few shoots at a time, not the whole lot together.

Shading.—The two great factors taken into account when Roses are being judged are size and shape, but, other things being equal, colour also comes in for consideration (and, I may add, scent, too, in cases where there is a tie).

It will be seen, then, that colour is important and this brings up the question of shading. Undue exposure to sun will fade the colour of even the most sturdy of red Roses, say.

Actually there is quite a large percentage of Roses which, before they go into the show tent, must undergo a period of shading. For shade is not only necessary as a safeguard against sun-scorch but also as a protection from severe rains or, in emergency, from violent winds. A secondary use for shading is to hold back the development of Roses which threaten to be too far advanced by show days.

It is no mean art to know when or how to shade. Too much shade is as bad as too little. As every grower knows, the less a bloom or bush is shaded, the finer the colour of the former will be and the stronger the latter. Delicate-coloured blooms are often quite spoiled by too heavy shading or shading for too long a period.

The Roses most in need of shade are vermilion, crimson, flame, dark rose and similar strong colours. The reds will always assume a purplish tinge under strong sunshine.

How can the shading be contrived? One thing is certain: It is never satisfactory to spread a canvas awning or a screen of other material over a whole bed or even over a complete bush. To the "body" of the plants—their leaves and stems—sun and air are life itself. Only the actual blooms that are wanted should be shaded

and these only during their final stages, when they are actually showing colour.

Special Rose-shading cones can be purchased if desired. These are excellent and well worth their money. They are so contrived that they can be fixed to their supports at any height. A photograph of these cones in position appears on one of the plates.

An alternative to purchasing proper shades is to make them oneself, out of stiff cartridge paper, or better, waterproof paper, for then the shades are useful as a protection from rain as well as sun. Merely cut and glue the paper into the form of a cone, or, more simply, that of a shallow foolscap such as children make.

The proper position for the shade is such that it shelters the selected bloom from the worst of the day's sunshine and yet does not interfere with the free circulation of air round the bloom. You must never leave a rain-soaked shade close down over a bloom, to be dried in turn by the sun, else your flower will rot, or at any rate get discoloured; also, remember that excess of shading will cause the petals to lose their substance and to become papery in texture and pale in colour.

This is especially noticeable in varieties of the more "artistic" colours.

Tying Show Blooms.—Equally important as shading is the tying with very thick white worsted of the centre petals of the flowers when the buds are beginning to open. White worsted is recommended because it does not discolour the flowers, is free from dye, and is sufficiently elastic to expand under the gentlest pressure.

Tying has these advantages:

1. It keeps the petals clean;
2. It holds them together, thus aiding good shape;
3. It has the effect of making the buds grow longer and assume the much-desired pointed shape;
4. It regulates the development of the bloom to just what it should be;
5. It encourages longer petals.

A length of about 10 in. of worsted is required for each bloom. On no account must the worsted be *knotted* round the bloom. This is the proper way: Form your strand into a ring, fastening the ends, not with a knot but by twisting each once round the ring. Slip the ring over the Rose, tighten it by pulling on the ends just

sufficiently to "embrace" the Rose and keep its centre compact, and that is all.

The reason why the worsted must not be knotted is that the ring has to be expanded with the expansion of the bud. With the twist-fastening advised the bud itself can loosen the ring to suit its girth.

Ties should be put on to the Roses as soon as the outer petals are seen to be unfolding. Never place the ring over these outer petals; these must be unhampered, and only the centre of the Rose should be ringed.

If the Rose grows very rapidly and the wool cuts it a little, then gently loosen it a trifle. The bloom should be cut and prepared for show whilst still in this tied-up state; nor should it be untied and brushed out until it is wanted to be got ready inside the tent. Then the worsted may be slipped off. As a rule, the petals will unfold, and with hardly a touch a medal bloom will be disclosed.

"Timing" Show Roses.—The timing of Rose blooms—having them just ready on the day of the show—is a matter which can only come of experience. None the less it is a very important part of the exhibitor's business.

Nearly every grower each year will secure Roses worthy of the highest award only to find that when they are at their best, the show is either over or not yet on. Thus many would-be champions have died untried! This is sad, but all the same it is what we must expect, and the higher the standard of perfection we attain in cultivating Roses, the more often will this happen. Indeed, I will go so far as to state that nearly every large grower at almost every show loses a medal only by hours of undeveloped or over-developed growth.

There is this consolation: The big professional or other growers can hardly pay the same attention to their blooms as can the small grower. Only the latter, with a few trees to look after, can give that individual attention to each—in the way of watering and feeding, shading and carefully timed disbudding—which will speed up or retard buds to exactly the right extent.

The Importance of Size.—Always place size first and foremost when going round your Rose trees looking for specimen blooms to cut for a show.

I know that will "go against the grain" with many of my readers. It will be held that mere size is no beauty factor, that form, quality, colouring, should be considered as of far greater importance. Alas; that is not the case. In vegetable shows to-day size has not nearly so many advocates among judges as it had, but the same thing is not yet apparent in the flower tent.

Well do I remember, one day at Bath, showing a beautiful Madame Jean Dupuy Rose and having it just beaten, in the eyes of the judge, by a Mildred Grant. It is seldom that Madame Jean Dupuy is ever fine enough to stand out as a medal bloom amongst Teas, but to have to eclipse an H.T. is too much. When size counts as a principal factor in the eyes of the judge you may as well show a Brussels Sprout in the same class as a Cabbage, and expect an equal chance of success. Judged on merits and possibilities, my Rose was the winner; and in part I was satisfied, especially as one judge decided in its favour.

This case emphasizes what I have said above—that, in choosing blooms to stage at a show, it is always as well to select from varieties which are naturally of good size, unless the grower has produced something abnormal on a naturally smaller-bloomed variety. Definitely, Roses below the medium size do not count when in competition with the giants of their class, no matter what their colour or shape.

No; you may show the Roses of your heart's selection, but you must also include many you like less—because they give sizeable blooms—if you would conquer in the fray and win the highest awards.

When to Cut Show Blooms.—With most Roses cutting is best left until the early morning of the show, but Tea Roses can be cut the day before; then, if stood in water in the dark, they will grow a little, and certainly the petals will be easier to dress.

The reason why it is best to cut the blooms in the morning is that most Roses go to sleep at night; that is, their petals shut somewhat, and it is safest not to disturb them then, for you can do very little with them until the sun is up. Further, the value of the majority of Roses cannot be well determined until the sun is up. Neither is it wise to cut red Roses too early, as they lose their fire and brilliance if kept too long in water.

A good deal of judgment is necessary as to what to cut first, especially when you have many Roses to wire and stage, but it is a golden rule to start with the Teas, for these grow in water. Then cut your white and pink Roses. Leave your youngest blooms until the last moment.

How to Cut the Blooms.—Use your sharpest pair of scissors for cutting, for although slight bruising of the end of the stem of the cut Rose is a help, you have the growth from which the bloom was cut to consider; if that is bruised you may invite the entry of disease.

In cutting the bloom, remove with it about 8 in. of stalk. If

you are successful your bloom will be raised by the judges in your box, and with a short stalk there is a danger that it may be lifted out of the water, when it will soon fade in a hot tent.

The Best Stage at which to Cut the Blooms.—Write all labels as you cut and place them in the tubes along with their respective blooms. Experience alone will teach you what to cut, but, speaking generally, a Rose to last well should be one on the under-developed side that will stand being cut the evening before the show.

Always take a goodly number of spare blooms, for you are certain to want one or more, and even the most careful exhibitor will meet with accidents.

Wiring the Blooms.—All show Roses must be wired in order that they may hold an upright position and to prevent linking of the stems. Wire each bloom as it is cut. Use the special florists' wires sold for the purpose. Do not let the wires wrap round the stem like a spring coil; a gentle curving turning is all that is necessary, the upper end being carried well up to the bloom.

The Foliage Question.—Leave on the stem any good, clean foliage that there may be, but clip off cleanly any leaf-sprays that are in any way blemished or insignificantly small. It is not permissible to wire on to a Rose leaf sprays from another Rose tree.

Where to Keep the Blooms when Cut.—As each bloom is cut, place it immediately in water, preferably in the tube in which the Rose will be staged. At all costs avoid the common practice of spraying the blooms after they are cut; it makes the petals flabby. They will keep perfectly fresh if, whilst awaiting the hour of dispatch, they are placed, in their tubes, in a cool room, preferably a cellar.

It is a great mistake to place the blooms in a box and close down the lid if any time is to elapse before dispatch. They should be exposed to the air up to the very last minute.

HOW TO SHOW ROSES

IN the foregoing chapter I have taken the would-be Rose exhibitor up to the stage when his Roses are cut and waiting for dispatch to the show.

In regard to their journey I can only say this: It should be as quick as possible. A start should be made sufficiently early to allow *plenty* of time for staging the exhibit and arranging it to the best advantage.

Taking Roses to the Show.—If the weather is very hot it is a good plan to wrap a lump of ice in a piece of flannel and pack it in along with the Roses. This keeps down the temperature and is amazingly successful as a preventive of flagging. It is certainly much better than damping the blooms or spreading wet tissue paper over them, this discolouring the petals and also attracting the dust which is bound to be present in the show tent if not elsewhere.

I have already mentioned that my habit has been always to tie up my blooms with soft worsted, even to the outer petals, when travelling, to keep them clean and preserve them against damage.

One day before a show at Bath I had treated a box of twenty-four Roses belonging to a friend in this fashion, and all were ready for the journey. A fellow-competitor from Warminster called to see my friend's garden, and the old gardener showed him his employer's exhibit, which looked more like a collection of trussed fowls than show Roses. The Warminster exhibitor patronizingly comforted the old gardener, and trusted that they would do well, but conveyed no hope. The old gardener, however, was not to be dismayed; he simply shut down the box and replied: "You wait 'til the governor has put them through the mangle!" Through the mangle they went; that friend from Warminster, who was beaten, never said another word.

The Best Type of Show Box.—Roses are usually exhibited in special show cases consisting of a lidded box fitted with tubes. The size of box to be used is laid down by the National Rose Society. The rule reads:

"All blooms exhibited (except where specially directed in the schedule to be shown in vases or otherwise) shall be staged in boxes of the regulation size, viz. 4 in. high in front and 18 in. wide, and of the following lengths (all outside measurements):

For 24 blooms, 3 ft. 6 in. long; for 18 blooms, 2 ft. 9 in. long; for 12 blooms, 2 ft. long; for 9 blooms, 1 ft. 6 in. long; and for 6 blooms, 1 ft. long. For 8 trebles, 3 ft. 6 in. long; for 6 trebles, 2 ft. 9 in. long; and for 4 trebles, 2 ft. long. In the above boxes the tubes must be 5 in. apart each way from centre to centre of the tubes.

In all classes in which three blooms of each variety are required to be shown in boxes the three blooms shall be arranged in the stand triangularly."

I always had the tubes that held the Roses made 2 in. deeper than normal, so as to give greater elevation if required, and also to hold more water. Some Rose stems have to be cut short, and it is most vexing to be unable to elevate a bloom to any desired length that may be found to be required. Go to a proper maker—not the local carpenter—for the boxes. It is quite an art to turn these out strong and yet light enough to reduce railway charges—a considerable item in these days.

The Moss to Use.—Good moss is also essential. It should be got from the country a few days before the show; it only requires to be spread in the shade and watered down every evening to last for many weeks. Ordinary moss found growing on rocks, or at the foot of trees, or in woodlands, is best.

The surface of a well-mossed box sets off the Roses to advantage, and nice fresh, green, feathery moss from the woods is hard to beat.

Place the moss in position before the flowers are put into the tubes. Arrange it to form a neat carpet. Remove any brown or unsightly pieces that may be discovered. Let your aim be to make the whole array as neat as possible.

On Arrival at the Show.—When you get to your allotted space at the show set to work methodically, but don't hurry things. If you've timed matters properly there should be no need for haste. Try to arrange things so that you just finish when the "seconds-out-of-the-ring" bell sounds. Especially on a hot day is it unwise to finish an exhibit before one need.

If you *do* finish too early, damp the moss—but *not* the blooms—and cover the exhibit with a sheet of paper until the signal for quitting sounds.

Arranging the Exhibit.—Whether it be an exhibit of garden Roses or a box of exhibition blooms, staging will always count, and, no matter what folk say, will weigh heavily with the judges. Study, therefore, so to arrange your colours that the one bunch or single bloom sets off its next-door neighbour to advantage. A good

order for the colours would be a white, a red, a yellow, a red, a pink, and so on. Avoid as far as possible the staging of two similar colours next to each other or immediately in front of one another and always break up clashing colours by interposing a white or cream between them.

As a general rule, with single specimens, the largest blooms should be placed in the background, the smallest in front. This does not mean that there may be any great discrepancy between the size of those in the back row and those in the front. All the specimens should be as near even in size as possible. On no account include one huge giant in an exhibit; it dwarfs all the rest, making them look smaller than they really are. Equally don't include an exceptionally small Rose; it spoils the look of the whole exhibit.

When there are more dark colours than light colours, keep the former more in the background than in the front—let the exhibit shade from dark to light.

If you have one special Rose that you think is deserving of a medal, of course, give it the place of honour, in the centre. Further, only colours calculated to set off to advantage should be placed near it, the purpose of this, of course, being to ensure that your chief treasure catches the judge's eye, a very valued point when the variety on which you pin your faith, although exceptional of its kind, has to challenge larger varieties for the premier position.

Before leaving your box see that your Rose has a well-written label with its name correctly spelt—a warning much needed, since if it wins, the uninitiated public are certain to write it down in their books.

If successful and an enterprising photographer seeks to immortalize your flowers at small cost, do not refuse him the honour, for the pleasure you will derive from the picture in years to come will be well worth the money. It will bring back to memory not only the triumph you scored, but also all the hard labour and care which, in that case at any rate, resulted in so great a success.

Dressing Roses.—I mentioned in the previous chapter that Roses should be tied with worsted when they are developing and that the worsted should remain in position up to the last moment. The time to remove it is just before the exhibit must be left to the mercy of the judges.

As each Rose is untied, consider whether a little dressing may not be an advantage.

By dressing is meant the arrangement of the petals so that they look their best. Some Roses will open and shake out into a

beautifully shaped bloom directly the tie is removed; others will not, instead looking a little ragged and untidy. It is the latter that need dressing.

In dressing a Rose there is nothing to beat the handle of your budding knife or a small bone paper-knife and a large camel's-hair brush to remove specks of dust, etc. Scissors I have never used; no, not even to remove a damaged petal. Indeed, most of the work can be done with your first finger and thumb, and a puff of breath blown sharply into a tightly closed bloom to loosen the petals should be enough. If blowing into the buds does *not* loosen the petals sufficiently the paper-knife can be used to open them out the necessary trifle. Only one petal must be opened at a time.

In dressing a Rose always work from the outer petals, laying these low before the next row is touched. Cupped petals often require the pressure of the tip of the first finger on the outside of the base. This causes a slight indentation which makes the petal lie back. For other petals a slight pinch given at the base will suffice. For others again only the downward pressure of the camel's-hair brush need be brought to bear.

Do not, good reader, go way with the idea that there is anything unnatural in the dressing of a show Rose.

*I have noticed every bloom—
A secret I'm confessing!
Like a blushing bride or groom,
Needs a little dressing.*

On "Faking".—No judge would pass a faked or damaged flower. In dressing, all the exhibitor does is to try by gentle methods so to present his Rose that at the time of judging it is at its fullest glory, which, unless open and properly displayed, it could not be.

I have time and time again coaxed a large bud ready to unfold into a glorious blushing Rose, to save the situation when I have been short of a bloom. Such "tricks" are a gentle and quite permissible art and I am proud of being a past master of the same. Exhibitors of birds, cattle, or horses will tell you that their exhibits need, in their way, like showmanship before they pass the judge's eye.

The dressing above described is an entirely different procedure to that which could legitimately come under the heading of "faking". Actually, I strongly deprecate faking in all its forms and so will all true Rose-lovers.

Believe me, it is very, very seldom that a faked flower wins a National Rose Society medal.

Petals unnaturally forced open, pinched into position, or cut with scissors are not of the order of medal blooms, and such practices are only of necessity when varieties are hard to get to make up a required number; then stubborn bud is requisitioned, or a damaged flower is shorn of bruised or mutilated petals to fill a gap.

Learn from Others.—Having finished your exhibit, don't hesitate, if you have time, to go round and see what the other exhibits are like. Maybe you can learn much from them.

The first time I ever showed I was so disgusted with my effort that I nearly closed my box and placed it under the bench; but my sporting instincts forbade that, and instead I mentally resolved to remedy my many obvious faults the following year, with the result that in that year the friend who had persuaded me to exhibit had to look to his laurels. Soon after he was playing second fiddle to me at all shows, and I was challenging the "trade" in small open classes, winning my share of prizes, and learning lessons and evolving ideas of value.

Did I set my heart on winning in a twelve distinct varieties class in hot competition, then I showed a box of 24 varieties and a vase. My rivals noted the strength of my vase and my 24 box, and staged accordingly, trying to beat me in all. A glance would tell me my fate had I left my exhibits as staged, but wisdom is justified of her children, and before the bell rang to exclude exhibitors from the show tent, lo and behold! like the move of a quick-change artist, a bloom of a similar variety had been exchanged from my 24 to the 12 box, or vice versa, and my vase had played a similar hand in the game, so that what was weakness when my rivals gazed upon the exhibit now was strength beyond their power to cope with, and the bell soon put them out of court.

I wired my vase Roses as for my box, simply bending down the wires, which were easily bent back into place on the change being made. Oh, the joy of beating a rival who had visited your box at least ten times to weigh up your strength before risking a bloom in another direction, in which possibly you were also competing.

What laughter and what good fun to see him hustle all to no purpose; oft-times what consternation to find you had left it too late, or he was playing a similar game, or you had forgotten and left two of a variety in a box and got disqualified by trying to be too clever.

DECORATIVE ROSE CLASSES

At some shows there are classes for what are known as "decorative" Roses, meaning Roses which naturally are small bloomed or whose blooms appear in trusses or bunches, such as those of Ramblers.

Decorative Roses are not exhibited in the ordinary show boxes previously described but either in vases or special standards to which are affixed a number of metal or glass receptacles. Such standards are to be bought quite reasonably.

The culture and management of decorative Roses follows closely on the lines already laid down, save that they are not ringed with worsted, as are the single specimens and are very seldom shaded or disbudded.

Cutting the Blooms.—Always cut as natural-looking a spray as your garden will provide. Let the spray consist of buds and clean, healthy foliage as well as opened blooms. It is permissible to remove any occasional flower that is faded or defective, but naturally this should not leave a noticeable gap in the truss. Have as long a stalk as possible to each truss.

Place the trusses in water immediately they are cut. Moss packed round them will prevent undue movement when the containers are being conveyed to the show.

Staging the Exhibits.—If circumstances permit, the exhibit should have a background, this preferably being of black material for such shows up the blooms to good advantage. When several colours are included in the exhibit let the pinks, yellows, orange and white be nearest the background.

In arranging the exhibit aim to have a nicely balanced, graceful, and airy effect. Overcrowding is as much a definite fault as a lopsided appearance.

Use no foliage other than the leaf sprays of the particular Roses in the exhibit. On the other hand, let the supply of foliage be adequate.

Vases and Baskets of Roses.—In regard to vases and baskets of Roses, the National Rose Society's regulations, of course, vary in accordance with class.

In regard to vases, it is usually stipulated that:

"Exhibits be arranged so as to show as far as possible the foliage and habit of growth of each variety, that each variety be staged on the tabling in a separate vase (half of the vases usually being 10 in. high and the other half 8 in. high), that all stems must touch the water and that no background be used."

In regard to baskets, common stipulations are:

"All or some part of each basket must rest on the staging, the tops of the tubes must not be more than 2 in. above the rim of the basket, the flowers must not face all one way and no background is permitted. Baskets, which must be handleless, are usually supplied on request. The usual maximum dimensions are 14 in. inside diameter and 9 in. depth though sometimes 9 in. and 6 in. respectively are the required dimensions. The number of roses and varieties to be included varies according to class."

If you don't at first Succeed.—It is possible that you may not be successful in winning a prize at your first show, that the opportunity you have had of comparing your exhibit with those that have won success will, you feel, drive you to despair.

Don't give way. Don't be depressed because of the excellence of competing Roses.

Take my own example. Oh! how I fought to win a National Rose Society medal for La France, my favourite Rose, but never have succeeded. I have shown boxes of twelve in the open, and have even beaten a twelve of Mildred Grant, shown by one of our largest trade growers at a big show, but yet I have always been a point behind the ultimate winner on a single bloom. But I have never despaired. In Rose-growing you never know your luck. Always you may have at the back of your mind that one day a tree will throw up a shoot that will produce the perfect giant that shall carry you to victory, or a David equally perfect, that shall excel over all the giants of your adversaries.

After all, a Rose can only be a Rose and there are limits to its size, if not to its colour and shape. That should always be the cheering thought to the enthusiast who sets out to conquer in the show tent, and another cheering thought for him is the sight of some bloom growing in a humble cottage garden as fine as any ever exhibited by the grower of thousands. Such things as that should be sufficient to bring up the hopes of the most despairing amateur—whilst at the same time calling to order the self-confidence of the most successful!

It is, after all, open to anyone to grow the best, and secure the highest award that his sporting nature and the love of his hobby has led him to compete for, and it is open to all who show to attain such a standard of excellence that the best is hardly the best.

Judging Roses.—If, having gained experience, you are ever called upon to judge exhibits, while remembering the rules and

regulations of the National Rose Society, yet use your judgment and knowledge of what a Rose can be and what it is; if you do not know the variety, then judge it as a Rose of colour and shade, paying due regard to any other point, such as freshness and staging.

A careful inspection will soon show which is first, second, and third. In the case of a tie, which is most unlikely, minor points, such as staging, should count.

I say a tie is unlikely because there is nearly always some militating factor, such as overdressing, a split bloom, a flower that is not quite fresh, one that is undersized or off colour, that can turn the scale.

The pointing of blooms (that is, the allotting of points to them) depends entirely upon your knowledge of all of the flowers to be judged. If you are a grower of them all there will be no need to point. I have often smiled when I have seen brother amateur judges attempting to point up exhibits containing varieties they have never previously seen and which, indeed, were quite new introductions.

THE YEAR'S WORK IN THE ROSE GARDEN

JANUARY

THERE is always work to do in every garden of any size but if the Rose-grower has followed closely the seasons of the year in all his undertakings, January will be one of his quietest months.

Planting that has been delayed should be pushed forward whenever the ground is free from frost. Old manure from spent hot-beds can be got out and beds that have been forked over can be top-dressed as required, but only when the frost is out of the ground.

All trees this month should be regularly inspected after storms of wind or rain; those that are loosened should be nailed in or tied up, and those that are planted on low-lying or clay soil should be closely examined after each wet spell to see that water is not left standing round them too long.

From the latter part of the month until the middle of February Roses may be grafted in heat under glass. Pot Roses should be pruned and brought into the house in relays at intervals of a few days to ensure a succession of flower.

Before it is too late, all arches or pergolas should be erected, and Climbers or Ramblers installed in their places.

Roses under glass will now be starting and ventilation and careful watering will be necessary. On the first signs of any insect pests fumigate the house with a good fumigant.

Standard Rose stocks may still be procured from the hedgerow and planted as soon as possible.

FEBRUARY

Rain or snow is the order of the month. With this in mind we must hasten to finish planting on dry, open days.

After frosts examine all Rose cuttings in the open, and if loosened or lifted in the soil they should be made firm by treading the soil around them.

Make all trees secure against March winds, especially Climbers, which should be tied in or nailed up, as the case may be. If the heads of any bushes or standards were protected by means of

bracken placed among the branches, this material should now be loosened to allow free play of air among the growths.

Where there are Ramblers on pergolas or fences, defective woodwork should be repaired at once, or soon the weight of growth may bring down the support and break the Rose, too. Remove and replace perished ties, leaving between the stem and its support enough room for natural stem expansion.

Finish the pruning of all pot Roses and bring a few more trees into the forcing house every week until the end of the month, when all should be started. Continue grafting Roses under glass until the middle of the month.

All Roses growing under glass are very liable to Mildew and insect pests, due to want of care in the regulating of air and moisture. Half the trouble arises out of the use of a poor thermometer. The small extra cost for a good one is soon repaid by the improvement in the Roses.

Avoid draughts in a house and regulate the temperature so as to prevent, as far as possible, the sudden and excessive rising and falling of the thermometer. If Mildew appears, spray with liver of sulphur solution or syringe with clear water and dust with flowers of sulphur, both of which remedies will keep down this scourge.

Climbing Roses under glass will want watching closely for insect pests. It is no use clearing pot Roses of pests whilst Climbers in the same house are infested. It is always wisest to fumigate an old greenhouse from time to time, as such is seldom quite free from the enemies of the Rose.

At the end of the month, if the weather is mild, Roses growing on sunny walls may be pruned.

MARCH

March is the busiest month in the year for the Rose-grower. Late planting and the pruning of Rose trees go on together, whilst the tying-in of Climbers, the lifting of layers made the previous summer, the staking of budded stocks, the careful ventilation of the greenhouse, the spraying of trees under glass, and the potting-up of a few spare trees are all jobs which are waiting to be done in their turn.

Pruning becomes our first consideration. We start with the H.P.s and our Climbers, then the H.T. Roses, leaving the Teas and the most delicate varieties until the first or second week in April.

When pruning trees, examine the labels to see that all are correct, for these often get blown off and lost. Because some trees have advanced and from the tops of their branches are showing leaf, do not let this soften your heart and cause you to break all the good laws of pruning; remember you want flowers—not leaves.

In regard to Rose planting this month, great care must be taken to choose the right weather for the job. A quiet, "drying" day is the best, the warmer the better; in any case, there must be no hint of frost in the ground. Prune all shoots back hard before planting and be sure to stake the trees well against the rough winds which are bound to come along.

Make newly planted Roses of all kinds firm in the ground. This is very necessary, owing to the action of frost and the uneven settling of freshly moved soil. You can be quite sure that unless a Rose is firm and comfortable at the roots, it is unhappy.

Cuttings from forced Roses may be taken this month and planted in pots; these should be rooted in bottom heat.

Watch the thermometer closely this month, and regulate carefully the ventilation of your greenhouse.

Insect pests will make their appearance under glass and must be looked for.

Transplant seedlings to their new quarters.

At this season, you can do much to prevent pests and diseases from launching an attack, and prevention is better than cure. If there are dead leaves, twigs, weeds, or refuse of any kind about, clean the beds and their surroundings, and burn the lot. This kind of unwanted, unhealthy material harbours the spores of Black Spot disease, Mildew, and sleeping insects. Having cleaned up, syringe with a solution of permanganate of potash.

Greenhouse climbing Roses will begin to show bud during this month and, as soon as this happens, stir the soil surface lightly and feed the plants with weak liquid manure once a week. During this month these Roses will grow quite well without any artificial heat, but blooming will be earlier and more profuse if the night temperature is not allowed to fall below 45°F. To this end a little heat at night is useful.

Do not remove any protection against frost from the outdoor trees until the end of the month, except in very sheltered corners of the garden. If your soil is a light one it is advisable to cover the surface of the beds of newly planted trees with a little old and well-rotted hotbed manure. This will greatly help the trees, especially the late-planted ones.

APRIL

April with its alternating bursts of warm sunshine and showers of cold rain is not an easy month for the Rose-grower.

Tea Roses have to be pruned and all trees inspected for early signs of Grub or Aphis. Remember that the first shoots are very tender and liable to be burnt if any strong insecticide is used against the pests. Soft soap or quassia solution is the best means of attack just now. If you have time to go over all your trees, rubbing infested shoots firmly between finger and thumb to crush the pests, so much the better.

As eyes on standard and other trees break where they are not wanted they should be rubbed out. Suckers from the parent stock should be removed. Roses budded the previous year, as soon as they are long enough, should have their shoots tied to canes or sticks.

Examine Roses pruned in March to find out if shoots cut back to what was apparently a good bud have disappeared. Here and there you may find that that topmost bud has failed and unless you correct matters there will be a "snag" of dead wood at the end of the growth. Dead "snags" are dangerous, and the growths concerned must be cut back farther, to a good outward-pointing bud. The tips of Ramblers and weeping Roses are specially prone to behave in this way.

Again, in your bush Roses and standards this month, inward-growing shoots will start. If these are allowed to remain, the buds will be choked up and good shoots weakened. Be ready, then, to rub out—not cut out—these unwanted internal shoots.

This is a good month to scatter soot over the surface of the beds and very lightly to fork it in. If the weather prove dry, water all newly transplanted Roses, giving them a good soak; remember, a light shower of rain is not likely to reach their roots.

The covering to Roses, such as bracken and leaves, can now be removed if not already done, and the surface of every bed should be lightly hoed.

Rake up and burn any prunings lying about. If there was any Mildew or Black Spot disease the previous year, these cut-off shoots will be carrying the infection, ready to be passed on to healthy, this year's growth.

If it has not already been done, take the digging fork, and prick over every bit of surface 2 or 3 in. deep, breaking up the soil lumps as you go and digging in the remains of the winter mulch. If in the course of this you find a bush that is loose in the soil, tread it in firmly.

For the grower of indoor Roses, April is a busy month. Pot Roses from now onwards will require more water and careful feeding with weak liquid manure. Insect pests must be carefully watched for, and if these are found in any quantity fumigate the house at once. Attend carefully to the ventilation of your house, for April hardly ever brings two days alike.

Cuttings can be taken during this month from trees that have been forced; these should be rooted in bottom heat.

The rain-water tub, with its bag of soot and sheep manure, will now be needed, for, after a storm of rain, trees may be watered with the liquid in dilute form.

MAY

Buds will be showing everywhere, and insect pests will abound to harass the poor grower. All trees must be gone over every day or every other day at least if we are not to lose a bud or some promising shoot.

Hand-picking is again the best remedy this month, but as the growths harden and become stronger, more frequent use may be made of the syringe and a good insecticide.

These are early days, but the grower in many cases will be able to decide as to the removal of certain unnecessary buds in order to foster a likely exhibition bloom. Even with trees and bushes from which it is not expected to gather show specimens, dis-budding pays, and as soon as it can be seen which are the most promising buds, the others should be removed.

If the weather is dry it is wisest to water the trees, but this should be done in the mornings.

Late frosts will be a cause of great anxiety, but little can be done to protect your trees other than to tie a piece of newspaper or the like round some choice bud for the night. Such material must, however, be removed as early as possible next morning.

Weak liquid manure and soot-water can be given to all trees freely this month. It is a wise measure to spray all Climbers growing over arches and pergolas with insecticide; owing to the height at which they are growing it is not possible to hand-pick these trees, and they suffer in consequence.

May is the month during which suckers begin to make their appearance round our Rose trees and bushes in real earnest. These must be removed as fast as they come; otherwise they seriously undermine the strength of the plants and hamper their chances of flowering.

Continue to tie up shoots of last year's budded Roses to canes and sticks.

Standard Roses are inclined to make very rapid growth during this month and you may find that you were scarcely severe enough at pruning time. Unless every branch has ample room for proper development, cut out entirely any weak growths that are in the way, especially those that grow towards the centre, or spring from the inside.

Newly planted standards will probably need to be re-staked. Since planting, the soil will have sunk, perhaps leaving the tied-up Rose suspended. Release the ties, press the soil firm, knock the stake down a little, and re-tie.

Rambler Roses which were frost-bitten are best treated now. Where the growth tips are black and shrivelled, cut back to a green, healthy place, and give the roots a good soaking with $\frac{1}{2}$ oz. of sulphate of ammonia to a gallon of water. See, too, that any Ramblers growing alongside walls don't lack moisture. Tie in loose growths, and watch carefully for Red Spider. Immediately you see signs, syringe vigorously with aired water. An occasional syringe on warm evenings will help to prevent an attack. Feed weekly with dilute liquid manure.

With all newly planted Roses see that the soil is kept firm. If the weather is dry, the stems and leaves will make a greater call on sap than the restricted root system can supply. Keep the soil moist, therefore, until the bushes are thoroughly established.

Harden off all Roses grown under glass that have flowered, and then stand them in the open. If Mildew makes its appearance in the greenhouse, dust with sulphur the leaves of all trees affected and then two or three days later spray with soft soap and water.

With all under-glass Roses, undue growth must be prevented by giving less water. Keep the soil comparatively dry and shorten back the growths to healthy eyes. As soon as growth begins again more water will be wanted, and it is a good plan to syringe all shoots with clear water twice a day. This cleanses the leaves and does much to prevent insect attack.

Cut back hard *Maréchal Niel* trees that have flowered in the greenhouse and give free ventilation. Cuttings taken under glass in March and April can now be transferred to single pots and grown on as before.

JUNE

Roses will now start to bloom in the open, increasing in numbers as the month advances. The glory of a June Rose is hard to excel;

there seems to be a greater freshness about the foliage than there is with those of July, and with many varieties first blooms are often the finest.

Disbudding must proceed apace and the slaughter of the innocents *must* take place if exhibition-quality blooms are to be secured. Read carefully the information given to you on disbudding elsewhere in this book, and do not let a day go by without putting it in practice.

Continue your vigilant care to ward off and exterminate pests, whose attacks will gradually lessen toward the end of the month.

If the weather prove very dry, all trees will require to have the surface of the ground hoed round them to conserve the moisture in the soil. A good watering with weak manure-water will help all trees. Soot in the water will certainly give a deeper green to the growing foliage.

Branches damaged by frost will now show clearly if they are going to die off, and if so they should be cut back. In any case, shoots which are diseased or which die back from any other cause must be cut back to sound wood.

Pot Roses may now be placed out in the open, and from these may be selected trees to fill up any blanks in the Rose beds that have been occasioned owing to frost and other causes. When planting out pot Roses, first prepare the holes to receive them, then knock them from their pots, and replant as carefully as possible. Do not disturb the ball of soil around the roots more than is absolutely necessary and, after covering them in, tread the ground as firmly as possible.

The show season for Roses will soon be in full swing and if the exhibitor has not already prepared his show boxes, let him do so at once. Let him also secure a good supply of green moss, which can be laid on the ground in the shade and damped down each day to keep it fresh and more or less in a growing condition.

To obtain well-ripened seed, some of the earliest Roses may be crossed as soon as the pollen is ready, but, like old Mother Hubbard, you may find results for labour empty and that some—one—in this case in the shape of insects—has been there first.

JULY

This month Roses bloom everywhere, and shows are held for their display throughout the United Kingdom. The Rose-grower now reaps the reward of his loving care and attention, but also there is still much to do in the garden.

Old blooms have to be cut off unless the seed is wanted; trees have to be watered in dry weather; disbudding *must* be continued; the soil must be hoed to keep down weeds; Rose shades must be inspected and adjusted; standard briars for budding must have their shoots reduced to the number required.

Mildew may appear or other fungus trouble, which on first signs must be treated.

Propagation by layers can be proceeded with, and budding should be well in hand.

Pot Roses that have made good growth can be shifted into larger pots. Flower buds should be removed from all trees wanted for winter flowering.

Roses, to do well, must have water this month, and plenty of it. If rain does not come regularly to soak the beds, artificial watering must be carried out, choosing the early morning or late evening to carry out the job. Continuous hoeing of the beds will considerably help to conserve what moisture there is in them.

In the evening after the heat of the day the foliage of Roses will benefit from a spraying with clear water that has stood in the sun all day. I do not advise spraying with water straight from a well or garden tap, for with this the plants are apt to be chilled, and this will invite Mildew.

Keep the trees clean, removing dead leaves and blooms that have fallen. Such attentions are going to help towards an early crop of autumn Roses and considerably benefit the trees. Aphis may appear but a good spraying for two or three days in succession will remove the pest.

Remove all blooms, whether for decoration or when they have faded, with as long a stem as possible. It is no good just removing the bloom itself; cut it with 9 in. or even a foot of stalk.

Do not neglect your Roses under glass by reason of the work in the open; the Climbers especially will need care in ventilation, watering, and spraying.

I strongly advise all growers to take stock of their gardens this month and to make up their orders for any new Roses they may require now, making their choice both by visits to the shows and, what is far better, the nurseries.

Towards the end of this month is the time to begin the pruning of Rambler Roses, removing all growths that have borne blooms and retaining only the young, vigorous shoots of this year's growth.

AUGUST

Roses bloom and petals fall all too quickly this month, for the heat is generally overpowering. In the evenings keep the hoe and watering-can going, and remove all dead blooms.

Spray the foliage freely of an evening with water that has stood in the sun. Where trees are affected with *Aphis* or other pests a good insecticide should be used.

Budding must be pushed on with. Where the grower has only a few stocks to bud, I strongly advise that buds be taken and inserted in the evening, or after the noonday heat.

The layering of Rose trees may be continued this month. After the operation keep the ground in a moist condition and the surface of the soil broken. Summer cuttings may be taken and struck in bottom heat; they will soon root and make nice little trees for planting out in the future.

Proceed with the pruning of Rambler Roses and tie out the young, newly formed shoots so that their wood can ripen before the winter sets in.

In cutting Roses do not remove too much foliage, for this month more than any other it is of the greatest value to the tree. For this very reason it should be kept free from dust and dirt by means of spraying. At the first signs of disease, spray or remove affected leaves. Mildew, unlike Rust or Black Spot, can generally be cured without great damage to the foliage if treated at once.

This is a grand month for collecting Rose petals of all highly scented varieties and, having dried them in the sun, putting them with other dried scented flowers and sweet-smelling leaves into a china bowl or jar for the making of potpourri. In drying, do not let the petals remain out at night to catch the falling dew.

Give all Roses growing under glass as much air as possible this month, and spray with clear water in the evenings and early morning. Examine all pot Roses to see that they do not dry out and also that they are free from insect pests.

SEPTEMBER

This is the month when the Roses produce their second show of bloom and flowers will often be forthcoming from now right up until Christmas. Everything, of course, depends upon the attention the trees now receive. Regular hoeing of the surface of the bed is essential; also the removal of all dead blooms. Such attentions are essential not only to ensure late blooms but also to encourage the ripening of all wood. In order to make sure that

every likely bud develops, thin out carefully all small buds and useless shoots, and fork over the soil of the bed, giving the same a good drenching with liquid manure.

Cut out all dead wood from climbing Roses on walls and arches, and nail up or tie in as necessary.

Untie raffia round budded stocks and fork over the soil, removing suckers and useless shoots. See also that all stakes and ties are sound before the coming of winter.

As soon as possible, mark out and prepare all beds for new Roses, manuring and trenching the ground in readiness for the autumn planting.

If any standards have developed any "robber" or extra-long shoots, cut them back to the general outline of the tree. In the case of a standard developing many weak growths and one strong one, it is better to bend the latter downwards as far as possible without breaking it, and tie it to the stake. Leave it in that position until you prune the following spring. Then release it. Prune the weak shoots a fortnight before the strong ones. The latter, by encouraging a vigorous sap flow, may strengthen the whole tree. I have often seen this treatment revive a declining standard.

The chief trouble to look out for now is Black Spot disease and, if this develops, be careful to pick up fallen leaves promptly and burn them, thus destroying the seeds or spores, which are a fertile source of future infection. Then syringe the bushes with a solution made by dissolving 1 oz. of liver of sulphur in three gallons of water. Immediately all the leaves have fallen, syringe the bushes with Bordeaux Mixture.

Re-pot Rose trees that need it, except those that are required for winter flowering, which will be held over until the spring or summer. At the end of the month bring in the first batch of pot Roses into a warm house, and start them into growth.

A few buds may still be put into briars that have failed, but these should be carefully protected against frost and cold, cutting winds, as the union will be none too good.

All bushes carrying a good crop of autumn buds should be left alone and no attempt made to feed them in order to encourage size. It is too late to apply liquid manure at this season. Such late applications simply encourage a lot of soft wood which will be sure to succumb to the first frost. The best plan is to leave the bushes alone, except for the removal of any worthless shoots.

Take stock of all trees and vacant space for new Roses, and see that everything is in readiness for planting at an early date.

Autumn shows are few, but those that have classes for Roses should receive the attention of the Rose-grower. Only he who has disbudded with care will be able to compete with any chance of credit and success.

OCTOBER

Disbudding must be the order of the day if we are to procure Roses up to Christmas. One, or sometimes two, buds at most should be left on a rod or branch. Shading should only be used as a protection against wet weather. After a storm, lift all shades to avoid damping off, for Roses will require all the sun they can get.

Push forward with the preparation of new Rose beds and get all ready for the planting season. Do not be in a hurry to start your planting too soon. Remember, to do well, a tree, when it is lifted, should be at rest.

Let your nurseryman have the list of new Roses required as early as possible, especially in the case of standards and half-standards, as all orders are taken in rotation, and many varieties in standards are soon sold out.

Cuttings may now be taken from trees growing in the open and planted as directed elsewhere in this book.

Briar and Manetti cuttings may also be taken this month and planted out in the open for next year's stocks.

Plant out rooted cuttings and seedlings. Re-pot and top-dress all pot Roses for forcing.

Shorten very long growths on dwarf trees to prevent them being blown about by rough winds; or, if the tree is still making much growth, take and tie it up in preference to cutting, for shoots too severely shortened often cause, on a growing tree, the lower eyes to break.

At the end of the month Roses may be raised from the open ground for potting. All Roses already growing in pots should be inspected and, after the pots have been cleaned, should be brought in to be grown on under glass.

Inspect late-budded stocks and see that all ties are removed.

Push forward with the nailing-up and tying-in of all Climbers before the rough winds do damage.

Cease giving manures in any form to all trees and use every effort to secure an early period of rest by removal of worthless buds, suckers, and weakly shoots.

Other preparations for winter include the mulching with strawy manure beds in extra exposed situations; the sprinkling of bracken

between the branches of tender standard and bush Roses; the fixing-up of framework over choice wall Roses so that they can be covered with tiffany or sacking in very cold weather, etc., etc.

October is the time to take precautions against the carrying-over of disease from one year to the next. The first thing to do is to collect all fallen leaves, leaf stalks, and petals, cut off the remains of old flowers, and burn the lot. The next step is to sprinkle 1 oz. of flowers of sulphur and 2 oz. of bone-meal on each square yard of ground round the bushes, and fork them in 6 in. deep, taking care not to damage the roots.

NOVEMBER

Planting is now in full swing, but it should only be carried out during dry weather. If the new trees arrive when the ground is too wet for planting, unpack them and heel them in in a sheltered part of the garden. As beds are planted and edged up, manure and leaves are scattered freely over the surface of the soil to give protection against frost and cutting winds.

Hardy trees should be thinned of all dead wood, and useless shoots and lengthy shoots should be shortened; but all regular pruning must be deferred until the spring.

Fork over all old Rose borders and give a generous coating of well-rotted manure and leaves. Get in a goodly store of loam and leaf-mould, and tidy up the potting shed for future operations.

Inspect all beds and note where trees can be planted or others shifted to advantage, so that any extra orders may be executed by the nurseries before the season becomes too advanced.

Rose seed may be gathered at the end of the month and sown at once, or kept in damp sand until the spring.

Cuttings may still be taken and should be planted without further delay.

Protect all late-budded stocks, drawing soil and leaves round those that are dwarf, and tying leaves round buds inserted into standard briars.

Stake and tie in all branches that need it.

If your Roses are overcrowded, making poor growth and very few blooms on that account, transplant them now. Lift them carefully, then cut back to immediately above the point of damage all bruised or broken roots. Also cut back to the general spread of the root system the thong-like roots which often ramble a long way to no good purpose. Then replant in well-prepared soil.

With bushes which were diseased the previous year and which

have been given the treatment advised in October, a further stage in their cure is now due. As soon as the bushes are thoroughly dormant, syringe them with copper sulphate solution, dissolving $\frac{1}{2}$ oz. of this chemical in each gallon of water.

Apply lime to Rose beds the soil of which is sour. Use freshly slaked lime at the rate of 4 oz. per square yard and fork it into the top 4 in. of soil.

Pot Roses intended for February flowering should now be pruned prior to being brought into the house for forcing. Green-house Climbers will now need attention and every care should be taken of trees that have started into growth.

DECEMBER

Even chill December, with its frost and snow, does not call a halt to the work of the Rose-grower. Open weather sees the planting of trees that have been ordered late. Tree leaves should be collected into sacks and carefully distributed round delicate Roses, being held in place by soil. Bracken should be cut and distributed over beds that are too exposed to the elements, and all made secure against the severe weather that must be encountered in the weeks to come.

Standard briars should be diligently sought for in the hedges and the field, and should be transferred to the garden without loss of time.

Seed-pods must be collected, and the seed sown forthwith, or stored in damp sand for sowing in the early spring. Trees that are not tied or nailed in must now be secured, and dead wood removed.

Old manure can be wheeled out and scattered liberally over the surface of well-forked beds. When doing this, however, care must be taken to turn over the manure once or twice beforehand, to open it and to prevent the accumulation of heavy, rain-soaked clods. When spreading the manure don't bed it down; leave it loose so that air and sunshine can get through. Don't allow manure actually to touch the main stems, or they will suffer from the gases it gives off, while the water it collects in a wet time may cause Canker.

Rambler and climbing Roses need help during this month. Remembering that the soil in which they are planted against walls and porches is often of a very poor nature, sprinkle bone-meal on the surface ($\frac{1}{4}$ oz. per square foot), fork the ground 6 in. deep for 2 ft. on each side of the stems, and 9 in. deep in the other

parts of the border. After forking, spread a 4-in. mulch of good manure on the bed.

The annual mulch for Rose hedges should also be applied now, using littery manure and putting it down in a thick layer for at least a foot out on each side of the hedge bottom.

Pot Roses for February flowering should now be brought into a warm house, and the batch to follow these carefully pruned and the pots cleaned in readiness.



A DICTIONARY OF ROSES

IN the list of Roses that follows will be found practically all the modern varieties catalogued by Rose-growers to-day, along with many older favourites which it may, or may not, be possible to buy from the nursery but which certainly are still seen frequently in the amateur's garden.

The meanings of the abbreviations employed to describe the class to which each Rose belongs and the uses for which it is specially suited are:

(A) Class to which it belongs.

Ayr.—Ayrshire.
B.—Bourbon.
C.—China.
Clg.—Climbing.
D.—Damask.
H.B.—Hybrid Bourbon.
H. Brac.—Hybrid Bracteata.
H. Briar.—Hybrid Briar.
H.M.—Hybrid Musk.
H.N.—Hybrid Noisette.
H.P.—Hybrid Perpetual.
H.T.—Hybrid Tea.
H.W.—Hybrid Wichuraiana.
Hy. Poly.—Hybrid Polyantha.
Lam.—Lambertiana.
Mult. Ramb.—Multiflora Rambler.
N.—Noisette.
Pern.—Pernetiana.
Poly.—Polyantha.
Poly. Dwf.—Dwarf Polyantha.
Prov.—Provence.
Rug.—Rugosa.
R.H.—Rugosa Hybrid.
S. Briar.—Sweet Briar.
Spec.—Rose Species.*
T.—Tea.
Wich.—Wichuraiana.
Wich. pom.—Wichuraiana pompon.

(B) Use for which it is suited.

A.—Autumn.
Ar.—Arch.
Bed.—Bedding.
Bu.—Bush.
But.—Button-hole.
Cut.—Cutting.
E.—Edging.
Exh.—Exhibition.
F.—Forcing.
G.—Garden.
H.—Hedge.
P.—Pot.
Perg.—Pergola.
Pil.—Pillar.
S.—Screen.
T.—Town.
W.—Wall.

* In catalogues, preceded by word *Rosa*—e.g. *Rosa acicularis*.

A

Abol (H.T.): Flowers white, although in the early stage and before the flower is fully opened the centre petals are sometimes tinted with pale pink. Very free flowering. Hardy.

Acicularis (Spec.): Rose-pink; single. 5 ft. tall. Shrubby habit. Flowers appear early and succeeded by scarlet leaves. Bu. G.

Admiral (H.T.): Coral pink buds develop-

ing to salmon-pink veined yellow. Very free. Old rose fragrance. Vigorous growth and clean foliage. Bed. Cut.

Admiration (H.T.): Rose with fine bushy free habit. The ground work of the petal beautiful soft pearly cream, heavily washed and shaded vermilion. Bedding and massing.

Adrian Reverchon (Lam.): Rose-pink; single. Flowers borne in great numbers. Fine for exposed position. Pil. Perg.

Aeuchen Muller (Poly. Dwf.): Brilliant pink blooms of medium size. Very free flowering. Growth medium. G. Bed.

Aimée Vibert (N.): Flower snow white, medium, full, sweet-scented. Growth very vigorous, climbing, perpetual flowering. Pil. W.

A. K. Williams (H.P.): Bright crimson. Flowers large, full, perfect form. Growth vigorous. Bed. Exh.

Alba (Spec.): A very old rose grown in English gardens since 1551. It is now known to be a natural hybrid between *R. Gallica* and a white flowering form of *R. canina*. Semi-double white fragrant flowers. Height 4 to 8 feet. It was supposed to have been the badge of the Yorkists in the Wars of the Roses, and is known as the Jacobite Rose. Grey glaucous foliage. Very hardy. Bu. G.

Alba Celestial (Spec.): Blush-pink; fragrant; double. Height 5 ft. Bu. G.

Alba Maiden's Blush (Spec.): Rosy white shading to salmon-pink at base; semi-double. Height 6 ft. Bu. G.

Albéric Barbier (Wich.): Flower creamy white, centre canary-yellow, medium, double. Growth very vigorous, climbing; early and late flowering. Ar. Perg. Pil. S.

Albertine (Wich.): Flower salmon. Growth moderate.

Alemain (H.T.): Bright Indian yellow. A splendid bedding rose which flowers freely all through the season. Medium growth and healthy foliage. Bed. Cut.

Alice Amos (Poly. pom.): Flowers cherry-pink, with white centre, single, large trusses. Growth vigorous, free flowering. Bed.

Alister Stella Gray (N.): Flower pale yellow, deeper centre, borne in clusters, free blooming and perpetual. Growth vigorous. Ar. Pil.

Allen's Golden Climber (Clg. H.T.): Orange-lake. Blooms large, full, firm, fragrant, and freely produced. Pil. W.S. Perg.

Alpina (Species): Flower a pure deep rose, single, and very early summer flowering. Growth vigorous; thornless. Bu.

Alpina Pyrenaica (Species): Flower a bright rose, single, and very early summer flowering. Growth moderate; a dwarf variety of *Alpina*.

Altaica (Spec.): A beautiful form of *R. spinosissima* from Siberia. Masses of pure white single flowers in May. Does well in poor soil. Height 3 to 4 feet. One of the prettiest of the species. Bu. G.

Amadis (Ayr): Flower deep purplish crimson. Growth free and rampant; does well under adverse conditions. Pil. Perg. S. H. Ar.

Amalia Jung (H.T.): Crimson-red. Flowers full, good shape, fragrant. Growth vigorous.

American Pillar (Wich.): Flower bright rose with light centre, large, single, fine trusses; bold glossy foliage. Growth vigorous, climber, summer flowering. Ar. Pil. Perg.

Amy Robsart (S. Briar): Flower deep rose. Growth very vigorous. H. Bu. Pil.

Andersoni (Hybrid of Species): Flower rose-pink, single summer-flowering. Growth vigorous. Bu.

Anemoneaeflora (Spec.): Blush pink. Blooms double, large. Produced in clusters in July. Variety is rather tender needing warm position. Pil. W.

Anemone (Sinica): See *Sinica Anemone*.

Angele Pernet (Pernet): Orange-apricot. Dwarf and good shape. Very fragrant. Bed. But. Cut.

Angels Mateu (Pern.): Coppery-orange and old rose. Exceptionally fragrant and of exceptional beauty. Bed.

Anna Drivel (H.T.): A bi-colour variety. Scarlet, reverse of petals, old gold. Semi-double flowers. Dark green foliage. Growth vigorous and upright. Bed. Cut.

Anne of Gierstein (S. Briar): Flowers deep crimson-rose, single, early; growth very vigorous. A pretty Penzance briar. Bu. G. H.

Anna Neagle (H.T.): Bright currant-red; blooms of medium size carried on long stiff stems. Mildew-proof foliage. Growth free and branching. Bed. Cut.

Anna Olivier (T.): Large, full flowers of perfect shape, petals cream, buff at base. Good grower, tea perfume. Exh. Bu. G.

Anne Poulsen (Poly.): Crimson-red becoming darker as petals unfold. Flowers large, double, fragrant, borne in clusters very freely. Few thorns. Growth strong, upright. Bed.

Annie Brandt (H.T.): Large coral-red buds opening to large salmon-shaded flowers. Bushy growth. Good in autumn. Dark green foliage. Bed. Cut.

Anni Jebens (Pern.): Scarlet-carmin outside of petals yellow. Blooms large, full, carried erect. Growth medium. Bed. P. But.

Antinea (H.T.): Salmon-orange, yellowing at base. Blooms large, full, lasting, exceptionally fragrant. Growth vigorous, upright, bushy, with plentiful foliage. Exceptionally hardy. Bed. Cut. Exh.

Apeles Mestres (Clg. Pern.): Yellow. Blooms excellent shape, moderately fragrant. Growth vigorous disease-resistant. Pil. S. W. Perg.

B

Ards Pillar (H.T.): Flowers full rich crimson, of cupped form. Growth vigorous. Pil. Ar.

Ards Rambler: Flower orange-crimson, large, fine foliage, fragrant. Growth vigorous. Pil. Ar.

Ards Rover (H.P.): Flowers dark shaded crimson, of good size, with stiff petals handsome foliage. Growth very vigorous. W. Pil. Ar. Perg.

Aribau (H.T.): Brilliant red flowers borne singly on erect stems. Foliage dark green. Bushy habit. Exh. Bed. Cut.

Arkansana (Spec.): Clear pink becoming white. Very thorny. Flowers succeeded by small fruits. Bu. G.

Arndt (Lam.): Yellowish red, shaded salmon-pink. Blooms become flesh-pink when fully open. Flowers borne in clusters. Bu. G.

Arnold (R.H.): Strong scarlet. Single. Flowers profusely. Good hardy bush.

Arvensis (Spec.): The Ayrshire Rose or Briar. Very vigorous; foliage almost evergreen; semi-double white flowers in clusters. The hybrid sorts still in cultivation are Bennett's Seedling and Dundee Rambler which see. Perg. H. W.

Augusta Kordes (Clg. Poly.): Brilliant scarlet. Very free flowering in spring and autumn. Growth vigorous, healthy. Perg. Pil. Ar.

Auguste Comte (T.): Flower madder-carmine, medium. Growth vigorous, branching, very free flowering. But.

Aureate (H.T.): Deep yellow; flushed in bud stage with scarlet. Blooms exceptionally good shape, very fragrant. Growth dwarf, vigorous. Bed. P. But.

Aurora (H. Musk): Flower golden canary. Growth vigorous bush.

Austrian Copper (Austrian Briar): Flower nasturtium-red, reverse of petals yellow, single, early summer flowering. Growth vigorous.

Austrian Yellow, Double (Austrian Briar): Flower clear yellow, early summer flowering. Very pretty in the bud. Growth vigorous. H. Bu.

Austrian Yellow Single (Austrian Briar): Flower clear yellow, early summer flowering. Growth vigorous. G. H. Bu.

Autumn (H.T.): Flower crimson-scarlet and yellow. Growth moderate.

Autumn Delight (H.M.): Light cream. Flowers borne in large sprays throughout season. Bed. H.

Avoca (H.T.): Flower crimson-scarlet, of medium size, well shaped, produced on ends of long shoots; fragrant. Growth very vigorous. Exh. G. Cut.

Baby Betty: Yellow, opening to delicate rose with ruddy tinge; vigorous grower and free flowering.

Baby Herriot (Poly.): Red, yellow and coral. Large flowers. Bed.

Banksia (Banksia): White, very vigorous climber; south or west wall; small double white flowers, known as the White Banksian Rose; summer-flowering, fragrant. For Yellow Banksian see Banksia Lutea.

Banksia Lutea (Banksia): Yellow, very vigorous; south or west wall; small double, yellow flowers, known as the Yellow Banksian Rose; summer flowering.

Barbara Richards (H.T.): Inner face; bright maize-yellow with buff reverse; the bud and young flower is washed and flushed warm rose, blooms of exhibition size and sweetly scented.

Barbara Robinson (H.T.): Colour, cream, growth very vigorous, free branching habit, extremely floriferous, producing blooms with the greatest profusion throughout the season. The buds are very long and pointed, opening cleanly in all weathers to a well-shaped flower. Foliage is abundant and good. Sweetly scented.

Barcelona (H.T.): Deep red with darker shading; outside of petals lighter. Flowers large, lasting, very fragrant, borne on long stems. Bed. But.

Baron de Wassener (Moss): Light crimson, well mossed buds, strong grower and very fragrant. G.T.

Bedford Crimson (H.T.): Very sweetly scented deep velvety crimson rose of the first class. Free flowering. Long stiff stems. Good shape. Vigorous. A very fine bedder.

Ben Cant (H.P.): Flower deep crimson, sweetly scented. Seedling from "Victor Hugo". Grand rich green foliage. Growth vigorous. Exh.

Bennett's Seedling (Clg.): Flower white, small semi-double, flat, in clusters. Ar. Perg. H. W.

Berwick (Scotch): Semi-double deep rose flowers, shading to white at edge of petals. Very pretty. Bu. G.

Bertha Gorst (H.T.): Crimson-cerise, shaded gold at base. Petals have curiously velvety texture. Exceptionally fragrant. Growth vigorous. Perfect bedding rose.

Better Times (H.T.): Crimson-carmine. Very fragrant and grand shape. Growth vigorous, healthy. Bed. Exh. But. P.

Betty (H.T.): Flower coppery rose, over spread with golden yellow, large, fairly full, fine form, buds very long, opening well, deliciously perfumed. Growth very vigorous, continuous flowering. A. Cut. Exh. F. P. T.

Betty Prior (Hy. Poly.): Dark carmine, with attractive blooms 4 in. across, produced in large clusters. Strong, upright stems. Perpetual flowering. Grand for beds, massing or low hedges. Bed. G. H. Cut.

Betty Prior (Poly.): Dark carmine. Blooms large, single, produced in big clusters. Growth disease-resistant. Bed. H.

Betty Uprichard (H.T.): Salmon-pink; carmine reverse. Flowers good form, exceptionally fragrant. Growth vigorous, tall, bushy. Healthier than almost any other. Bed.

Billiard et Barre (Clg.): Deep golden-yellow buds, superb when half open. A fine Tea climber. W. Ar. Pil. Perg.

Billy Boy (H.T.): Semi-double pure deep buttercup-yellow bedding rose. Extra free and bushy habit. Bright green foliage. Stout stems carrying flowers erect. Very free flowering and always in flower.

Black Boy (Clg. H.T.): Dark blackish crimson, shaded dark maroon, vigorous climber, continuous flowering.

Black Moss (Moss): Distinct black crimson purple. A quaintly beautiful old Moss Rose. It is also known as Nuits de Young. B. G.

Blanc double de Coubert (Rug.): Flower pure white, very large, nearly full, fragrant. Growth very vigorous. Bu. H.

Blanche Moreau (Moss): Flower pure white, large, full, perfect form, produced in corymba. Growth vigorous, well mossed, hardy. The finest white Moss Rose. G. T.

Blanche Simon (Moss): Flower pure white, large, rather flat, full. Growth vigorous.

Blanda (Spec.): Mauve-pink. Flowers borne in clusters of 3-7; succeeded by red fruits. Likes damp situation. Bu. H. G.

Blaze: Ever-blooming scarlet Climbing Rose. A hardy Climbing Rose which inherits the blazing colour of Paul's Scarlet Climber and the ever-blooming habit of Grass an Teplitz. It is a very vigorous climbing variety which will grow to considerable height and produce flowers on both the old and the new growth.

Bloomfield Courage (H.W.): Velvety red with white centre and prominent yellow stamens. Flowers small, single, borne in clusters. Good Rambler. Perg. Ar.

Blush China (C.): The oldest and best-known China Rose. Blush-pink. Large, full, double flowers borne in big loose sprays. Fragrant. Growth upright and free. Very hardy. Bu. G.

Blush Rambler (Mult. ramb.): Flower bluish-rose colour, in large clusters, sweetly scented, free. Growth vigorous. Pil. Ar. Perg. H.

Boule de Neige (N.): Flower pure white shaded greenish-white, medium, full, imbricated, opening well. Growth vigorous. A. Cut. T.

Bouquet d'Or (Clg.): Deep yellow with coppery centre. An old climbing Tea Rose and still one of the best. Quite hardy. W. Pil.

Bourbon Queen (H.B.): Large flowers, deep rose; sweet and constant. A fine old variety now much appreciated. Good for hedges and makes a fine bush. Pil. H. Bu. W.

Boursault (Spec.): Red. Stems practically thornless and assume rich red tint in autumn. Flowers appear in large trusses. H. Bu. Pil. Perg.

Bracteata (Spec.): Pure white with bright golden stamens. Height 10 to 14 ft. Needs warm position and rich soil. Flowers followed by red fruits. W.

Bracteata Mermaid: As above but flowers are sulphur-yellow.

Brenda (S. Briar): Flower peach-pink, single. Growth very vigorous. H. Bu. S.

Bridesmaid (T.): Flower clear pink tinted bright rosy scarlet, large, full, globular, high centred. Growth vigorous. A. Cut. Exh. F. G.

Brunonii (Spec.): Flower single white, a variety of *R. Moschata*; sweetly scented. Growth vigorous.

Bullata (Prov.): The finest form of the Cabbage Rose; immense overlapping handsome foliage and large double red flowers; deliciously fragrant. Makes a fine bush. Bu. G.

Burgundica (H.B.): The old Burgundy Rose; it only grows a few inches high, and has small full double daisy-like pink flowers. E. G. Bed.

Burnet (Spec.): A native plant. Dwarf creeping habit; milk-white flowers and black fruit in autumn. A delightful little rose. E.

Burnet Brightness (Spec. var.): Similar in every respect to the foregoing but the flowers, which are of a glowing deep rose colour, are a little larger. A very pretty dwarf rose either for edging or the rockery. E. G.

C

Californica (Spec.): Deep pink. Blooms borne in large clusters, June and July. Small red fruits follow. Bu. G. H.

Californica Flora Plena: As above but flowers semi-double.

Callisto (H. Musk): Flower golden-yellow rosettes, in clusters; foliage dark green. Growth moderate, branching, free flowering. A. Bu.

Calocarpa (Rug.): Distinct; flowers rosy peach, succeeded by pendulous fruit of the most glowing sealing-wax colour; leaves downy. Makes a big bush. S. G. Bu. H.

Cameo (Poly.): Bright salmon-pink. Blooms exceptionally beautiful. Bed.

Canary (H.T.): Light yellow; a very reliable variety for decorative work in the garden and for cutting. Vigorous. Clean, healthy foliage. But. Bu. G. Bed.

Candeur Lyonnaise (H.P.): A favourite with exhibitors. White tinted sulphur; flowers of great size. Vigorous grower. Exh.

Canina (Spec.): Wild dog-rose of our own countryside, but blooms larger and better colour under cultivation.

Captain Christy (H.P.): Flower soft flesh-pink, with deep centre, very large, full and fragrant. Growth bushy, erect, hardy. A. Cut. Exh. F. G.

Captain F. S. Harvey Cant: Rich salmon-pink suffused with yellow. Flowers large, fine build with high pointed centre, of great substance. Fine.

Captain Hayward (H.P.): Flower pure brilliant cochineal-carmine, very large, full, high centred, highly perfumed. Growth vigorous, very free flowering. A. Cut. Exh. F. G. T.

Caress (H.T.): Buttercup-yellow tinted rose, with salmon-carmine border. Growth strong, upright. Bed. But.

Carmine Pillar (C.H.T.): Flower bright rosy carmine, large, single. Growth very vigorous, climbing, early flowering. Ar. G. Perg. Pil.

Carolina (Spec.): Rosy carmine. Flowers single, produced in masses, June to July. Growth shrubby, 3 to 6 ft. high. Scarlet fruits in autumn. H. Bu. G.

Caroline Testout (H.T.): Flower satin rose with brighter centre, large, full, globular, opening well, sweet. Growth vigorous, erect, free flowering, hardy. A. Cut. Bed. Exh. F. G. T.

Catalonia (H.T.): Cardinal-red shaded gold. Flowers globular in shape. Growth vigorous, bushy. Exceptionally fragrant, free flowering. Bed.

Catherine Mornet (T.): Flower pale pink, changing to pale yellowish flesh, edges of petals tinted lilac-rose, very large, full, imbricated, opening well, very sweet. Growth vigorous. A. Cut. Exh.

Caudata (Spec.): Light rosy crimson. Flowers single, borne in clusters in June. Leaves and flowers fragrant. Long red fruits in autumn. Bu. G. H.

Cecile Brunner (Poly. pom.): Flower bluish-white, shaded pale rose, small, full, in clusters. Growth dwarf. G. Bed. E.

Centifolia (Spec.): Ancient cabbage, or

Provence, Rose. Flowers rosy pink, double, very fragrant. H. Bu.

Centifolia Provincialis Petite de Hollande (Spec.): Pink, cup-shaped flowers. Bush 4 to 5 ft. high. H.

Centifolia Provincialis Red Provence (Spec.): Rich red, medium double, very fragrant. Blooms June.

Ceres (H.M.): Blush-shaded yellow, produced in corymba. Strong growth and perfume. Fine foliage. Vigorous. H. Bu. G.

Chaplin's Pink: See Chaplin's Pink Climber.

Chaplin's Pink Climber: It may be best described as a double pink climber of great value for arches and pillars.

Charles Lefebvre (H.P.): Flower velvety carmine-lake, shaded purple-garnet, large, full, cupped, imbricated, very sweet. Growth vigorous. A. Cut. F. G.

Charles P. Kilham (H.T.): Brilliant orange, orient red, suffused with glowing scarlet. When full open the colour fades to brilliant Lincoln pink in the old flowers. Habit free and bushy, breaking freely from the base; very perpetual.

Charlotte Klemm (C.): Flower fiery red, semi-double. Growth moderate. G.

Charmer (H.T.): Cerise-pink and yellow. Very fragrant. Growth prolific, free branching. Bed.

Chateau de Clos Vougeot (H.T.): Flower velvety scarlet, shaded fiery red, changing to dark velvety crimson, large, full, globular, very sweet. Growth vigorous, branching. A. Cut. Exh. G. T.

Chérie (Poly.): Scarlet-crimson, a sport from "Else Poulsen", which it resembles in growth; very beautiful.

Cherry (H.T.): Sunflower-yellow on outside, on inner side bright rose, heavily veined in a deeper shade of rose. As the flowers grow the inner surfaces of the petals turn brilliant carmine-pink, flushed yellow. Blooms large, full, well formed, with reflexed petals. A fine bedding and decorative variety.

Chieftain (H.T.): Bright red with darker shading and with orange scarlet suffusion in the open flower. Large, full flowers with long fleshy petals are borne on long stiff stems. Vigorous upright growth with disease-free foliage and plenty of blooms. Very fragrant. Exh. G. Cut. Bu.

Chinensis (Spec.): Known as the monthly rose and also China rose. Flowers from June till winter. Bu. G. H.

C. H. Middleton (H.T.): Deep glowing rich red with black shadings. Good grower. A good bedding rose of a good constitution and habit of growth with healthy foliage. Bed. Cut. G.

Christine (Pernet): Flower deepest and clearest golden-yellow, perfectly shaped, with petals of good substance; sweetly scented. Growth vigorous; deep glossy green mildew-proof foliage. *Bed. Cut.*

Christopher Stone (H.T.): Velvety scarlet. Flowers semi-double with golden stamens. Growth vigorous, almost free from thorns. Moderately fragrant. *Bed. But.*

Cinnamomea (Species): Flower large, single, pink, wood brown and spineless.

Citron (Pern.): Flowers buff shaded copper, blooms fairly large, opening cup-shaped. Fragrant. Vigorous and free. Red-green foliage. *G. Bed.*

Clara d'Arcis (H.T.): Rose-pink with touch of yellow at base. Fragrance spicy. Free flowering. *Bed.*

Clarice Goodacre (H.T.): A rose of tangerine orange perfume; its perfectly spiral globular-formed blooms are three-quarter zoned biscuit-chrome on ivory-white stiff petals; long pointed buds carried on erect rigid flower stalks. Vigorous and erect wood festooned with ideal H.T. foliage. *Exh. Bed. But.*

Cleopatra (T.): Flower creamy flesh, buds long and pointed, petals thick, opening well. Growth moderate. *Exh.*

Climbing Banksian Alba: As Banksian Alba (which see) only climbing habit.

Climbing Banksian Lutea: As Banksian Lutea (which see) only climbing habit.

Climbing Captain Christy (H.P.): A climbing form of "Captain Christy", from which it sported. Most distinct. *A. B. Pil.*

Climbing Caroline Testout (H.T.): A climbing form of this popular rose.

Climbing Catherine Mermot (T.): Flower deep pink, in every respect similar to "Catherine Mermot", of which it is a sport. Growth very vigorous, of very strong climbing habits. *Exh. F. W.*

Climbing Château de Clos Vougeot (H.T.): Flower deep crimson, shaded velvety, scarlet and fiery red, full and globular; opens well. Growth very vigorous, mildew-proof. One of the best climbers. *Ar. Pil. W.*

Climbing Chatenay (H.T.): Flower bright salmon-pink with deeper centre, reflexed petals, pointed centre. Growth vigorous. *Exh. Ar. Pil. W.*

Climbing Christine (Clg. H.T.): See "Christine" for colouring. *Pil. W.*

Climbing Columbia (Clg. H.T.): For colouring, etc., see "Columbia". *Pil. W.*

Climbing Cramoie Superieure (C.): Perhaps the best of the crimson-flowered climbing roses. Dark velvety crimson. Strong grower with foliage that is nearly ever-green. *Pil. Ar. W.*

Climbing Daily Mail Scented: A climb-

ing sport of the beautiful *Daily Mail Scented Rose*; colour rich dark velvety crimson with scarlet sheen.

Climbing Dame Edith Helen (Clg. H.T.): See "Dame Edith Helen" for colouring. *Pil. W.*

Climbing Devonensis (T.): Flower creamy white with blush centre, large and full, free, early flowering. Growth very vigorous. *Ar. Perg. W.*

Climbing Duchess of Athol (Clg. H.T.): Copper-orange flushed old rose. Blooms freely produced and lasting well. Growth strong. *Pil. W.*

Climbing Effective (H.T.): Clear crimson. Flowers sometimes single, sometimes semi-double. Highly scented. Good climber for walls, pillars, etc.

Climbing Emma Wright (Clg. H.T.): See "Emma Wright" for colouring. *Pil. W.*

Climbing Etoile de Hollande (Clg. H.T.): See "Etoile de Hollande" for colouring. *Pil. W.*

Climbing Frau Karl Druschki (Clg. H.P.): See "Frau Karl Druschki", *Pil. Perg. W. Ar.*

Climbing General McArthur (Clg. H.T.): See "General McArthur", *Pil. Perg. W. Ar.*

Climbing Golden Dawn (H.T.): Rich pale yellow, deeper at heart. Identical with the dwarf form but a vigorous climber. *W. Pil.*

Climbing Golden Emblem: A strong climbing sport of that well-known variety Golden Emblem.

Climbing Golden Ophelia (Clg. H.T.): A very fine climbing sport of this well-known variety. The flowers are usually of deeper colour, larger and more freely produced.

Climbing Gruss an Teplitz: As "Gruss an Teplitz" (which see) only climbing habit.

Climbing Hoosier Beauty (Clg. H.T.): Fiery crimson. Very fragrant. Growth vigorous. *Pil. Ar. Pot.*

Climbing Irish Fireflame (H.T.): Flower fiery orange, large, single. Identical in all respects with "Irish Fireflame" save habit of growth, which is vigorous. *Ar. Pil. W.*

Climbing Lady Hillingdon (T.): A climbing sport of the variety of same name. *F.*

Climbing Lady Sylvia (Clg. H.T.): See "Lady Sylvia" for colouring. *Pil. W. Perg.*

Climbing La France (H.T.): Flower silvery rose shaded pale lilac, large and full, free. Growth very vigorous. One of the best climbers amongst the H.T.s. *Exh. Pil. Ar. Perg. W.*

Climbing Lieut. Chauré (H.T.): Flower rich velvety crimson, shaded garnet-red,

deep petals, cupped with long buds. Growth vigorous. A bud sport from "Lieut. Chauré"; fragrant. Ar. Pil.

Climbing Mabel Morse (Clg. H.T.): See "Mabel Morse" for colouring. Pil. Perg. W.

Climbing Madame Abel Chatenay (H.T.): A climbing sport of the rose of same name, producing growth of seven to eight feet in one season.

Climbing Madame Butterfly (Clg. H.T.): A climbing sport from the well-known H.T., but flower is larger, fuller and longer, the outside petals are clear and good. The colour is not exactly the same, being slightly suffused with more apricot.

Climbing Madame Edouard Herriot (Pern.): A climbing sport of this well-known and justly esteemed rose.

Climbing Maman Cochet (T.): Flower deep flesh shaded fawn and rose, large and full. Growth very vigorous. Bud sport from "Maman Cochet". W.

Climbing Melanie Souperet (H.T.): Flower pale sunset yellow, tinted with amethyst, large. Growth vigorous. Exh. G. Bed. P.

Climbing Mrs. G. A. Van Rossem (Clg. H.T.): See "Mrs. G. A. Van Rossem" for colouring. Pil. Perg. W.

Climbing Mrs. Henry Bowles (Clg. H.T.): See "Mrs. Henry Bowles". Pil. Perg. W.

Climbing Mrs. Henry Morse: A climbing sport from that well-known and highly esteemed variety "Mrs. Henry Morse".

Climbing Mrs. Herbert Stevens (T.): A climbing form of Mrs. "Herbert Stevens".

Climbing Niphetos (T.): A climbing form of this well-known variety; very free flowering. F.

Climbing Ophelia (H.T.): In all respects, excepting growth, identical with the normal type, of which there is not any rose that will produce throughout the entire season a greater number of perfect blooms.

Climbing Paul Crampel (Clg. Poly.): Rambler form of the most brilliant Polyantha bedding rose. Perg. Ar. S.

Climbing Paul Ledé (H.T.): A well-defined climbing form of this well-known variety. Vigorous.

Climbing Richmond (H.T.): In all respects, excepting growth, identical with the normal type, from which it sported. Growth vigorous and of true climbing character.

Climbing Rose Marie (Clg. H.T.): See "Rose Marie". W. Pil. Perg.

Climbing Shot Silk: A fixed sport of this general favourite, perhaps the most noteworthy climbing H.T. ever introduced; it is a vigorous grower, blooms profusely

and is suitable for any climbing purpose, position or aspect.

Climbing Souvenir de la Malmaison (B): A climbing form of the well-known dwarf variety.

Climbing Sunburst (H.T.): A vigorous climbing sport of the well-known variety of the same name; early and late flowering.

Clinophylla (Spec.): White. Growth compact, almost thornless. Orange fruits in autumn. Bu.

Clytemnestra (H. Musk): Flower copper to chamois yellow, in clusters. Growth vigorous. Bed. Bu.

Col. Campbell Watson (H.T.): Pink shaded salmon-rose to carmine. Blooms freely produced. Very fragrant. Growth vigorous. Bed.

Colonel Oswald Fitzgerald (H.T.): Dark velvety crimson. Fine spiral buds open to full blooms of beautiful finish. Growth moderate. Grand colour and form but lacks scent. G. Bed.

Colonel Sharman Crawford (H.T.): Dark red. Blooms good shape, exceptionally fragrant, plentifully produced. Growth vigorous. Bed. Exh. Pot.

Columbia (H.T.): Flower true pink, of the shade of "Mrs. George Shawyer", deepening as it opens to glowing pink, produced on long stiff stems; fragrant. It is a free grower, with beautiful foliage. Cut.

Commandant Felix Faure (H.P.): Crimson with vermilion shading. Exceptionally fragrant. Growth moderately vigorous. Bed.

Common Moss (Moss): Large and full pale rose flowers with heavily mossed buds. Very sweet. Vigorous. Bu. G.

Complicata (Spec.): A variety of Canina with umbels of clear rose-coloured flowers, succeeded by brilliant red fruits. Very distinct grey-green foliage. Bu.

Comtesse de Naldillac (T.): A fine old Tea Rose with rosy peach flowers, shading to coppery yellow. A good grower with clean attractive foliage. Has the strong old tea perfume. Exh. But. G. Cut. Bu.

Comtesse du Cayla (C.): Flower nasturtium-red to orange-yellow, double, variable in colour. Growth vigorous. Bed. Bu. G.

Comtesse Vandal (H.T.): Coral-pink shaded salmon with gold at base; outside petals deeper coral. Flowers good shape, large, moderately fragrant. Bed.

Conchita (Poly.): Salmon. Flowers, double very lasting, plentifully produced, slightly fragrant. Growth vigorous. Bed.

Condessa de Santiago (H.T.): Petals Oriental red inside, golden yellow outside. Blooms large, cup-shaped. Growth very vigorous, upright, free from disease. Very fragrant. Bed.

Conrad Ferdinand Meyer (R.H.): Flower bright silvery rose, very large, full, well formed, very sweet. Growth very vigorous, floriferous. B. Cut. H. G.

Coral Cluster (Poly. pom.): Flower pale coral-pink to soft salmon-pink, perfectly formed, free, in large clusters. Growth vigorous. Bed. F.

Coral Drops (Spec.): Rose. Flowers appear in June, succeeded in autumn by sprays of coral fruits. Bu.

Corallina (L.): Rosy crimson, long pointed buds, produced in the greatest profusion. Splendid in autumn. Good grower. Cut. Bed. G.

Corallina (T.): Flower deep coral-red, large petals, pointed buds. Growth vigorous, good standard. G. Bed.

Cornelia (H.M.): Strawberry flushed yellow. Perpetual flowering in clusters. Grand in autumn. Very fragrant. Strong grower with healthy foliage. H. Bu. G.

Countess of Oxford (H.P.): Flower strawberry-red, passing to brilliant cochineal-carmine, large, full, of fine form. Growth vigorous, hardy. A. Cu. Exh. F. G.

Covent Garden (H.T.): Flower rich deep crimson, with plum-black flushes on reverse of petals, well-formed, borne perfectly upright on stout stems. Growth branching, glossy foliage free from Mildew; free flowering. One of the best crimson autumnal roses for bedding purposes yet introduced. F. Cut.

Cramoieille Supérieure (C.): Flower a rich crimson semi-double, in large clusters. Growth vigorous.

Crested Moss (Moss): Charming rosy pink, crested flowers. Very sweet with the old Provence fragrance. Bushy growth and clean foliage. Bu. G.

Crimson Conquest (H.W.): Bright crimson. Blooms abundantly in heavy masses. Excellent Rambler. Ar. Perg. S.

Crimson Damask (D.): Brilliant crimson single flowers. A vigorous grower. Bu. Pil.

Crimson Globe (Moss): Deep crimson, but the flowers are not so surrounded with moss as in some of the others in this section. A good grower with bright green foliage. Bu. G.

Crimson Glory (H.T.): Velvety crimson. Blooms large. Growth of exceptional vigour and business. One of best modern bedding roses of its colour.

Crimson Glow (H.W.): A Rambler of the same habit as "Paul's" Scarlet Climber with blooms much the same colour—deep crimson with white base. Ar. Perg. S.

Crimson Moss (Moss): Full double, very sweet. One of the best of the old Moss Roses. Vigorous. Bu. G.

Crimson Rambler (Mult. ramb.): Flower

bright crimson, medium, double, produced in large pyramidal trusses. Growth vigorous, climbing, late flowering. Ar. Perg. Pil.

Cristata (Moss): Flower rose, large, full and globular; very fragrant. Growth moderate. Well mossed and very pretty.

Crown Princess Ingrid (Hy. Poly.): Pure crimson carmine without shading. Flowers in huge clusters. Large, semi-double, frilled. A reliable bedding rose. Bed. Bu. G.

Cumberland Belle (Moss): Very lovely silvery rose flowers well created and very sweet. A charming variety. Vigorous. Bu. G.

Cynthia Brooke (H.T.): Coppery yellow, large globular-shaped blooms carried on strong stems. Very vigorous, and the deep green foliage is disease proof. Bed. Exh. G.

D

Daily Mail Scented Rose: Very vigorous deep velvety crimson, shaded scarlet, flowers full and of good form, carried on erect stems, the finest and most highly fragrant rose sent out for many years, blooming early and late.

Dainty (Poly): Salmon-pink. Flowers medium size. Bed.

Dainty Bess (H.T.): The colour is a delightful salmon-pink and the stamens and centre of the flower make a unique contrast with their gold and crimson. Very sweetly scented and free flowering. The habit is good and new shoots are freely produced. Vigorous.

Dakar (H.T.): Silvery pink striped rose-pink. Flowers of exceptional size on long, strong stems; very lasting. Exceptionally fragrant. Bed.

Damascona (Spec.): The Damask Rose. Pink. One of the oldest roses known, appearing in numerous ancient MSS. Came to England with Crusaders. Blooms are very fragrant. There are also Damask roses with white single flowers and pink semi-double flowers. Bu.

Damascona York and Lancaster (Spec.): Red; flesh; white; white striped red or half-red half-flesh. Blooms semi-double, produced in clusters, fragrant. Growth hardy. Bu.

Dame Edith Helen (H.T.): Pure glowing pink, not too deep. Erect strong stems; delightfully fragrant; vigorous; free flowering, hardy. As a garden, bedding and exhibition rose, this variety has few equals.

Danão (H.M.): Flower soft yellow, semi-double, in clusters, perpetual flowering. Growth very vigorous.

Daphne (H. Musk): Flower pink, clusters, perpetual flowering. Growth vigorous. A.

Davidii (Spec.): Rich red. Blooms borne in clusters, succeeded by bottle-shaped orange fruits. Growth strong, very thorny. Bu.

David McKee (H.T.): Flower deep orange and chrome. Growth vigorous. Free flowering.

Daybreak (H.M.): Salmon-pink on yellow ground. Buds long, pointed. Very fragrant and exceptionally free flowering. Growth robust. Bed.

Darla: Brilliant orange-scarlet with yellow base; buds long and pointed. Flowers semi-double large waved petals.

Decorator (H.T.): Carmine with orange-yellow base; inside petals bright cerise. Colour changes to light rose when blooms are fully expanded. Growth strong. Bed.

Delightful (H.T.): In two distinct colours, the outside of the petals being amber-yellow, and the inner side bright rose-pink. Tea scented.

Diana (Poly.): Single flower of dark orange suffused with carmine on top of petals; flowers continuously giving an abundance of blooms in large clusters. Excellent for table decoration and bedding. Glossy mildew-proof foliage. Very bushy growth.

Dickson's Bouquet (H.T.): Salmon-carmine. Vigorous grower with healthy foliage. Grand for cutting. Bed. Bu. G. Cut.

Dickson's Centennial (H.T.): Deep crimson, red and black shadings. In full-blown rose inner petals come strawberry-red and have velvety sheen. Blooms large but rather loose. Growth bushy. Moderately fragrant. Bed.

Dickson's Delight (H.T.): Vivid orange, beautiful buds. Fine bushy habit with healthy clean foliage. Vigorous. Bed. Bu. Bur. G. Cut.

Dickson's Perfection (H.T.): Shrimp-pink overlaid orange, shading to orange-yellow at base. Truly lovely combination of colours. Bed.

Directeur Guerin (H.T.): Creamy-yellow with orange centre. Blooms good shape. Growth strong, erect. Mildew-resistant. Bed.

Distinction (Poly.): Rose-neuron-pink, passing to deep rose-pink with brighter centre. Flowers double. Growth vigorous. Blooms throughout summer. Bed.

Donald Prior (Poly.): Scarlet flushed crimson. Flowers large, semi-double, plentifully produced. Growth vigorous. Bed. H.

Doreen Thorn (H.T.): Glowing pink, yellowing to base. Flowers exceptionally good shape in early stages, peony-like in later stages when also, yellow anthers show. Moderately fragrant. Growth strong. Bed.

Doris Findlater (H.T.): Light apricot shaded darker apricot at base; outside petals flushed reddish-salmon. Growth exceptionally hardy. This rose does well anywhere.

Doris Grace Robinson (H.T.): Lemon-ivory. A beautifully formed flower of splendid form. Good grower with a free habit. Exh. G. Bu.

Dorothy Dennison (Wich.): Flower palest shell-pink, large trusses. Sport from "Dorothy Perkins". Very vigorous. Ar. Pil. Perg.

Dorothy McGredy (H.T.): Petals outside, sunflower shading to strawberry; vermillion and yellow base inside. Exceptionally fragrant. Blooms really good shape, medium size. Bed.

Dorothy Page Roberts (H.T.): Coppery-pink, suffused gold to apricot. A really good and reliable rose. Vigorous and bushy. Bu. G. Bed. Cut.

Dorothy Perkins (Wich.): Flower rich rose-pink, small, double, very sweet, produced in large clusters. Growth very vigorous, climbing, late flowering; bright glossy green foliage. Ar. H. Perg. Pil. S.

Doris Rykers (Poly. Dwf.): Flowers beautiful light salmon-pink. Fine dwarf habit and nice bushy growth. Flowers with great freedom over a long season. Bed. E.

Dr. Eckener (R.H.): Yellow tinted copper. Flowers semi-double. Makes good 6 to 8 ft. bush. Best grown against walls.

Dr. Edward Deacon (H.T.): The margin of the petals being pale shrimp-pink, gradually emerging into a deep salmon-orange towards the base of petals giving the flower a wonderful appearance, each petal being artistically reflexed. The habit of the plant is upright and free. Bold, glossy, leathery foliage, and is practically disease-proof.

Dr. F. G. Chandler (H.T.): Bright crimson-scarlet, large full flowers of beautiful form. Very fragrant. Fine grower. Bed. G. Cut.

Dr. W. E. Hadden (H.T.): Raspberry-red streaked and flushed yellow deepening to orange at base. Flowers freely produced, excellent form. Growth vigorous, mildew-resistant. Blooms continuously. Bed.

Dr. W. Van Fleet (Wich.): Flower flesh-pink on the outer surface, deepening to rosy flesh in the centre, large, full and double, scented. Growth vigorous, climbing, free. Pil.

D. T. Poulsen (Hy. Poly.): Velvety crimson with small white eye. Semi-double flowers in large clusters. Good habit. Unfortunately liable to fade. G. Bed. Bu.

Duke of Wellington (H.P.): Bright red

with darker shading. Blooms good shape. Growth vigorous. Bed.

Ducher (C.): Flower pure white and free flowering. Growth vigorous.

Duchess of Atholl (H.T.): Orange, flushed with old rose, good constitution, bronze foliage. Growth vigorous.

Duke of Edinburgh (H.P.): Brilliant velvety crimson and one of the best of the old Hybrid Perpetuals. Very fragrant. A good grower. Exh. Cut. Bu.

Dumalis (Spec.): A variety of *R. canina*. Pretty pink, single flowers. Makes a dense bush about six feet high. Bu. H.

Dundee Rambler (Ayr): Flower white, pink edges. Growth very vigorous. Summer-flowering. Ar. Perg. H.N. Wall. T.

Dunkirk (H.T.): Deep bright rosy red, full shapely blooms. Delightfully fragrant. Dark-green foliage. One of first of its class to come into flower.

Dupontii (Spec.): White shaded pink. Flowers single, fragrant, succeeded by pear-shaped fruits. Bu.

Dusky Maiden (Hy. Poly.): Lovely dark red, almost black, single flowers in clusters of five or six. Vigorous habit, and very free. Bed. Bu. G.

E

Earl of Devon (Spec.): Yellow. One of the best roses in this class. Blooms twice a year—in May and October. Makes very ornamental bush for use as specimen.

Earl Haig (H.T.): Flower clear scarlet-crimson, large, good form, sweetly scented. Growth vigorous. Exh.

Easlea's Golden Rambler (H.W.): Golden-yellow splashed crimson. Flowers large in big clusters; nicely fragrant. Growth vigorous, hardy. Perg. Ar. S.

Eblouissant (Poly. pom.): Flower brilliant deep velvety red, retaining its colour well, of good size, firm and substance, produced in corymba. Growth perfect, possessing the hardy floriferous nature of the *Polyantha Rosa*.

Ecae (Species): Flower yellow, single. The Abyssinian Rose.

Eclipse (H.T.): Light golden-yellow, shapely flowers. Fine buds. Good grower and flowers very freely. Bed. G. Cut.

Ecstasy (H.T.): Light cadmium shaded bronze and cerise. Colouring more pronounced on back of petals. Blooms medium size, very lasting. Erect growth. Exceptionally fragrant. Bed.

Edith Bellenden (S. Briar): Pale rose, single flowers. Very free. A vigorous grower with scented foliage. H. S. Bu.

Edith Cavell (Poly. pom.): See "Miss Edith Cavell".

Edith Nellie Perkins (H.T.): The outside of the petal is a light orient red, heavily shaded cerise at top and orange at base, the inner face is salmon-pink, merging into orange-salmon, with golden-orange base, the venation being very pronounced and attractive. It is possessed of foliage and stem as decorative and handsome as many shrubs that are grown chiefly for their foliage.

Elizabeth Arden (H.T.): Pure white rose bearing exquisitely scented blooms of perfect form on a good stiff stem, foliage dark green and mildew-proof. Habit of growth vigorous and bushy, an ideal bedding and exhibition rose.

Elizabeth of York (H.T.): Cerise, flushed orange-salmon. Flowers borne very freely. Dark chocolate foliage. Vigorous grower and forms a spectacular bush. A splendid garden rose. Bed. Bu. Cut. G. H. T.

Ellen Poulsen (Poly. pom.): Flower dark brilliant pink, large, fairly full, sweet-scented. Growth vigorous, bushy. P. Bed. Cut. Pot.

Else Poulsen (Poly. Hyb.): Rose-pink and carmine flowers. Semi-double. The flowers last for weeks. Great trusses. Very vigorous growth. G. Bed. Bu. H.

Emily Gray (Wich.): A marvellous Wichuraiana, with foliage like *Berberis vulgaris*, great substance and very glossy; flowers rich golden yellow and almost as large as "Madame Ravary". The finest yellow Wichuraiana Rose yet introduced.

Emma Wright (H.T.): Flower of pure orange colour without shading. Free flowering. Bed.

Ena Harkness (H.T.): An offspring of *Crimson Glory* and *Southport*. One of the finest of the crimson-scarlet roses. Non-fading, beautifully formed, very fragrant flowers, freely produced on long stems. Highly resistant to disease. One of the best of the new roses. Exh. Bed. Cut. G.

E. S. Boerner (H.T.): A seedling from *Golden Dawn* and *Phyllis Gold*. Pale lemon-yellow. Fine in the half-open state, but the flowers open very double as they have a lot of petals. Fragrant. Flowers are produced singly in great profusion. Exh. Bed. G.

Essence: Fiery velvety crimson, keeping its colour well; exquisite perfume, long and pointed, carried erect, free.

Etoile de Hollande (H.T.): Flower bright dark red, of medium size, deliciously perfumed. Growth vigorous, upright.

Etoile d'Or (Poly. pom.): Flower citron-yellow, centre pale yellow. Dwarf. Bed.

Eugénie Lamesch (Poly. pom.): Flower chrome-yellow, changing to clear yellow,

edged Turkey red, of medium size, ranunculus-shaped, produced in trusses. Growth dwarf, bushy. Bed. Cut. Bu.

Eugénie Verdier (H.P.): Flower bright flesh-rose, large, full, globular. Growth robust, floriferous. A. Cut.

Eva (H.M.): Carmine-red with white eye. Perpetual flowering. Fragrant. Vigorous and disease-proof. H. Bu. Bed.

E. V. Lucas (H.T.): Dark crimson. Blooms large, borne in sprays. Growth free, branching. Slightly fragrant. Bed. Bu.

Excellenz von Schubert (Lam.): Dark carmine-rose. Flowers small, borne in large clusters rather late in season. Vigorous growth. Pil.

Excelsa (Wich.): Flower bright scarlet, double. Growth very vigorous, climbing, thick glossy foliage; late flowering.

F

Fabvier (C.): Flower dazzling crimson with white centre, semi-double. Dwarf. Bed. E.

Fairy Cluster (H. Poly.): Silvery pink. Flowers single, borne in loose clusters. Growth strong, shapely. Bed.

Fargesii (Spec.): Velvety rose-red. Flowers single, appearing in May and June, succeeded by coral fruits. Bu.

Fantasia (H.T.): Sparkling bright golden-yellow, medium size blooms. Wild rose fragrance. Excellent for cutting. Promises well for forcing and pot culture.

Farreri (Spec.): Pink. Blooms small, borne on arching stems. Fern-like foliage tinted red. Coral fruits in late summer. Bu.

Farreri Persetosa (Spec.): Known as "The Threepenny Bit Rose". Tiny flowers and leaves. Good specimen bush, 5 ft. high. Coral fruits in autumn.

Fashion (Poly. Hyb.): Flowers of a distinctive salmon pink. Fine grower. (In commerce in 1930.)

Fedtschenkoana (Spec.): White. Flowers single, borne in clusters, slightly fragrant. Red fruits in autumn. Growth prickly. Bu.

Felicia (H. Musk.): China-pink, shaded yellow, produced in large clusters, perpetual flowering, good in autumn, very fragrant. Growth vigorous.

Félicité-et-Perpétue (Mult. ramb.): Flower fleshy white, medium size, full, produced in clusters. Growth very vigorous climbing. A. Perg. Pil. W.

Fellenberg (C.): Flower bright rosy-carmine, semi-double, in clusters; fragrant. Growth vigorous. Bu. G. H.

Feu J. Looymans (H.T.): Apricot-yellow flushed with salmon. Long pointed buds developing into shapely flowers. Brownish-green foliage. Sweetly scented. A vigorous grower. Bed. Cut. Bu. G.

Filipes (Spec.): White. Flowers single, very fragrant, succeeded by scarlet fruits. Makes 10-ft. high shrub or climber.

Fisher Holmes (H.P.): Flower strawberry-red, shaded with deep velvety crimson; large, full, imbricated, with high centre, opening well; sweetly scented. Growth vigorous, free flowering. A. Cut. F. G. T.

F. J. Grootendorst (R.H.): Small, fringed flowers of reddish-pink produced in clusters. Strong grower. Bu. G.H.S.

Flamingo (H.T.): Bright geranium-red, developed flower rosy cerise, long pointed bloom, medium double, spiral shape, pointed centre, recommended.

Flora McIvor (S. Bizar): Blush-rose single flowers with white centres. A very strong grower, making long branches wreathed with blossom. Scented foliage. H. Bu. S.

Florence Haswell Voltch (H.T.): Brilliant scarlet, shaded darker, moderately full, semi-climbing habit of growth, best as a pillar, early and late flowering.

Florence L. Izzard (H.T.): The colour is a deep pure buttercup-yellow, blooms long and beautifully pointed, of fine substance, perfect form, and delightfully scented. Foliage mildew-proof and glossy, with few spines, with an ideal habit of growth. For exhibition, bedding, garden and cut-flower purposes.

Foliolosa (Spec.): Pink. Makes bush 15 in. high. Bristly red fruits in autumn. Bu.

Fontanelle (H.T.): Rich yellow. A flower of perfect form, often up to exhibition standard. Good grower, with clean foliage. Needs disbudding for show. Esh. Bed. G.

Fortschritt (Pern.): Yellow-pink. Flowers large, semi-double in clusters; slightly fragrant. Growth bushy, vigorous. Bed.

Fortuna (Hybrid Musk): A perpetual flowering cluster rose, colour soft china-pink, semi-single blooms, 4½ inches across, growth dwarf shrub, bedding, fragrant, good in autumn.

Fortune's Yellow Rose (N.): Flower orange-yellow, shaded and flaked with red, semi-double, in wreaths. Vigorous climber, south or west wall. F.

Francisca Kruger (T.): Coppery-yellow shaded peach. One of the best of the old Tes Roses. Grand on its own roots. Esh. Bu. Cut.

François Juranville (H.W.): Salmon-pink shaded coppery-pink and orange-yellow. Grand rambler bearing large double flowers in sprays. Flowers early and is moderately fragrant. Perg. Ar. S.

Frau Karl Druschki (H.P.): Flower pure snow-white, outer petals occasionally

shaded with pink, large, full, long, handsome buds which open well. Growth very vigorous, free flowering. Bed. Exh.

Frazer Annesley (H.T.): Inside of petals carmine with yellow base; outside saffron-yellow. Blooms long, pointed, medium size. Foliage bronzy green. Branching habit. Bed.

Fred Walker (H.T.): Pink shading to coppery-orange at base in bud stage; old-rose flushed gold when full blown. Flowers good shape, slightly fragrant. Growth strong. Mildew-proof. Bed.

Frensham (Poly. Hyb.): Deep crimson flowers which hold their colour until the last. Attractive foliage not liable to mildew. The flowers are beautifully formed. One of the best of the new roses in this class. Bed. Bu. Cut. G.

Friendship (H.T.): Strawberry-red flowers of fine fragrance. The flowers are freely borne over a long period. Good grower with clean foliage and a nice branching habit. G. Bed. Cut.

G

Gallica (Spec.): The French Rose. Very old rose, first referred to in 1596. Blooms are variously light red, white, pink, red with purple stripes. All fragrant. Bu.

Gallica Rosa Mundi (Spec.): Semi-double flowers. White striped pink.

Geheimrat Duisberg (Pern.): Golden yellow. Flowers large, double, good shape. Exceptionally fragrant. Bed.

Général Jacqueminot (H.P.): Flower velvety geranium-red shaded with strawberry-red, large, moderately full, high centred, very sweet. Growth vigorous. A. Cut. F. G. T.

General McArthur (H.T.): Flower bright scarlet-red, large and full, sweet-scented, elongated bud opening well, generally borne singly on long stiff stems. Growth very vigorous and free flowering. A. Bed. Cut. F. G. T.

Gentiliana (Spec.): White. Flowers single, fragrant, borne in clusters early summer. Long, laurel-like foliage. W.

George Dickson (H.T.): Flower velvety black-scarlet-crimson with brilliant scarlet reflexed tips with heavy and uniquely pure crimson-maroon veining on the reverse, very large, full, globular, perfectly formed, Tea perfume. Growth vigorous, with thick leathery holly-green foliage. Cut. Exh.

Georges Chesnal (H.T.): Golden-yellow veined copper. Flowers large, full, long lasting. Growth vigorous. Bed.

Georges Nobonnand (T.): Pale flesh, shaded with yellow. The shapely flowers are freely borne continuously throughout

the season. A fine old Tea Rose that does best on its own roots. Exh. Bu. G.

Gerald Hardy (H.T.): Bright scarlet. Flowers full, deliciously fragrant. Growth strong, bushy. Bed.

Gerbe Rose (Wich.): Beautiful silvery rose. A neglected Rambler that is now coming into favour again. A good grower, with disease-free foliage. The trusses of flowers are very pretty. Perg. Pil.

Gigantea (Spec.): Yellow in bud stage, opening to white. Blooms single, large, very fragrant. Needs warm position, preferably sunny wall.

Gipsy Lass (H.T.): Rich scarlet-crimson with blackish shading, full, globular, lasting, medium size, free and perpetual, true rose perfume, good-centred varieties of this colour are much required.

Girona (H.T.): Rose-pink, red, and clear yellow. Long pointed buds opening to intensely fragrant flowers. Free habit and constant succession of bloom; vigorous growth with shiny, disease-proof foliage. Bed. Cut. But. G.

Gloaming (H.T.): Centre luminous pink suffused salmon; outer petals lighter shade. Blooms large, double, exceptionally fragrant. Growth vigorous, upright, bushy. Bed.

Gloire de Chedane Guinoisseau (H.P.): Flower rich vermilion-crimson. Growth vigorous. Exh.

Gloire de Dijon (T.): Flower yellowish-flesh heavily shaded reddish-salmon, very large, very full, flat, highly perfumed, opening well. Growth very vigorous, climbing. A. B. F. Perg. Pil.

Gloire de Rosomanes (C): Very vigorous grower, making shoots during the summer 2 to 4 ft. long, and always flowering on the tips. Splendid for the centre of a bed; flowers semi-double, in huge bunches of the most brilliant crimson. W. Bu. Perg. Pil.

Gloire du Midi (Poly.): Orange-red. Bed.

Gloire Lyonnaise (H.P.): Flower sulphury white, deeper in the centre, large, full, elongated bud, fragrant, produced singly. Growth vigorous. Cut.

Gloria Mundi: A Polyantha with bloom-clusters of the most brilliant orange imaginable, makes a perfect bed.

Glory of Rome (H.T.): Rosy-red, large and very fragrant flowers of nice shape. Good grower with healthy foliage. One of the best for cutting. Exh. Cut. Bed. But.

Golden Dawn (H.T.): Rich sunflower-yellow, flushed old rose. Tea scented. Full flowers, superbly shaped. One of the best yellow roses. The habit is free and branching; a good variety for garden and exhibition.

Golden Emblem (Pernet): Flower similar in colour to "Constance" and "Rayon d'Or" and having the same crimson stripe on outer petals, with high pointed centre; Tea perfume. Growth free and branching, with splendid constitution, deep glossy green foliage, stout stalks and mildew-proof; extra perpetual flowering.

Goldenes Mainz (H.T.): Golden-yellow. Flowers very large, double, cup-shaped. Growth vigorous, upright, bushy. Exceptionally fragrant. Bed.

Golden Gleam (H.T.): Clear bright yellow without shading. The buds and half-open flowers are flushed and streaked with scarlet. Free flowering. Grand habit, free and upright. Fine dark green foliage and free from Mildew. Hardy. Bed. Cut.

Golden Glory (H.T.): Golden yellow. Flowers of good form. Growth neat. Moderately fragrant. Bed.

Golden Glow (H.T.): Flower golden-yellow to apricot and orange. Growth vigorous. Bed.

Golden Moss (Moss): Golden buff flowers, shading to yellow. A new colour in this section. The flowers are delightfully fragrant. Vigorous growth. Bu. G.

Golden Ophelia (H.T.): Flower golden-yellow in the centre, paling slightly at the outer petals, of fair size, very compact, opening in perfect symmetrical form. A seedling from "Ophelia". Cut.

Golden Rambler (W.): Clear yellow splashed crimson. Flowers of great size. Growth vigorous. Good rambler for all purposes.

Golden Salmon (Dwf. poly.): An intense fiery golden salmon of wonderful beauty. Flowers medium to large in size, produced in large full trusses. Strong bushy growth of medium height. Fine healthy foliage. Good for forcing.

Golden Salmon Superior (Poly.): Name indicates colour, which is quite distinct from other varieties. Bed.

Goldlachs. See **Golden Salmon**.

Gorgeous (H.T.): Tawny-pink, shaded yellow and heavily veined with copper. A very showy rose with a pretty combination of colours. A fairly vigorous grower. Bed. Cut. G.

Gotha (H.T.): Brownish yellow, passing to apricot with yellow base. Flowers large, fairly fragrant, plentiful. Growth vigorous, bushy. Bed.

Green Mantle (S. Briar): Rich pink flowers with white centres. A strong grower. Scented foliage. S. Bu. H.

Gruss an Aachen (H.T.): Flower pale salmon shading to white, fragrant. Growth dwarf. Bed. E.

Gruss an Teplitz (H.T.): Flower brilliant scarlet-crimson, shaded with velvety fiery

red, medium size, full, sweet scented. Growth vigorous. Bed. Cut.

Gwyneth (H. Poly.): Clear sunflower yellow. Buds lined with crimson on the outside. Very free. Mildew-proof. Dark green foliage. Vigorous and fine habit. Ideal bedder.

Gwyneth Jones (Pernet): The colour is unique, a brilliant carmine-orange without shading, and the blooms retain their fascinating colour until they drop. The flowers are semi-double to moderately full, and possess a faint lemon perfume. Foliage is dark green and mildew-proof and the stems are strong with few thorns. The habit is very bushy, strong and free, and flowering continually throughout the season. An ideal rose for bedding, decoration and the garden.

Gymnocarpa (Spec.): Rosy-pink. Flowers small, succeeded by scarlet berries. Pretty bush, moderate height (6 ft.). Foliage is fragrant.

H

Hadley (H.T.): Flower deep reddish-purple, of good shape. Growth very free. Cut. Bu.

Hardii (Spec.): Sulphur-yellow with brown blotch at base of each petal. Very distinctive colouring. Good bush for warm protected position. Needs rich soil.

Harrisonii (Austrian Briar): Golden-yellow, semi-double flowers in masses. Makes a good bush. Vigorous grower except in cold localities. Bu. H.

Hawthorn Crimson (H.T.): Intense velvety-crimson, semi-double flowers. There is a veining of maroon through the blossoms. A grand grower with strong, healthy foliage. Very similar to Red Letter day but much darker in colour. Bed.

Hazel Alexander (H.T.): Rich crimson. Blooms good shape and of excellent perfume. Growth vigorous. Bed. Bu.

Hector Deane (H.T.): A combination of orange, cochineal, carmine, and salmon pink. Strong grower, making a fine bush. Very fragrant. Bed. Cut.

Hede (H.T.): Pure sunflower-yellow, with large and very full flowers. Long pointed buds carried on stiff stems. Large, dark green, leathery foliage. A good rose for garden decoration, and also for cutting. Bed. Cut. Bu.

Heinrich Gaede (H.T.): Orange flushed carmine. Exceptionally pretty in bud stage. Blooms carried on erect stems. Growth vigorous. Bed.

Heinrich Wendland (H.T.): Petals golden-yellow outside, brownish red inside. Blooms exceptionally large, moderately

fragrant, high centred, lasting. Good all-weather rose. Resists disease. Strong growth. Bed. Cut.

Helene (Spec.): Discovered by Wilson in China, and named after his wife. Fragrant, white flowers $1\frac{1}{2}$ inches across, borne in large clusters during early summer. Fruit orange-red in colour. The slender, arching stems measure 15 feet or more in length. W. Ar. Perg. Pil.

Helene (Spec.): White. Flowers fragrant, borne in clusters and succeeded by orange fruits. Growth slender and arching, stems often extending to 15 ft. Bu.

Hemisphaerica (Spec.): Sulphur-yellow. Flowers double, borne in trails. Needs warm position. Not suitable for growing in cold districts. W.

Henry Nevard: Crimson-scarlet; large and finely formed, carried on erect shoots almost identical in height, very highly perfumed with the true old H.P. scent.

Hermosa (C.): Flower pale lilac-rose, of medium size, full, globular, sweet-scented. Growth vigorous, hardy, continuous flowering. A. Bed. G. T.

Heros (H.T.): Richest red but does not fade. Blooms large, double, long lasting. Very fragrant. Growth vigorous, bushy. Bed.

Hiawatha (Wich.): Flower rich crimson with white eye, small, single, produced in large and long clusters. Growth very vigorous, climbing, late flowering; foliage deep glossy green. Ar. Perg. Pil. W.

Hibernica (Spec.): The Irish Rose. Light pink. Flowers single, succeeded by red fruits. Makes nice dwarf shrub. 4 ft.

Highdownensis (Spec.): Light crimson. Flowers single, borne on arching stems, succeeded by red fruits. Bu.

Hillieri (Spec.): Very dark crimson. Flowers scented, succeeded by red fruits. Foliage has nice perfume. Makes good 9-ft. bush.

Hispida (Spec.): Creamy white. Flowers large, single, appearing early, succeeded by black fruits. Bu.

Hoffman von Fallersleben (Lam.): Salmon-red shaded yellow. Flowers borne in clusters. Growth vigorous. Pil. Perg. W.

Homere (T.): One of the best and most appreciated of the fine old Tea Roses. A splendid rose for the garden. Bright pink, with salmon centre. Strong grower with clean, healthy foliage. Much appreciated by those who know it. Pil. Bu. W.

Home Sweet Home (H.T.): Pure pink, large flowers after the style of Dame Edith Helen. A lovely, fragrant flower. Good grower with dark green, healthy foliage. Exh. Bed. Cut.

Hoosier Beauty (H.T.): Flower glowing crimson with darker shading, large, full, of good form, carried on erect stiff stems. Growth free; floriferous. Cut.

Hortulanus Budde (H.T.): Flower dark red with yellow centre, of medium size, produced in great profusion throughout the season.

Hugh Dickson (H.P.): Flower brilliant crimson shaded scarlet, large, full, very sweet. Growth vigorous, floriferous. A. Exh. F.

Hugonis (Spec.): Yellow. Flowers single, borne on slender branches, very fragrant. Ornamental bush for specimen use. There are also varieties of Hugonis with copper-red, pale lemon and primrose blooms.

Humilis (Spec.): Pink. Blooms appear in autumn. Makes nice 4-ft. bush for positions where spreading habit does not matter.

Independence Day (Pernet): Flower of flame colour on petals of sunflower-gold, overlaying orange-apricot, all of which tints are fused together in the mature bloom, the centre of which glows with warmth and intensity; sweetly scented. Growth vigorous and free; of wonderful flowering capacity, every shoot bears a large number of fine blooms and buds; foliage glossy, dark green; mildew-proof. G.

Indica (Spec.): Pink. This is the common pink China Rose. Blooms splendidly in warm positions facing south. Flowers semi-double, borne in sprays. Bu.

Innocence (H.T.): A very large single pure white flower, measuring over five inches in diameter. The plant is of a fine strong upright growth, with dark green foliage. Mildew-proof. Invaluable for massing.

Irish Elegance (H.T.): Flower orange-scarlet to shades of apricot, single. Vigorous. Bed. Bu. G.

Irish Fireflame (H.T.): Flower deep maddery-orange, splashed with crimson single. Vigorous. Bed. G.

Isobel (Pernet): Flower carmine flushed orange-scarlet, single flowered. Growth vigorous. Bed. G.

Ivy May (H.T.): Pretty rose-pink running to amber at the base of the petals and at the edges. Charming, very free flowering, fine texture. Very sweetly scented. Upright and strong growth. Bed. Bu.

I. Zingari (Pern.): A telling combination of orange and vermillion. A semi-double flower of great brilliance. The flowers are of poor form, but the plants make a bed of unique colour. Very free flowering, and a good grower. Bed.

Jack McCandless (H.T.): Amber-yellow; inside petals veined red. Blooms well-shaped, medium size, plentifully produced. Growth vigorous, bushy, mildew-proof. Bed.

Jacotte (H.W.): Coppery-yellow tinted red. Flowers semi-double, very lasting, slightly fragrant. Growth vigorous, disease-resistant, rather thorny. Good Rambler for pergola, arch, screen.

James Rea (H.T.): Carmine-lake, would be popularly described as rose-pink, perfect form and substance, with exceptionally large petals, glorious perfume, free.

J. B. Clark (H.T.): Flower deep scarlet shaded blackish crimson, very large and full, elongated bud, high centred, fragrant. Growth vigorous, erect, floriferous. Exh. T.

J. C. M. Mensing (H.T.): Particularly lovely rose-pink. Flowers of excellent form, moderately fragrant. Growth strong. Bed. But.

J. C. Thornton (H.T.): Intensely brilliant ruby-scarlet colour. An excellent bedding rose and forces well in pots, each bloom being carried on a straight stiff stem. Habit vigorous, foliage leathery, bright green.

Jean Cote (H.T.): Old gold, flowers darker at centre. Buds open to very large flowers which last for a long time when cut. The growth is strong with leathery, disease-proof foliage. Very fragrant. Exh. Bed. But. Cut.

Jeannie Deans (S. Briar): Large, semi-double, rosy-crimson flowers. Good grower with sweet foliage. One of the best of the Penzance Briars. Bu. S. H.

Jean Ducher (T.): Salmon-yellow flowers of exquisite shape, beautifully shaded with peach. A fine old Tea Rose that does well on its own roots. A charming rose. Exh. G. Bu.

Jean Soupert (H.P.): Flower dark velvety purple, large, full, imbricated, fragrant. Growth vigorous. A. Cut. Exh.

Jessie (Poly. pom.): Flower of bright cherry crimson colour, which does not fade or develop purple tints, disposed in large clusters. Growth freely branching, constantly in bloom; foliage bright glossy green, vigorous. Bed. Pot.

J. F. Muller (Poly.): Dazzling fiery red. Perpetual flowering. Bed.

J. G. Glassford (H.T.): Flower bright scarlet-crimson, with broad and stout petals, fragrant. Growth vigorous. Exh.

J. H. Bruce (H.T.): Crimson-scarlet. Flowers well shaped, practically sun- and rain-proof, nicely fragrant, freely produced. Growth vigorous, upright. Bed. Exh.

Joan Cant (H.T.): Salmon-pink inside

outside rich pink, highly pointed, delicious perfume.

Johanna Tantau (Poly.): Pink. Petals have golden sheen when buds first open and fade to white when flowers are full. Moderately fragrant. Very free flowering. Low-spreading habit. Bed.

John Moore (H.T.): Buff, shaded gold. The flowers are very large with high pointed centres. Very fragrant. Foliage dark green. Exh. G.

Joseph Guy (Dwarf Poly.): Scarlet-red. Blooms very large, plentifully produced. Growth vigorous. Bed.

Josephine Wheatcroft (Poly. Dwarf): Golden yellow. A nice addition to this class. Flowers freely, and has nice dwarf habit. Bed.

Julia, Countess of Dartrey (H.T.): The colour is pure "Tyrian rose" with a yellow base, and is very intense, brilliant and distinct. The flowers are very large, full, of ideal shape, and fine for exhibition. Garden and exhibition.

Julia Mannering (S. Briar): Another of the Penzance Briars. Pearly-pink, semi-double flowers. A very vigorous grower with sweet foliage. Bu. S. H.

Julien Porin (Pernet): Yellow that grows deeper and more intense as the flowers mature. The buds are long and shapely and develop into large full flowers of beautiful form. Delightfully sweet scented. Growth upright. Bed. Exh.

K

Karen Poulsen (Poly.): Brilliant scarlet. Flowers medium size, single. Growth vigorous, upright, continuous flowering. One of the most popular Polyantha roses. Bed.

Karl Scholtz (H.T.): Scarlet crimson flowers, with long-pointed buds opening into large high-centred flowers with huge petals. Upright growth with very strong wood. Healthy, large green foliage. Exh. Bed. G.

Katherine Zeimet (Poly. pom.): Flower yellowish white, changing to pure white, small, very double, imbricated, fragrant, produced in large clusters. Growth vigorous, free, erect. E. G. P.

Katherine Pechhold (H.T.): Coppery orange flushed rose and gold. Flowers good shape, slightly fragrant. Growth vigorous, bushy. Bed.

Kathleen (Hybrid Musk): A perpetual free-flowering cluster rose. Colour pink-blush, after the shade of *R. canina*. Large trusses of small single flowers, well distributed. Strong shrub habit, free flowering. Good in autumn.

Kersbergen (D. Poly.): Deep crimson flowers borne in large trusses. Growth free.

King Alexander I (H.T.): Reddish-copper in the bud opening to golden-copper with yellow base. Bronze-green foliage. Upright growth and exceptionally vigorous. Bed. G. Bu.

Kidway (H.T.): Yellow shaded orange. Flowers extra large, double. Slight fragrance. Foliage bronzy green. Growth vigorous, upright, bushy. Bed.

Kirsten Poulsen (Polyanthay): A beautiful bright scarlet colour with golden anthers, borne erect on strong stiff stems of upright growth. Excellent for all purposes, especially for decorative work as the flowers retain their original colour and remain fresh for several days.

Kirsten Poulsen Improved (Poly. Hyb.): A much improved form of the popular Kirsten Poulsen which it will ultimately completely supersede. Similar in every respect, but with larger and richer coloured flowers. Bed. Bu. H.

Klondyke (H.T.): Flower yellow to primrose-yellow, large bunches. Growth very vigorous. Bed.

K. of K. (H.T.): Flower of intense scarlet colour, its huge petals are velvet sheened solid scarlet throughout, semi-single, the blooms are produced in great profusion throughout the season, and are deliciously perfumed. Named as a tribute of respect to and admiration for a great British soldier.

Koster's Orleans (Poly pom.): Flower crimson-scarlet, semi-double, large clusters. Growth dwarf. Bed. E.

L

Lady Alice Stanley (H.T.): Flower silvery pink, with rose reverse. Growth vigorous.

Lady Barnby (H.T.): Glowing pink, shaded rosy red; large blooms, medium full tone. Otto of Rose perfume. Dwarf habit, free and branching.

Lady Cahn (H.T.): Clear yellow, veined with a darker shade. Very vigorous, producing a great number of strong upright growths bearing flowers in abundance. Large, full flowers. Healthy foliage. Exh. Bed. G. Cut.

Lady Forteviot (Pern.): Golden-yellow shading to apricot. Flowers large, semi-double, very fragrant; particularly good form. Growth strong, mildew-proof. Bed.

Lady Frost (H.T.): Rose-madder with flush of carmine in centre. Flowers moderate size, borne on stout stems. Growth strong. Bed.

Lady Gay (Wich.): Flower cherry-pink, fading to soft white, small, fairly full.

Growth vigorous, climbing, hardy. Ar. B. Perg. Pil.

Lady Godiva (Wich.): Flower soft pale flesh pink. Growth like "Dorothy Perkins". Ar. Perg. Pil.

Lady Hamilton (Scotch Rose): Flower buff-white shaded with rose, well expanded, with semi-double flowers, are rosy blush with the base of petals tinged with yellow. Dwarf habit. Bed. Dwarf Hedge.

Lady Hillingdon (T.): Flower deep apricot-yellow, medium size, long pointed bud. Growth vigorous, free. Distinct. Cut. F. Exh.

Lady Inchiquin (H.T.): Strong. Orange-cerise. Large, full, and perfect in shape. Free flowering. A rose of marvellous beauty. Valuable for all purposes.

Lady Leslie (H.T.): Colour is rosy scarlet, developing into scarlet-carmine, suffused with saffron-yellow on a yellow base. Very sweetly scented.

Ladylove (H.T.): An improved "Madame Butterfly". Light rose fading to Hydrangea-pink, deepening to the centre with bright apricot. Flowers of fair size. Very free flowering. Superb as cut flower.

Lady Mandeville (H.T.): A rose descended from Mrs. Sam McGredy from which it is a seedling. It has inherited many of its famous parent's characteristics. The colour is deep cadmium-yellow, flushed orange. The flowers are large and full. Exh. Bed. Cut. G.

Lady Moyra Cavendish (H.T.): Bright strawberry-red, flushed crimson. Perfectly shaped blooms, which are of medium size, are produced in great abundance all through the season. Bed. G. Bu.

Lady Penzance (S. Briar): Flower coppery-yellow, single early. Growth vigorous, distinct. Bu. G. H.

Lady Pirrie (H.T.): Flower outside of petals deep coppery-reddish-salmon, inside apricot-yellow, flushed fawn and copper, large, fairly full, of perfect form. Growth vigorous, floriferous. Bed. Bu.

Lady Rachel Verney (H.T.): Madder-rose and cerise-pink, shaded lemon. Blooms nicely fragrant. Growth sturdy. Bed.

Lady Reading (Poly.): Good rose, both for forcing and bedding; a brilliant red.

Lady Sylvia (H.T.): Rich, prawn-pink, shading to apricot. A very beautiful sport from "Madame Butterfly". Good grower and very free blooming.

Lady Trent (H.T.): Coppery-orange, very large blooms with ideal pointed centres. Every flower opens flat. Fragrant. Foliage dark green, shiny, and the habit of growth is vigorous. Exh. Bed. G.

Lady Violet Astor (H.T.): Pink shaded salmon. Flowers especially well shaped.

Very fragrant, plentifully produced. Retains colour well in summer. Growth strong. Bed.

Lady Waterlow (H.T.): Flower pale salmon bluish edged with carmine, semi-double. Growth vigorous. Bu. Pil. G. W.

Laevigata (Spec.): White with yellow centre. Flowers single, slightly fragrant. The Cherokee Rose of China. Grows well only on warm wall.

La Folette (H. Gigantes): This is pink climbing rose growing so freely on *Rivieras* and in South of France pleasure resorts. Given warm wall or pillar in warm position, makes magnificent show. Must be protected from cold winds.

La France (H.T.): Flower pale pink, silvery reflex, large, full, globular, fine form, high centred, very highly perfumed. Growth vigorous, free blooming. A. Bed. Cut. E. Exh. F. G.

Lal (H.T.): Salmon-pink suffused primrose. Flowers of excellent shape and very fragrant. Growth vigorous, healthy. Bed. But. Exh.

Lamarque (N.): Flower sulphur-yellow, very large, full, clusters. Growth vigorous. Pil.

Lamia (H.T.): Flower intense reddish-orange, medium size and charming form in the bud, and beautiful colouring when expanded. Growth vigorous. Bed. Cut.

La Neige (Moss): Flower pure white of medium size, full. Growth vigorous, floriferous.

La Reine Elizabeth (D. Poly.): Deep crimson, splendid for forcing. Growth free.

Le Réve (Clg. Pern.): Sunflower-yellow. Blooms profusely and is very vigorous. Pil. W.

La Tosca (H.T.): Flower pale silvery-pink, tinted with rosy white and yellow, large, full, opening well. Growth very vigorous, flowering continuously. A. Bed. Cut. But. G. T.

Laurette Messimy (C.): Flower rosy-pink, shaded golden-yellow at base of petals, large, semi-double, fragrant. Growth vigorous, floriferous. A. E. G.

Lawrence of Arabia (H.T.): Indian yellow flowers of great size. The attractive blossoms are good for decorative work, and last well when cut. A vigorous grower with large foliage. Exh. Bed. Cut. G.

Laxa (Spec.): Yellowish-white. Flowers small. Growth nearly thornless, hardy. Bu. W.

Leading Lady (H.T.): Flesh-pink flushed peach-blossom-rose. Blooms have satiny glow and are of excellent form and fairly fragrant. Growth strong, disease-resistant. Bed. But. Exh.

Lemania (H.T.): Very dark crimson, with nicely shaped blooms. A good dark, fragrant rose for cutting. Good grower, with clean foliage. Bed. Cut.

Lemon Pillar (Paul's) (Clg. H.T.): Flower sulphur-yellow. Growth very vigorous. Pil.

Léonie Lamesch (Poly. pom.): Flower bright coppery-red, shaded with deep red and golden-yellow, small to medium, double, very sweet. Growth moderate, erect.

Leontine Gervais (Wich. ramb.): Flower salmon-rose, tinted yellow, very fragrant, early. Vigorous climber. Ar. Pil. Perg.

Leonard Fife (H.T.): Coral-pink, shaded gold at base of petals. Well formed, large flowers, with high pointed centre, produced on long, stiff stems. Very fragrant. Foliage sparse, bronze green, which tones well with the bronze wood. Regarded as an improved Picture. Exh. Bed. Cut. G.

Lesley Dudley (H.T.): Pink at edge of petals, shaded down through carmine, scarlet-orange and salmon-rose to saffron; outside of petals pink, buff, and gold. Blooms large, pointed, perfect shape. Growth vigorous, bushy, with few thorns. Good perfume. Bed. Exh. P. But.

Leuchstern (Clg. Poly.): Flower bright rose, with white eye, small, single, produced in corymba. Growth vigorous, climbing, floriferous. Ar. Perg. Pil. W.

Lieutenant Chauré (H.T.): Flower crimson-red, shaded with garnet, large, fairly full, possessing petals of great depth and cupped form, fine long bud. Growth vigorous, upright branching. Bed. Cut.

Lise Palais (H.T.): Coppery-salmon, shaded darker inside the petals. Vigorous, free-flowering variety. Strong, healthy foliage. Cut. G. Bed.

Little Dorrit (Poly.): Coral-salmon. Flowers borne in large sprays. Growth dwarf. Bed.

Locarno (D. Poly.): Orange-scarlet sport of "Orléans", very brilliant. Growth free.

Longicuspis (Spec.): Cream. Growth vigorous, leaves remaining most of winter. Foliage red on underside; stems also red. Rich fragrance in autumn. Bu.

Lord Charlemont (H.T.): Clear crimson. Large flowers of good form, sweetly scented. Good grower with healthy foliage. Bed. G. Cut. But.

Lord Lonsdale (H.T.): Bright yellow, Tea-scented; good for bedding.

Lord Penzance (S. Brier): Flower fawn colour, with deeply serrated leaves, single, summer flowering. Growth vigorous. Bu. G. H.

Lord Rossmore (H.T.): Cream with pink flush. The flowers are of great size and good shape. The growth is strong and free,

and the foliage is hard and healthy. Exh. Bed. Cut. G.

Los Angeles (H.T.): Flower of a luminous flame-pink, toned with coral and shaded with translucent gold at the base of the petals, fragrance equals in intensity "Marechal Niel". The buds are long and pointed, and expand into a flower of mammoth proportions. Growth very vigorous, producing a continuous succession of long-stemmed flowers. Slightly fragrant. Bed. But. Exh.

Louis van Houtte (H.P.): Fiery red shaded crimson. Blooms large, full, exceptional form. Growth strong. Bed.

Lucens (Spec.): Blush-pink. Flowers semi-double, borne in clusters. Bu.

Lucida (Spec.): Flower bright red single, handsome shining foliage, assuming beautiful crimson tints in autumn. Growth very vigorous, useful for effect in wild garden; very hardy.

Lucida alba (Spec.): Flower pure white, single, useful for rockeries. Growth moderate.

Lucida plena (Spec.): Flower pale pink, deeper centre, double. Growth moderate, distinct.

Lucie Marie (H.T.): Buttercup-yellow, veined apricot-orange. Buds large, deep, and pointed. Petals deep and wide; growth tall and hardy; long rigid stems. Fragrant.

Lucy Ashton (S. Briar): Flower white with pink edges. Growth vigorous. Bu. H.

Lucy Bertram (S. Briar): Flower deep crimson with white centre. Growth vigorous. Bu. H.

Luis Brinas (H.T.): Orange-rose. Flowers cup-shaped, double, lasting very well. Good perfume. Growth vigorous, upright. Bed.

Lutea (Spec.): Golden-yellow. One of oldest roses known, being noted as existing in English gardens in sixteenth century. Bu.

Lutes Persiana (Spec.): Golden-yellow. The Persian yellow Rose. Flowers semi-double. Growth vigorous. Bu.

Lutea Punicea (Spec.): Copper-red; reverse golden-yellow. The Australian copper Rose. Bu.

Lutens (Spec.): Pale yellow. Flowers appear in clusters, followed by black fruits. Foliage remains all winter. Bu.

Lyelli (Spec.): Cerise with yellow centre. Flowers appear in clusters and are fragrant. Foliage brownish green. Bu.

M

Mabel Frances (H.T.): Clear rose-pink, shapely flowers. Nice habit and growth. A pretty flower with lovely buds. Clean foliage. Bed. Cut. But.

Mabel Morse (H.T.): Flower clear rich golden-yellow, sweetly scented, good foliage, free. Growth vigorous, erect.

Macounii (Spec.): Rose-pink. Flowers, which are fragrant, followed by mound fruits. Bu.

Macrantha (Spec.): White-tinted rose with yellow anthers. Blooms single, nicely scented, plentifully produced. Habit is exceptional, trailing growth being produced. Useful as bush or pillar rose.

Macrophylla (Spec.): Clear pink. Flowers single, succeeded by bottle-shaped red fruits in autumn. Bu. There is also a pink (Crasse Aculeata) and a white (Forma) variety of this rose.

Macrophylla Fragesi (Spec.): Flower bright crimson, single, distinct.

Macrophylla Rugosa (Spec.): Flower white, edged with pink, very distinct.

Madame Abel Chatenay (H.T.): Flower bright carmine-rose shaded with pale vermillion rose and salmon, base of petals deeper in colour, large, full, high centred, bud long, of beautiful shape, carried erect. Growth very vigorous, free, and continuous flowering. F. Bed. Exh. Cut.

Madame Alfred Carrière (N.P.): Flower fleshy white on a salmon ground, large, full, globular. Growth very vigorous, climbing. A. Pil.

Madame Antoine Mari (T.): Flower rosy flesh, shaded lilac, large, full, opening well, sweet-scented. Growth vigorous. A. Cut. Exh. G. T.

Madame Butterfly (H.T.): Pink, apricot and gold blended with unique charm. Glorified edition of "Ophelia", of which it is a sport. Flowers exceptionally fragrant, good shape, freely produced. Growth compact but strong. Bed. Exh. Cut.

Madame Constant Souper (T.): Flower deep golden-yellow, tinted and shaded with rosy peach, large, full, well formed, fragrant. Growth vigorous, floriferous. Exh.

Madame Cusin (T.): Violet-rose with yellow base.

Mme d'Arblay (Prov.): Flower flesh, changing to white, produced in clusters, early flowering. Growth vigorous.

Madame Edmund Labbe (H.T.): Bright yellow with scarlet and orange shades. A very decorative garden rose. Good grower with healthy foliage. Bushy. Bed. Cut. G.

Madame de Watteville (T.): Salmon white-bordered with bright rose. A captivating flower. Fine on its own roots. Exh. Bed. Cut. G.

Madame Edouard Herriot (Pernet): Flower superb coral-red shaded with yellow, and bright rosy scarlet, passing to prawn-red, of medium size, semi-double, bud coral-red shaded with yellow on the

base. Growth vigorous, of spreading branching habit with many long thorns and green-bronzed foliage; perpetual flowering. Bed. Cut.

Madame Eugène Resal (C.): Flower changing from coppery-red to bright chinaware on orange ground, large, full. Growth vigorous, very free flowering.

Mme Eugene Verdier (H.P.): Flower salmon-pink, sweetly scented, good foliage. Growth vigorous.

Madame Georges Bruant (H.R.): Flower paper-white, large, semi-double, produced in corymba. Growth very vigorous, very floriferous. B. T.

Madame Gregoire Staechelin (Climbing H.T.): Buds very long and elegant, very large single flowers of a delicate rose colour, very highly perfumed. Growth very vigorous. A profuse bloomer. Pil. W. Ar.

Madame Henri Guillot (H.T.): Brilliant salmon orange. A very striking colour. Good grower, with a nice bushy habit and clean foliage. Bed. Cut. But. G.

Madame Isaac Pereire (B.): Flower deep rose-pink, shaded clear carmine-purple, very large, globular, very sweet. Growth very vigorous, climbing. Pil. T.

Madame J. B. Croibier (Pern.): Salmon shaded carmine and tinted yellow at base. Blooms good shape. Growth vigorous. Bed.

Madame Jean Dupuy (T.): Flower golden-yellow, centre rosy yellow, edges of petals bordered rose, large, full, good form, fragrant. Growth very vigorous, continuous flowering. A. Cut. G. But.

Madame Jean Gaujard (H.T.): Clear golden-yellow shading to orange in centre. Large flowers of fine form. Blooms carried singly on long, firm stems. Vigorous and free-flowering with attractive mildew-proof foliage. Exh. Bed. Cut. G.

Madame Joseph Perraud (H.T.): Orange tinted copper at centre; edge of petals flushed shell-pink. Flowers of exceptional beauty, nicely fragrant, very large, full, and lasting. Growth exceptionally vigorous, upright, bushy. Bed. Exh.

Madame Juliette (H.T.): Bright coppery-pink. Flowers pointed in early stage, opening full. Fragrant. Growth vigorous and upright. Bed. G. Cut.

Madame Jules Bouché (H.T.): Flower salmon-white, centre shaded light cream, large, full, of good form, buds long. Growth vigorous, free flowering. Cut. G. T. A. Bed. Exh.

Madame Jules Gouchalt (Poly. pom.): Flower bright vermilion-red shaded orange-vermilion in the bud state, opening to bright rose, of perfect shape; produced in long and erect panicles. Growth vigorous. Bed. Pot. F.

Madame Jules Gravereaux (T.): Flower succinum-yellow, shaded soft salmon-flesh and pale pink, very large, very full, sweet-scented. Growth very vigorous, climbing, very free. Exh. Pil.

Madame Jules Guérin: See **President Charles Hain**.

Madame Hoste (T.): Pale lemon-yellow. A most attractive flower of extreme delicacy. One of the fine old Teas, and like most of them does best on its own roots. Exh. Cut. G.

Madame Lambard (T.): Salmon, shaded with rose. A beautiful flower. Does well on its own roots, and forms a good bush with clean foliage. A grand old Tea variety. Exh. Bed. Cut. G.

Madame Léon Pain (H.T.): Flower silvery flesh, centre yellowish-orange, large, full, sweet, elongated bud. Growth vigorous, floriferous. A. Cut. F. T.

Madame Melanie Souper (H.T.): Lovely cupped flower of good form, orange and yellow, strong stalk, free flowering; dark glossy foliage and good bedder.

Madame Moreau (T.): Flower yellowish-salmon with rosy centre, large, full, fragrant. Growth very vigorous, semi-climbing, floriferous.

Madame Ravary (H.T.): Flower beautiful orange-yellow, large, moderately full, globular, sweet-scented. Growth vigorous, hardy, branching, free. A. Cut. F. G. P. T.

Madame Raymond Gaujard (Pern.): Oriental scarlet with velvety sheen, yellowing to base. Blooms exceptionally good form. Growth vigorous. Bed.

Madame Victor Verdier (H.P.): Flower strawberry-red, passing to clear carmine-purple, large, very sweet. Growth vigorous, hardy. A. Cut. F. T.

Magnifique (Dwarf Poly.): Bright pleasing pink, beautifully fringed double blooms carried in bold trusses. Habit erect and bushy. Excellent for bedding.

Magnum Pernet: See **President Charles Hain**.

Maiden's Blush (Alba): Flower soft blush.

Maid Marion (H.M.): Buds blush-pink, then becoming white. Flowers semi-double borne in large trusses. Growth vigorous, good perfume. Pil. H. Bu.

Maison Pernet-Ducher (H.T.): Golden-yellow veined copper. Flowers large, full, double, long lasting. Growth, vigorous, bushy. Bed.

Malar Ros (H.T.): Velvety crimson and blood-red. Flowers large, very fragrant, full, lasting. Growth vigorous, upright, bushy. Bed.

Maman Cochet (T.): Flower flesh-coloured rose, flushed with carmine and

salmon, large, full, globular, high centred. Growth vigorous, free flowering. A. Exh. Cut. G. P. F.

Ma Paquerette (Poly. pom.): Flower white, small, double, in trusses. Growth vigorous.

Marchioness of Linlithgow (H.T.): One of the darkest red varieties—a deep blackish crimson. Very fragrant.

Marcia Stanhope (H.T.): A seedling variety from "Frau Karl Druschki", but of more compact growth; a fragrant white rose. Bed. But.

Maréchal Niel (N.): Flower golden lemon-yellow, very large, very full, globular, of perfect form, highly perfumed. Growth very vigorous, climbing, very free flowering. A. Cut. F. Exh.

Margaret Anne Baxter (H.T.): White. Blooms are of exceptionally good form from bud to full-blown stage. Petals very strong. Flowers carried gracefully on long stems. Growth vigorous with few thorns. Slight perfume. Bed.

Margaret Dickson Hamill (H.T.): Flower delicate maize-straw coloured; the deep shell-like petals flushed with delicate carmine on the back, large, globular; very fragrant. Growth vigorous, erect; free flowering; leathery green foliage, with deep crimson leaf stalks. Exh.

Margaret McGredy (H.T.): Geranium or orange-scarlet. Colour does not fade. Flowers large, full perfect form. Free flowering. Vigorous.

Marianne (H.T.): Copper-yellow, pink, and red delightfully blended. Flowers large with high centre and exceptionally fragrant. Growth moderate. Bed. Exh.

Marie van Houtte (T.): Lemon-yellow petals edged with rose. One of the most attractive of the old Tea Roses. Shapely flowers which open well. Clean foliage. Exh. Bed. Cut. G.

Mariposa (D. Poly.): Deep orange, darker than "Orange King". Growth free.

Marmion (H.T.): Petals salmon-pink shaded to amber, outside, pale rose flushed orange inside. Delightful combination of colours. Rich Tea scent. Growth strong. Bed.

Mary Hicks (Poly.): Fine crimson, deeper than "Excelsa". Very vigorous, fine foliage.

Mary Lovett (H.W.): Waxy white. Nicely fragrant. Growth strong. Good Rambler for pergolas, arches, etc.

Mary Wallace (Wich.): This charming pillar rose has well-formed semi-double flowers, bright clear rose-pink, with salmon base to the petals; exceeding four inches in diameter. Makes a fine plant 6 to 8 ft. high. Grand mildew-proof foliage; very free flowering and always in flower.

Maud E. Gladstone (D. Poly.): Malmaison pink of good size, shaded coral and suffused chrome-yellow. Tea perfume. Growth free.

Max Krause (H.T.): Extremely double, lasting, reddish-orange flower fading to golden-yellow. Very vigorous.

May Wettern (H.T.): Bright salmon-pink in the bud to deep flesh-pink, then to pure light pink in the aged bloom. The bloom is of moderate fullness. The growth vigorous. Fragrant.

McGredy's Coral (H.T.): Coral-pink overlaid salmon shaded copper. Blooms unique in colour, large, pointed, perfect form. Growth vigorous, branching. Bed. Exh.

McGredy's Gem (H.T.): Colour ground is creamy-pink with a yellow base, deepening to rose-pink towards the edge of the petals. A pinkish rose of "Madame Butterfly" shading, but slightly deeper. The flowers are of medium size, full, of perfect form, and have a slight Tea fragrance.

McGredy's Ivory (H.T.): Creamy-white, merges into a light yellow base, free and perpetual flowering; equally good as a garden, bedding and exhibition variety.

McGredy's Orange (H.T.): Inside and base of petals Indian yellow; petals outside bright orange flushed salmon. Blooms medium in size with splendid Tea perfume. Growth erect, vigorous. Bed.

McGredy's Peach (H.T.): Creamy-yellow washed salmon, a beautiful and delicate combination reminding one of the delicate bloom of a ripe, light-coloured peach. A slight Tea perfume. The growth is vigorous, free, upright, and the stout stems are clothed with dark green, glossy, disease-free foliage. Suitable for bedding or perfect exhibition flowers.

McGredy's Pink (H.T.): Bright rose, shading as flowers open to pearly cream and pink with yellow base. Blooms large, perfect form delicately scented, freely produced, carried on strong stiff stems. Growth vigorous, branching. Bed. Exh.

McGredy's Pride (H.T.): Orange and salmon-pink flushed yellow; outside petals yellow flushed flesh-pink. Flowers large, full, carried on long stems. Bed.

McGredy's Salmon (H.T.): In the bud and in the open flower the colour is an even salmon-pink. The blooms are of perfect formation. Flowers carried erect on sturdy stems. Not too vigorous as the plant flowers so profusely. A really good rose. Exh. bed. Cut. G.

McGredy's Scarlet (H.T.): Brilliant scarlet, base orange, washed deep crimson, large, full, perfect shape, delicate Tea perfume, distinct, free flowering.

McGredy's Sunset (H.T.): Petals outside

buttercup-yellow, inside chrome-yellow shading to scarlet. Blooms medium size, full, good form, nicely fragrant. Growth vigorous, mildew-proof. Bed.

McGredy's Triumph (H.T.): Geranium-red flushed orange, deepening to richer orange at base. Blooms large, full, exceptionally good form, moderate fragrance. Growth exceptionally free and strong. Bed.

McGredy's Wonder (H.T.): Coppery-orange faintly flushed orange-red towards edge of petals. Flowers are pointed; good form. Growth vigorous, upright, mildew-resistant. Bed.

McGredy's Yellow (H.T.): Large, bright, buttercup-yellow flowers; every bloom, large or small, is of perfect form, and sweetly scented. A strong grower. The foliage is beautiful, large, glossy, dark, bronzy green on dark red stems, reminding one of a Barberry. Bed. Exh.

Meg Merrilies (S. Briar): Flower bright crimson, single, free flowering. Growth vigorous. Bu. H.

Mélanie Soupert (H.T.): Flower salmon-yellow suffused with carmine-pink, large, globular, sweetly perfumed, long bud, opening well. Growth vigorous, free, erect. A. But. Exh. F. G. T.

Mermaid (H. Brac.): Flower sulphury yellow, the deep amber stamens standing out prominently and throwing a rich shade of yellow over the whole of the blossom.

Microphylla (Spec.): Known as "The Chestnut Rose". Flowers are pale pink, fragrant, and succeeded by spiny fruits. Bu. W.

Mikado (C.): Deep yellow. Bed.

Minnehaha (Wich. ramb.): Flower deep pink rosettes, large, loose trusses; similar to "Dorothy Perkins"; late flowering. Growth vigorous. Ar. Pil. Perg.

Mirifica (Spec.): The Sacramento Rose. A rare plant bearing exquisite clear rose flowers about 3 in. across. The foliage resembles that of a gooseberry. Reddish, cone-shaped fruit. Height 3 to 4 ft. Bu. G.

Miss C. E. van Rossem (H.T.): Flower velvety dark red, sweetly scented. Growth vigorous and branching. Bed. Cut.

Miss Edith Cavell (Poly.): Brilliant crimson. Formerly known as "Nurse Cavell". Growth vigorous. Blooms produced very freely. Bed.

Miss Hellyett (Wich.): Large and full; rosy pink with salmon-pink centre, a decided acquisition; mid-season.

Miss Willmott (H.T.): Flower pale lemon with a tint of rose on edges of petals, large, exquisitely formed, sweet-scented. Growth free and branching.

Mollis (Spec.): Deep rose. Flowers appear in June. Branches are purple. Bu.

Molly Sharman-Crawford (T.): Flower delicate eau de nil-white, which becomes purer as the flower expands, large, full, perfectly formed, perfumed, lasting a long time in good condition. Growth vigorous, bushy, free flowering. A. Cut. G.

Monte Cola (Spec.): Bright rose. Blooms borne in clusters. Stems have few thorns. Bu.

Montezuma (Spec.): Pink. Flowers single, fragrant, produced in June. Bu.

Moonlight (Hybrid Musk): Flower white flushed with lemon-yellow, with golden stamens, semi-single, in clusters, sweetly scented. Growth vigorous.

Moschata (Spec.): The Musk Rose. Flowers are white, single, and appear in June to July. Reaches great height; stems have been known to climb to 30 ft. W.

Moschata alba (Species): Flower white with yellow stamens, large clusters. Growth vigorous. Pil. G.

Moschata Florabunda (Spec.): White. Single flowers produced in clusters, bearing strong resemblance to syringa; nicely scented. W.

Moschata Himalayica (Species): Flower white tinged pink; yellow stamens, single, summer flowering. Growth very vigorous. Ar. Perg.

Moschata Nivea: White flowers, rather smaller than "Alba", with black stamens, single.

Moyesii (Spec.): Ruby-red. Flowers appear in June to July, followed by pitcher-shaped red fruits. Makes grand bush, forming quite distinctive feature in garden. There is also another variety with cream double flowers (Nevada).

Mrs. Anthony Spaiding (H.T.): Strawberry-red flushed orange and veined claret; outside of petals overlaid russet-orange. Exceptional colouring. Flowers large, good shape, nice perfume. Growth vigorous, spreading, mildew-resistant. Bed.

Mrs. A. R. Barraclough (H.T.): Colour is bright, soft, sparkling, carmine-pink of even shade throughout, shading to yellow at base. Flowers are full, large, fine substance and perfect form. Bed. B.h.

Mrs. Arthur Curtiss James (Climber): Very vigorous hardy climber, buds marked like "Golden Emblem", large fragrant blooms golden yellow on long stems for cutting.

Mrs. Beatty (H.T.): Delightful perfume, perfect shape and of the exquisite self yellow of "Maréchal Niel". Habit of growth good in all ways, blooms early summer till winter frosts, foliage exceptionally beautiful, free from mildew.

Mrs. Charles Lamplough (H.T.): Flower soft lemon-chrome throughout; large size, depth, and substance, sweetly scented, Exh. Cut.

Mrs. Cutbush (Poly. Dwarf.): Pale pink. Large clusters of full flowers, freely produced. Fine bedder. Good grower. Bed.

Mrs. C. H. Rigg (H.T.): Golden flowers shaded with yellow, deepening to a richer tone at the base of the petals. Buds are long and pointed and open to large, full blooms of excellent shape and size. Growth strong and vigorous. Deep green foliage. Exh. Bed. Cut. G.

Mrs. Edward Laxton (H.T.): Beautiful combination of orange and old rose. Flowers large, double, lasting. Growth very vigorous. Bed.

Mrs. E. J. Hudson (H.T.): Vigorous. Bright rosy-pink, large well-pointed flowers. R. T.

Mrs. E. Wood (H.T.): Light yellow shaded salmon. Flowers in all stages long, nicely formed. Profuse flowering; slightly fragrant. Growth compact but strong. Bed.

Mrs. Foley-Hobbs (T.): Flower delicate ivory-white, faintly tinged clear pink on the edges of petals, very large, full, well formed, Tea perfumed. Growth vigorous, free, erect. Exh. Cut.

Mrs. Frank Verdon (H.T.): Creamy-yellow shading to primrose at base, becoming butter-yellow and apricot as flowers expand. Flowers full, shapely. Growth strong. Bed.

Mrs. G. A. Van Rossem (H.T.): The flowers are heavily flamed and shaded dark orange and apricot on a dark golden-yellow ground, the reverse of the petals is often dark bronze and nearly brown when the flowers are in the first stage of development. The ovoid buds always open to quite perfect blooms. The plant is vigorous, upright, and forms very floriferous bushes.

Mrs. G. A. Wheatcroft (H.T.): The outside of petals are soft salmon-pink to carmine with orange base and a suffusion of copper all over the petal. The inside of petal is gold at the base, shading through coppery-pink to silver-rose at the tips. Ideal for bedding and massing.

Mrs. George Easlea (H.T.): Pure pink. A very large bloom with a high-pointed centre that keeps its shape to the end. The habit of growth is vigorous and bushy, and the foliage a delightful shade of green. Exh. Bed. Cut. G.

Mrs. George Geary (H.T.): Glowing orange-cerise. Long pointed flowers of good form with reflexed petals, produced in profusion. Fine erect growth, with completely disease-resisting foliage. A good bedding rose. Bed. G. Cut.

Mrs. George Marriott (H.T.): Flower deep cream and pearl, suffused rose and vermillion, very large, of perfect form. Exh. Bed.

Mrs. Henry Bowles (H.T.): Flower soft rose-pink, large, full, scented, deep petal, good shape, form after "Mrs. W. J. Grant"; free flowering, handsome foliage. Growth vigorous and erect. Exh. Cut. F. Bed.

Mrs. Henry Morse (H.T.): Flower bright rose, washed vermillion, with clear vermillion veining on petals which are of size and substance, perfect in shape and form; sweetly scented. Exh. Bed. Cut.

Mrs. Henry Winnett (H.T.): Vigorous. Crimson-red. Flowers of fine shape. A superb variety and one of the finest red.

Mrs. Herbert Hoover (H.Y.): Rich velvety red, neat full flowers of medium size. G. Vig.

Mrs. Herbert Stevens (T.): Flower white with a fawn-and-peach shading toward centre, perfectly formed, Tea perfume. Growth vigorous, free-growing, very floriferous. Bed. Exh. G.

Mrs. John Bell (H.T.): This is a rose with a very fine constitution and a good habit; the flower is fairly full and a good shape. Colour is described as cochineal-carmine. Bed.

Mrs. John Laing (H.P.): Flower soft pink, shaded lilac, large, full, finely shaped, globular, fragrant. Growth vigorous, early and late flowering. A Cut. Exh. F. G. T.

Mrs. L. B. Coddington (H.T.): Pink shading to light gold at base. Flowers large, double, lasting, moderately fragrant. Growth vigorous. Bed.

Mrs. Paul (B.): Flower blush-white shaded with peach pink, camellia-like. Growth vigorous. Bed.

Mrs. Paul Goudie (H.T.): Deep buttercup-yellow, petals heavily margined carmine-scarlet, which does not fade. Vigorous, bushy growth with dark green Mildew-proof foliage. A good bedding rose. Bed. Cut. G.

Mrs. R. G. Sharman Crawford (H.P.): Flower deep rosy pink, outer petals shaded with pale flesh, edges and base of petals white, large, full, of cupped form, imbricated. Growth vigorous, floriferous. A Cut. Exh. F.

Mrs. Sam McGredy: Scarlet coppery-orange, flushed red, outside of petals dazzling effect, large size, beautiful form, very freely produced and delicately perfumed. Bed. Exh.

Mrs. S. Paton (H.T.): Brilliant orange-scarlet, carmine, without any variation, running to an orange base. The flowers are full, moderately large, and of fine form. A very fine hardy bedding rose, quite Mildew-proof.

Mrs. T. B. Doxford (H.T.): Reverse of bud and young flower old rose, marked strawberry-red, inside salmon-carmine with yellow base, to a beautiful peach-blossom

shading in full bloom, long pointed bud, moderate size, compact and bushy, perpetual flowering, sweet perfume, and ideal bedding and decorative rose.

Mrs. Verschuren (H.T.): Formerly known as "R.M.S. Queen Mary". Flowers salmon-orange. Very attractive. Good grower and makes nice bushy habit. Bred. Cut. G. Bu.

Mrs. William Sprott (H.T.): Rich cadmium yellow, uniform and without shading. The habit of the plant makes a first-class bedding rose. Blooms suitable for exhibition are freely produced. Exh. Bred. G. Cut.

Mrs. Wemyss Quin (Pernet): Flower intense lemon-chrome, washed with a delicate, but solid, maddery-orange, becoming deep, non-fading canary-yellow with age, the guard petals are tinged crimson-orange, with odd reflexes, tipped brilliant, coppery-crimson, of excellent form; very sweetly scented. Growth vigorous, branching, very floriferous. District.

Mrs. W. H. Cuthbush (Poly.): Silvery rose-pink. Flowers double; produced in clusters. Growth free and compact. Bed.

Multibracteata (Spec.): Pink. Flowers appear in trusses June to September, followed by orange fruits. Bu.

Multiflora (Spec.): The Japanese Rose. White, honey-scented. Flowers in clusters.

Multiflora grandiflora (Species): Flower pure white, known also as "Polyantha grandiflora"; single, early. Growth very vigorous. Ar. Perg.

Murielae (Spec.): Pale pink fading to white. Flowers small. Growth branching, stems bearing coral thorns. Bu.

Muscosa (Spec.): There are many varieties of this, variously having light crimson, white, pink, bluish, flesh, carmine, etc., flowers. Muscosa Roses make excellent bushes for use as specimens about garden.

Mutabilis (Spec.): Cadmium-yellow changing to buff, rose, and pink. Blooms fragrant, produced continuously. Needs warm wall.

Myrtle Farrer (H.T.): Intense scarlet, shaded gold. Best described as an improved Charles P. Kilham. Blooms pointed in the early stages, but open somewhat flat. Good grower with healthy foliage. Bred. Cut. G.

N

Natalie Nypels (Poly. Dwf.): Soft pink. Large pendulous flowers in large clusters. Blossoms continuously. Bed. G.

Neville Chamberlain (H.T.): Salmon-pink, shaded orange. A very nice, shapely

flower. Fine grower with a bushy habit. Clean, healthy foliage. Bed. Cut. G.

New Dawn: See *The New Dawn*.

Night (H.T.): Very dark crimson. Nearly as dark as "Nigrette" (below) but of better form and habit. Slightly fragrant. Growth strong, bushy.

Nigrette (H.T.): Dark crimson. The nearest approach to a black rose so far produced. Apart from its colour, this rose is not considered to have many merits, shape not being particularly good.

Nison Vallia (Pern.): Unique combination of colouring—petals yellow on outside, apricot on inside. Growth strong and resisting disease well. Bed.

Niphetos (T.): Flower pure white, sometimes pale lemon, large, full, long pointed buds, very sweet. Growth moderate, very free flowering. Cut. F. P.

Nitida (Spec.): Flowers bright rose, 2 in. across. Foliage, stems and fruit very attractive in autumn. Height 12 to 18 in. A charming rose for edging and the rock garden. Very hardy and compact.

Nonin (H.T.): Pale gold shaded cream, perfectly pointed flowers which last well when cut. Long, stiff stems. Strong Tea perfume. Disease-resisting foliage. Bed. Cut. G.

Norman Lambert (H.T.): The outside of the petals are deep buttercup-yellow, and the inside deep salmon-orange suffused bronze and yellow, fading to yellow at the base of the petals. Flowers are large, full. Foliage mildew-proof. Ideal for garden and bedding.

Nova Zembla (Rug.): Flower pure white, centre rosy white, large, full, fragrant. Growth vigorous, hardy; a white form of "Conrad Ferdinand Meyer". Bu. Cut. H. G.

Nur-Mahal ("The Light of Palaces") (H. Musk): Colour cramoisie; flowers medium, semi-single, produced in corymbs, large sprays; bush habit; flowers continuously; musk perfume.

Nutkana (Spec.): The Wasatch Rose of North America. Flowers bright red, 2 in. across in June. Fruit bright red. 4 to 6 ft. high. A very handsome rose. Bu.

Nuttalliana (Spec.): Flowers pale rose and delightfully sweet. They are profusely borne during June and July. Fruit crimson, persisting throughout the winter. Makes a beautiful plant. Bu. H. S.

Nurse Cavell. See "Miss Edith Cavell".
Nypels Perfection (Poly.): Deep rose-pink. Flowers large, semi-double, produced in clusters. Growth vigorous, bushy. Bed.

O

Oakington Ruby (C.): Deep crimson opening to ruby-crimson. Very free flowering. Growth hardy. Bu.

Ochroleuca (Scotch): A beautiful single golden-yellow flowered form of the wild Scotch Rose. Fine colour and one of the most brilliant of the single-flowered yellow roses. Small foliage. It is a good grower with the typical habit of the forms in the *R. spinosissima* group. Small, scented foliage. Bu. G.

Old Blush China Rose (C.): Flower bright, silvery pink, semi-double, in clusters, free. Growth vigorous. Bed. E.

Old Crimson (Moss): Flower crimson, full, double, sweetly scented, well mossed. Growth vigorous. Bu.

Old Crimson China Rose (C.): Flower deep velvety crimson, semi-double, in clusters. Growth vigorous.

Old Monthly (C.): Charming pink rose. Flowers borne in clusters. Blooms continuously throughout the summer. A good addition to the herbaceous border.

Old Purple (Moss): Purple, tinted with blue. A striking and distinct, and possibly the nearest approach to the "blue" rose. One of the best of the old Moss Roses. Very vigorous, will grow into a tree. Bu. H. G.

Oliver Mee (H.T.): The colour in the young state is deep salmon with heavy flush of clear fawn, changing with age to deep salmon-pink. The buds are very long and pointed, of exquisite shape which open to large, full, high-centred flowers of great distinction. A splendid garden rose; sweetly scented.

Olympiad (H.T.): Dark carmine-scarlet with orange shading, fading to pinker shades in the centre. Long pointed buds with long petals, opening to flowers of perfect form. A strong grower of good habit with healthy foliage. Exh. Bed. Cut. G.

Omeiensis (Spec.): White. Blooming commences in May. Flowers have only four petals, being in that respect distinct. Blooms succeeded by crimson and orange fruits. Bu. Another variety of "*Omeiensis*" has large red spines.

Ophelia (H.T.): Flower salmon-flesh shaded with rose, large, of perfect shape, standing up well on long stiff stems. Growth vigorous, very free flowering. Exh. F. Bed. Cut.

Orange King (Poly.): A new break in colour, being a decided orange, both distinct and pretty; something unique among the Polyanthas.

Orange Nassau (H.T.): Reddish-orange-yellow, a really wonderful colour, but

growth is weak. Very pretty, but it requires liberal cultivation to grow it well. Good foliage. Bed. Cut. G.

Orange Perfection (Dwf. Poly.): Brilliant orange-red. Flowers of good form, growth free, excellent habit and most floriferous. An excellent variety.

Otto Krause (H.T.): Coppery yellow. A large, full rose of good shape. Clean foliage. Excellent for cutting and for decorative work. Bed. Cut. G.

Orange Triumph (Poly. Hyb.): Orange scarlet flowers in large trusses. A striking colour, and one of the best in this new class. Good grower, with nice bushy habit and clean foliage. Bed. Cut. G. Bu.

Oriental Queen (H. China): Colour is brilliant orange-scarlet with a yellow base. A very noteworthy introduction.

Orléans Rose (Poly. Pom.): Flower brilliant geranium-red, suffused Neyron-red, with white centre and carmine petals. Growth vigorous, bushy, free flowering. A. Bed. E. F. G. P. T.

Oscar Cordel (H.P.): Flower Brilliant deep rose-pink very large, full, sweet, produced singly; a good Rose in autumn. Cut. F. G.

Oswald Sieper (H.T.): White with sulphur-yellow centre. Blooms large, double, perfect in form, with stiff petals. Growth strong, healthy. Bed. Exh.

Oxyodon (Spec.) Rose-pink. Flowers beautifully perfumed; followed by red fruits. Bu.

P

Palustris (Spec.): Rose-pink. Foliage takes on lovely autumn tints. Suits moist position. Bu.

Papa Gontier (T.): Bright rose-crimson. Very charming in bud. A delightful old Tea Rose. Worth growing on its own roots when it then makes good growth and flowers freely. But. Bed. G.

Patience (H.T.): Scarlet-carmine-lake with deep orange at base, colours intermingle. Flowers large, full perfect form. Delicate perfume. Free, bushy, vigorous growth.

Paul Crampel (Poly.) Flowers have the same fine deep orange-scarlet colour as the well-known Geranium Paul Crampel, and keeps this colour until the end. Bed.

Paul Lédé (H.T.): Flower fine carmine-rose shaded with yellow, large, moderately full, cupped, very sweet, elongated bud. Growth vigorous, very free flowering. A. Cut. Exh. F. G. T.

Paul's Carmine Pillar (C.H.T.): Flower rosy carmine, large, single. Growth very vigorous. Flowers early.

Paul's Lemon Pillar (N.): Flower pale lemon, coming paler sulphur-yellow. Growth vigorous. Pil.

Paul's Scarlet Climber (Wich.): Flower vivid scarlet, shaded with crimson, flowering in great profusion, large clusters of medium size, semi-double. Growth very vigorous. Pil. Perg.

Paul Transon (Wich.): Many flowered panicles of large, double rosy-coloured flowers. A fine climber. Good grower with clean foliage. Perg. Pil.

Pax (Hybrid Musk): Flower pure white with golden stamens, semi-double, in large clusters, free flowering. Buds open pale lemon. Growth vigorous. Bed. Bu.

Peace (H.T.): Raised on Continent, recently introduced via America. Well-shaped blooms, yellow, tinged pink at top. Strong grower.

Pembridge (Spec.): Rich cream with apricot centre. Flowers excellent shape. Growth somewhat tender. Best grown under glass but suits warm position in south.

Pendulina (Spec.): Rich pink. Flowers single and very fragrant. Growth leathery with thornless stems. Flowers very early. Useful 5 to 8 ft. high bush. Pear-shaped fruits in autumn.

Pendulina Flora Plena. As above, but flowers double.

Penelope (H. Musk): A perpetual flowering cluster rose. Colour shell-pink shaded salmon. Flowers carried in corymbs. Shrub habit. Handsome dark green foliage. Wood claret colour. Good in autumn. Fragrant, musk perfume.

Percy Izzard (H.T.): Deep cream shading to golden-yellow at base and pearly pink at edges of petals. Particularly lovely foliage. Flowers good shape, weather resistant. Growth strong. Bed.

Perle d'Or (Poly. pom.): Flower rankeen yellow, small, perfect form. Growth dwarf. G. Bed.

Permanent Wave (Poly. Hyb.): See "Van Ness".

Peon: A fascinating tiny rose covered with deep crimson flowers. A most attractive little rose for the rock garden.

Persian Yellow (Austrian Briar): Flower deep golden-yellow, of medium size, semi-double, globular. Growth vigorous. (Type.) B.G.

Peter Pan (H.T.): Orange. Excellent form. Growth strong. Bed.

Phyllis Bide (Clg. Poly.): Small pale gold blooms, produced in light sprays; perpetual.

Phyllis Gold (H.T.): Golden-yellow, paling towards edges. Blooms exceptionally well-formed, having high-pointed centre and stiff petals. Nicely fragrant.

Growth vigorous, upright. Claimed to be one of best yellow roses in existence. Bed. But. Exh.

Picardy (R.H.): Flowers blood-red inside, yellow outside. Bu.

Picture (H.T.): Rose-pink, velvety petals reflex in the most pleasing manner, medium size, perfectly formed, ideal rose for garden and bedding purposes and is splendid for cutting.

Pink Grootendorst (R.H.): Shell-pink. Fringed flowers produced in clusters. Good 6-ft. bush.

Pink Prosperity (H.M.): Pink. Flowers double, produced in large trusses; nice perfume. Growth compact. Bed.

Piscocarpa (Species): Quite a tree, with very small bright scarlet pea-shaped hips. Distinct.

Pissartii (Spec.): White tinged pink. Persian variety of Musk Rose. Flowers semi-double, very fragrant. Strong growth. Pil. Ar.

Polly (H.T.): Reddish-orange, deep yellow base, well formed, valuable for forcing, sweetly scented.

Pomifera (Species): Flower blush, single, summer flowering, large hips. Growth vigorous. Bu. G.

Portadown (H.T.): A rich deep crimson-rose with a velvety sheen. Blooms large, full and beautifully formed. Very free flowering.

Portadown Bedder (H.T.): Petals are orange-yellow on the outside, with a rich cerise flush that deepens towards the edge, and inside there is a suffusion of glowing scarlet-cerise on an orange ground. Free flowering and fragrant. A good bedding variety.

Portadown Fragrance (H.T.): Bright orange-salmon-pink with orange-salmon base. Full flowers and fine shape. Fragrant. Bed.

Portadown Glory (H.T.): Canary-yellow, which is both rich in tone and lasting, perfectly formed, and has a Tea perfume, a free bedding rose with blooms of exhibition size.

Portadown Sally (H.T.): Vigorous. Reddish crimson-carmine flushed and veined yellow running to a yellow base. The outer sides of the petals are sulphur-yellow stained and flushed carmine. Sweetly scented and a good grower.

Poulsen's Copper (Poly. Hyb.): Rosacerise with a coppery tone throughout the whole flower. Vigorous grower with free and upright habit. Flowers produced in large clusters. Bed. Cut. Bu. G.

Poulsen's Pink (Poly. Hyb.): The large, semi-double blooms are of a rose-pink colour, with a lemon yellow base, produced in large clusters. Slightly fragrant.

The habit of growth is very vigorous and the bright, glossy green foliage makes an attractive setting, and is highly resistant to disease. Bed. Cut. Bu. G.

Foulsen's Yellow (Poly. Hyb.): A new break in colour in this class. Flowers buttercup-yellow, carried in large clusters, and produced in profusion all through the season. Good grower. Bed. Cut. Bu. G.

President Amedee de Broglie (H.T.): Glowing red with yellow reverse. Very showy and most attractive. Good grower, with nice bushy habit and clean foliage. Bed. Cut. G.

President Charles Hain (Pern.): Golden yellow paling towards edge of petals; outside of petals yellow and cream. Flowers large, well formed, full, nicely pointed in bud stage, good perfume. Growth vigorous, healthy; stems exceptionally rigid. Has at varying times also been called "Amelia Earhart", "Magnum Pernet", "Mme. Jules Guerin". Bed. Exh.

President Herbert Hoover (Pern.): Orange-yellow shaded scarlet and pink. Exceptionally beautiful colouring. Flowers full, excellent form. Growth vigorous. Nicely fragrant. Bed.

President Marcia (H.T.): Rose-pink; salmon shading on reverse of petals. Flowers large, full, nicely fragrant. Growth strong. Bed.

Princess Beatrix (H.T.): Orange shaded copper, flowers very large with high-pointed centre. Growth vigorous and upright. Fragrant. Good foliage. Bed. Cut. G.

Prince Camille de Rohan (H.P.): Deep velvety crimson. Full flowers. Vigorous and good grower. One of the best of the grand old Hybrid Perpetuals. Worth growing for its lovely colour. Requires liberal cultivation in order to do it well, but is worthy of the extra trouble. It is an aristocrat amongst roses. Exh. Bu. Cut. G.

President Pets (H.T.): A rose which varies in colour. In summer it is almost pure white with just a shade of pink, in the autumn it displays a distinct buff centre. Large, perfectly formed flowers with stiff petals which do not suffer from rain. Upright vigorous growth, with flowers carried on long, stiff stems. Ample disease-free foliage. Bed. Cut. G.

Princess Elizabeth: See "The Princess Elizabeth".

Princess Margaret Rose (H.T.): Salmon-pink, with dainty mildew-proof foliage—an ideal bedding rose.

Princess Marina (H.T.): Light apricot shaded and veined salmon; outside petals copper stained crimson in bud stage. Blooms of perfect shape carried on stiff stems. Growth vigorous. Bed, Exh.

Princess of Orange (Poly.): Geranium-red. Climbing sport of "Gloria Mundi". Growth vigorous. Pil. Ar.

Princess Royal (H.T.): Light rose at first, changing to hydrangea-pink when full blown. Flowers shell-shaped, very fragrant. Growth extremely robust, bushy, also disease-resistant. Bed.

Professor Deaux (Pern.): Gold striped yellow. Blooms nice form. Growth moderate. Bed. Cut.

Prosperity (H. Musk): Flower white, tinted pink in bud, form rosette, large clusters, perpetual flowering. Growth vigorous. Bu.

Pumila (Spec.): The Wild Shop Rose. This tiny little red rose, about 9 in. high, is suitable for rock gardens and for edgings. Synonymous with *R. Gallica var. pumila*.

Q

Queen Alexandra Rose: See **The Queen Alexandra Rose**.

Queen Mab (China): Soft rosy apricot. A pretty colour and one of the most popular of the old China Roses. Good grower with nice bushy habit. Flowers all through the season. Bed. Bu. G. H.

R

Raffles Bruce (H.T.): Yellow and apricot shades. Nice shapely flowers, freely borne all through the season. The plant makes a nice bush of semi-moderate growth. Foliage abundant and very clean. Bed. Cut. Bu. G.

Ramon Bach (H.T.): Orange-yellow. Pretty buds, opening to a most attractive flower of nice shape. Good foliage. Moderate grower. Bed. But. G.

Rapa (Spec.): Deep pink. Fragrant flowers borne in clusters early in summer. Bu.

Rapture (H.T.): Intensely brilliant in its vivid shades of bright apricot, coral-pink, rose and gold. Has more petals than "Ophelia" and produces more flowers per plant than its parent.

Red Ensign (H.T.): Intense scarlet. Nicely formed flowers with a high pointed centre and stiff petals. Very fragrant. Foliage light green. Vigorous habit. Upright grower. Bed. Cut. G.

Red Letter Day (H.T.): Flower velvety, brilliant, glowing scarlet-crimson, opening to medium-sized curiously cactus-shaped flowers, which do not fade or burn in the sun, as the reflex of the petals is satiny crimson scarlet colourings devoid of blue or magenta, semi-double. Growth erect and free-branching; free and con-

tinuous flowering throughout the season. Bed.

René André (Wich. ramb.): Flower dark saffron-yellow, shaded orange-red, early, fragrant. Growth vigorous. Ar. Pil. Perg. E. Weeping Standard. W.

Rev. F. Page Roberts (H.T.): Yellow shaded buff. Flowers large, full, perfect form. Colour fadeless. Growth compact, bushy, vigorous. Deliciously fragrant. Bed. Exh.

Reward (H.T.): Rose shaded light yellow and orange. Combination of colouring very beautiful. Blooms excellent shape, buds being long. Growth compact, sturdy. Slightly fragrant. Bed. Exh.

Rex Anderson (H.T.): Lemon shaded gold at base. Flowers large, perfect shape, carried in loose clusters on stiff stems. Nicely fragrant. Growth vigorous, upright. Bed. Exh.

Rheingold (H.T.): Golden-yellow, blooms large, full, fragrant. Growth vigorous. Bed.

Richmond (H.T.): Flower pure scarlet-red, large, fairly full, generally carried single on long and stiff stems, sweetly perfumed. Growth vigorous, free. A Cut. Exh. F. G. T.

R.M.S. Queen Mary: See Mrs. Verschuren.

Robin Hood (Hy. Musk): Polyantha type. Bright cherry red. Blooms in large clusters. Shrub habit, very free and continuous blooming.

Rödhätte (Poly. pom.): Flower clear cherry-red, fairly large, semi-double. Growth vigorous and free flowering. Bed. Cut.

Romeo (Wich.): Flower deep red, double and of perfect form; resembling a miniature "Liberty". Bu.

Rosaleen (H.M.): Dark red. Double flowers carried in large clusters and continuously produced. Bed. H.

Rosaleen Dunn (H.T.): Crimson red of an even shade throughout. The broad, stiff, leathery petals build up a huge pointed, double exhibition flower of great depth. The flowers are of perfect formation. Good grower with nice foliage. Exh.

Rose à Parfum de l'Hay (R.H.): Large double crimson flowers of exceptional fragrance. Growth very hardy. Bu.

Rose Apples (Rug.): Flower pale carmine-rose, semi-double, large petals, free. Growth vigorous. A fragrant form of *R. rugosa*. Bu. H.

Rose Berkley (H.T.): The colour is deep rosy salmon-pink suffused orange, and running to an orange base. The flowers are large, full, and beautifully shaped, with high-pointed centre, and of exhibition size and quality. The foliage is large, dark

green, leathery, and mildew-proof. A magnificent garden, bedding, and exhibition rose.

Rose d'Amour (Pern.): Inside petals capucine-red, outside old gold. Flowers strongly double, oval shape. Growth strong, producing bloom continuously. Bed.

Roselandia (H.T.): The flower is apricot-yellow shaded cadmium-yellow and slightly paler on the edges of the petals. The shape is good, high centre and full. Stems are good. Free flowering. Good foliage, good under glass.

Rosenelfe (Poly. Hyb.): A delicate shade of pink. The pretty flowers resemble a miniature Hybrid Tea. One of the most delightful and charming sorts in this section with a distinction that is peculiarly its own. Good bushy grower, making a plant of nice habit. Healthy foliage. Bed. Bu. G. Bu.

Rouge Mallerin (H.T.): Intense scarlet-crimson shaded darker scarlet. One of brightest reds available. Flowers large, high-centred, retaining colour well. Very fragrant. Growth vigorous, upright, compact. Bed. Exh.

Royal Scarlet (H. Wich.): A valuable addition to red climbers. After the style of "Paul's Scarlet", the flowers being similar in shape to the latter, only rather smaller, and a shade deeper in colour, free flowering; fine pillar rose.

Rubiginosa (Spec.): Bright pink. Flowers single, borne in early summer; followed by red fruits. H. Bu.

Rubra (Rug.): Flower deep rose shaded violet, large, single. Growth vigorous; a variety of "Alba". Bu. H.

Rubra Plena (Microphylla): Flower rose colour, double, good foliage. Growth vigorous, tender. W.

Rubrifolia (Spec.): Deep pink. Flowers small, single, borne in small trusses in early summer, followed by red fruits. Makes good 6-ft. bush.

Rufus (Poly.): Purest crimson throughout; unchanged by weather. Flowers produced in handsome corymbus. Bed.

Rugosa (Spec.): Purplish-rose. Often called "The Japanese Rose". Very fragrant. Bu. G. H. There are also varieties with white flowers having yellow anthers (alba) and rose-pink flowers (Calocarpa).

Rugosa alba (Rug.): Flower white; a sport from "Rugosa rubra"; single, fine foliage. Growth vigorous. Bu. H. T.

Russelliana (Spec.): Pale bluish. Flowers single, produced in numerous clusters. Slightly fragrant. Foliage golden in early summer; dark green later. Bu.

Rustica (Spec.): Pale yellow and gold with apricot centre; outside citron-yellow. Bu.

S

Salmon Spray (Poly.): Salmon-pink with carmine reverse. Flowers large, semi-double, slightly fragrant. Growth vigorous. Bed.

Sam McGredy (H.T.): Cream shading to golden buff in centre. Delightful colouring. Blooms excellent shape, having high-pointed centre and stiff petals. Nicely fragrant. Growth strong, upright with reddish foliage. Bed.

Sammy (H.M.): Carmine. Flowers double; produced in erect trusses. Growth strong. Foliage and wood tinted bronzy green. Nicely fragrant. Bed. Bu. G.

Sanguinaire (Rug.): Flowers brilliant red suffused orange. A rose of extraordinary growth and freedom of flowering. The flowers are huge. A distinct and very beautiful variety. Bu. Pil. S. H.

Sanders' White (Wich.): This is the most free blooming of all the double white Wichuriana crosses; it makes long vigorous growths, which are amply clothed in bright shining leafage, forming an admirable contrast to the large clusters of snow-white flowers. Perg. Pil. Ar.

Sappho (T.): Flower fawn colour, suffused with rose, centre deep yellow. Growth vigorous.

Sarah van Fleet (R.H.): Light rose-pink. Exceptional fragrance. Growth vigorous, hardy. Makes good 5-ft. bush.

Saturata (Spec.): Bright pink. Flowers followed by red hairy berries. Growth strong, erect, almost thornless. Bu.

Scarlet Queen (H.T.): Scarlet crimson. Blooms produced in clusters of three. Fragrant. Vigorous and free. Nice foliage. A splendid bedder. Bed. G.

Schiller (Lam.): Peach-blossom pink passing to clear pink. Flowers small, semi-double, borne in clusters. Growth vigorous. Bed. Bu.

Sempervirens (Spec.): The Evergreen Rose. Flowers are white and appear in early summer. Climbing habit. Pil. Ar. W.

Senator Potie (H.T.): Clear yellow with a tinge of red on the outside of the petals. Moderately sized flowers, opening cupped. Slightly fragrant. Foliage dark green. Vigorous grower. Bed. Cut. G.

Senora Gari (H.T.): Cadmium-yellow. Flowers very large, double, high-centred, lasting, fragrant. Growth vigorous. Needs care in cultivation and good situation. Bed.

Seraphinil (Spec.): Bright rose. Flowers succeeded by brown fruits. Dwarf (2½ ft.) bush.

Sericea (Species): Flower white or pale yellow, single, freely produced, foliage handsome. Growth vigorous.

Sericea pteracantha (Species): Flower white, very early, summer flowering, large red thorns on the young wood. Growth vigorous. Bu. G.

Sertata (Spec.): Rose-pink. Flowers single, produced in June, followed by red-brown fruits. Growth strong, thornless. Makes good 6- to 7-ft. bush.

Setigera (Spec.): Rose-pink. Flowers appear midsummer. Growth hardy, rambling. Needs sunny position. Bu. W.

Setipoda (Spec.): Rich pink. Flowers single, appearing in early summer, followed by long scarlet fruits. Good 8- to 9-ft. bush. Also useful for hedges.

Setzerii (Spec.): Deep rose. Flowers appear in clusters all through summer. Growth strong. Habit arching. G.

Seven Sisters (R. Mult. Platyphyllo): Deep pink. Flowers large, double, borne in clusters. Good climber for pillars.

Sheila (Poly.): Orange-salmon becoming salmon-pink as flowers expand. Growth strong. Excellent polyantha rose for forcing, for pot and bedding.

Shot Silk (H.T.): Bright cherry-cerise over-shot with salmon-orange, free branching growth with glossy green foliage not liable to mildew. A variety of great merit.

Shower of Gold (Wich.): Flower golden-yellow, double, of rosette shape. Growth very vigorous, climbing, numerous laterals are produced, clad with beautiful glossy foliage. Ar. Perg. Pil.

Silver Jubilee (H.T.): Golden yellow-shading to chrome at base; canary-yellow at edge of petals. Blooms very large, full. Growth strong, vigorous, hardy. Bed.

Silver Moon (Wich. ramb.): Flower pale cream yellow to silvery white, large and semi-single. Growth very vigorous. Ar. Pil. Perg.

Simone Guerin (Pern.): The reddish-yellow of carrots. Flowers large, high-centred, semi-double. Growth vigorous, bushy. Bed.

Sincerity (H.T.): Cream, shaded coppery-pink. Large blooms with high pointed centre, opening flat. The flowers are apt to come split. Vigorous grower. Fragrant. Foliage dark green. Bed. Cut. Bu.

Sinica Anemone (Species): Flower silvery pink shaded rose, single, large, petals. Growth very vigorous. Does best on warm west or south wall. Ar. Pil. Perg.

Sir Basil MacFarland (H.T.): Salmon-pink with orange sheen, flushed and veined yellow. Moderate-sized flowers carried erect on stiff stems. Good grower with nicely formed bushes. Bed. Cut. G.

Sir David Davis (H.T.): The colour is unfading deep glowing crimson, of an even shade throughout. The flowers are large,

full, pointed, and of fine form. The foliage is bright green, large, and of good texture. Stems are long and stiff, carrying flowers upright. The habit is strong, vigorous, upright, very perpetual, and free flowering. Bed. But.

Sir Henry Seagrave (H.T.): Light yellow flower, very large and well formed, foliage strong and healthy. Growth tall and vigorous. Bed. Exh.

Snowflake (Wich.): Flower white shading to yellow at base. Like a fall of snow on the green stems and foliage; scented, foliage fine and glossy, late, vigorous. Ar. Pil. Perg.

Snow Queen (H.P.): Flower pure white, large and full. Syn. "Frau Karl Druschki". Very vigorous. The best white rose in commerce. Exh. Cut. Bed.

Souliena (Spec.): Yellowish-white tinted pink. Flowers appear in corymbs mid-summer, succeeded by orange-red fruits. Has pretty grey-green foliage. Makes 10- to 12-ft. climber. Stems very thorny.

Southport (H.T.): Very brilliant scarlet variety of a decided and distinct colour which is maintained until the petals drop. The growth is vigorous, upright, free, and very perpetual blooming.

Souvenir (H.T.): Bright yellow. Flowers have good form; nicely fragrant. Growth free, vigorous. Bed.

Souvenir de Claudius Denoyel (Clg. H.T.): Crimson. Flowers good shape, large, nicely fragrant. Growth vigorous. Resents pruning in first year. Pil. W.

Souvenir de Georges Pernet (Pernet): Flowers of beautiful Orient red colour, the end of petals cochineal-carmine, shaded with yellow; very large, full and globular; oval bud carried on erect stem. A vigorous grower of branching habit, with few long thorns and bronze-green foliage.

Souvenir de J. B. Guillot (T.): Coppery-red, changing to orange, very brilliant. One of the best of the fine old Tea Roses. Well worth trying on its own roots. Makes a nice bush. Bed. Cut. Bu. But. G.

Souvenir de la Malmaison (B.): Flower rosy white, very large and full, very sweet. Growth vigorous, hardy, very free flowering. A Bed. Cut. F.

Souvenir de William Robinson (T.): Flower a lovely combination of salmon-pink, nankin-yellow, Naples yellow and crimson-carmine, large, full, sweet. Growth vigorous, free. Exh.

Spaethiana (Spec.): Yellowish brick-red. Flowers produced freely, followed by red fruits; foliage becomes red in autumn. Good compact short bush.

Sparkler (Poly. Dwf.): Sparkling, brilliant red. More vivid than any other red in this section. Plant makes nice little bushes with perfect habit. Very free. Bed.

Spinosissima (Spec.): Cream sometimes tinged with pink. Flowers single, produced singly over whole length of stem. Growth compact, bushy, averaging 2 to 3 ft. in height. Very hardy and succeeds everywhere, even in poor soil. Flowers very early. Black fruits in autumn. Bu. There are other varieties having semi-double cream flowers (lutea); yellow double flowers (Lutea Plena); deep crimson-purple flowers (Brightness); pale bluish, large semi-double flowers (Stanwell Perpetual).

Spinulifolia (Spec.): Pink. Flowers single, produced early in summer, sweetly scented, followed by orange berries. Growth almost thornless. Bu.

Spitfire (H.T.): Flowers attractive orange-yellow. Fragrant. Growth is upright, slightly branching. Good for hedging.

Splendens (Ayr): Flowers flesh colour, large, full. Vigorous. Ar. Pil. Perg.

Spun Gold (H.T.): Canary-yellow flowers of a uniform colour throughout without any shading. The medium-sized blooms are beautifully formed, and have more than the average number of petals. The long, strong, reddish-green stems carry the blooms upright, and are almost completely free from thorns. Bed. Cut. Bu. G.

Sunglow (H.T.): Orange flushed salmon. Blooms nicely shaped, moderately fragrant. Growth vigorous. Bed.

Sunshine (Poly.): A beautiful yellow rose. Buds are stained with bronzy red and orange, gradually fading to pale orange and buff. Very sweetly scented.

Superba (Poly. pom.): Dark red variety striking and beautiful.

Swansdown (H.T.): White, shading cream at base during autumn; bud large, long pointed; bloom full, beautiful spiral formation; growth vigorous and hardy; exceptionally free and continuous blooming; very sweet fragrance.

Sweet Briar Double Scarlet (S. Briar): Flower rosy red, bright double, sweetly scented. Growth very vigorous. Bu. H.

Sweet Briar Double White (S. Briar): Flower flesh white. Growth vigorous. Bu. H.

Sweetness (H.T.): Lemon-yellow shaded pink. Flowers large, good form, nicely fragrant, excellent shape when half-open. Growth vigorous, upright. Bed.

Sweginzowii (Spec.): Pink. Blooms are small and borne in clusters. Crimson hairy fruits in autumn. Makes compact dense-growing shrub 6 to 7 ft. high.

T

Talisman (H.T.): Scarlet, pink, copper, and gold in glorious combination. Flowers of especially good shape and delicious fragrance. Growth vigorous, hardy. Bed.

Tausendschön (Clg. Poly.): Flower soft pink in opening, the petals becoming reflexed with carmine-rose when expanding, medium, double, produced in large clusters. Growth very vigorous, climbing, almost thornless. Distinct. Perg. Pil.

Tea Rambler (Mult. ramb.): Flower coppery-pink to soft salmon-pink. Growth very vigorous. Ar. Pil. Perg.

The Bishop (H.T.): Crimson-red. Flowers large, having true old-rose perfume. Growth vigorous, erect, bushy. Bed.

The Bride (T.): Flower amber-white, changing to creamy white, edges of petals suffused rose, large, full, imbricated, opening well, very sweet. Growth vigorous, free flowering. A. Bed. Cut. F. G.

The Doctor (H.T.): Clear rose-pink, blooms very large and fragrant. The expanded flowers have a fine silvery effect. A good variety for any purpose. Fine grower with nice green foliage. Exh. Bed. But. G. Cut.

The Fairy (Poly. Dwf.): Small double pink flowers in close clusters.

The Garland (Hybrid Musk): Flower fawn buds, nankin and pink to bluish-white, large clusters, semi-double. Growth vigorous; summer flowering.

The General (H.T.): Flower blood-red, flushed orange, large, full-pointed, globular, carried erect; fragrant damask perfume. Growth compact, foliage dark green, wood claret; flowering continuously from early summer to late autumn.

Thelma (Hybrid Wich.): Soft coral-pink, very large flowers, fairly double. The flowers are wonderfully persistent on the plant. Vigorous. Good all-purpose rambler.

The New Dawn (H.W.): Shell-pink fading to bluish. Flowers fragrant, produced continuously through summer and autumn. Looked upon as one of best ramblers ever produced. Suitable for pergolas, walls, pillars, etc.

The Princess Elizabeth (H.T.): Orange-yellow splashed and edged deep cerise. Flowers large, double, slightly fragrant, very lasting. Growth strong, disease-resistant. Bronzy foliage. Bed.

The Queen Alexandra Rose (Pernet): Flower intense vermilion, deeply shaded old gold in reverse of petals, large, freely produced. Growth vigorous, deep glossy green, mildew-proof. Bed.

Thiabe (Hybrid Musk): Flower chamolish-yellow rosettes in clusters. Growth vigorous. W.

Tom Barr: Orange-buff, slightly veined carmine. The blooms are always of good shape. Growth strong.

Tom Wood (H.P.): Flower brownish-red, deep, cupped, sweetly scented. Growth vigorous.

Tony Spalding (H.T.): Brilliant scarlet-crimson which does not fade. The flowers are only of medium size but are nicely shaped. Fragrant. Vigorous with bushy habit. Bed. Cut. G.

Townsend (Scotch): Double pink. One of the best of the old Scotch roses. Small foliage of the spinosissima type. A pretty old-world variety. Grows about three feet high. Bu. G.

Trier (Lambertiana): Flower creamy white, edged with fawn, semi-single. Growth vigorous. Bu. Pil. A.

Trigo (H.T.): Lovely pale yellow, shaded pink, dark green foliage. Good bedding rose. Scented.

Tuscany (Gallica): Probably the most splendidly coloured of all the dear old Garden Roses. Flowers intense velvety crimson, and when first open they are almost black velvet, fading off to dark crimson. Good grower and makes a nice bush. Bu. G.

U

Uhland (Lam.): Reddish-yellow. Flowers slightly fringed and borne in clusters. Growth vigorous. Pil.

Ulrich Brunner (H.P.): Flower geranium-red, changing to cochineal-carmine when fully open, large, fairly full, cupped form, opening well, fragrant. Growth vigorous, erect, hardy and very free flowering. A. Bed. Cut. Exh. F. G. T.

V

Valerie (Poly.): Sunflower-yellow. Flowers borne in large trusses. Growth upright, compact. Bed.

Vanity (H. Musk): Flower rose-pink, large, semi-single, free, in large clusters. Growth vigorous. Pil.

Van Nes (Poly.): Cochineal-carmine. Flowers large, semi-double, having frilled edges and borne in clusters. Growth vigorous, upright. Slightly fragrant. Bed.

Vera Allen (H.T.): Shades of pink and crimson, culminating in an attractive large, handsome, fragrant bloom. Clean, reddish foliage. Vigorous and good habit. Bed. Cut. Bu. G.

Vesuvius (H.T.): Dark single rose. Colour brightest scarlet-crimson, of exquisite

form and solid substance, with sweet perfume. The habit of growth is free and bushy. Superb for bedding, massing, and cut-flower work.

Victor Hugo (H.P.): Flower crimson-carmine shaded purple, medium to large size, full, globular, fragrant. Growth vigorous. A. Cut.

Vierlanden (H.T.): Deep salmon-pink. Flowers large, double, exceptionally fragrant. Growth vigorous. Bed.

Viktoria Adelheid (H.T.): Golden-yellow shaded and edged brownish-red. Flower good shape, nicely fragrant. Growth moderate. Bed.

Village Maid (G.): Flower white, striped with rose and purple, variable, large and full. Growth vigorous. Bu.

Violet Simpson (H.T.): A vivid shrimp-pink, fairly full and a perfect shape, fit for exhibition.

Violetta (Clg. Poly.): Deep violet. Flowers borne in clusters. Useful climber for all purposes.

Violinista Costa (H.T.): Rosy-crimson shaded orange. A very pleasing combination of colours. The blend is very telling. A very showy rose. Strong, hardy growth. A good variety for decorative work of all kinds. Bed. Bu. Cut. But. G.

Virginiana (Spec.): Rose-pink. Flowers single, large, succeeded by red fruits. Growth vigorous, hardy. Bu. G.

Virginian Rambler (Ayr): In the way of "Dundee Rambler", but the flowers are shaded with pink.

Viridiflora (C.): Flower green, colour of foliage, of medium size, double. Growth moderate.

Viscountess Charlemont (H.T.): Salmon-rose shaded to rose-pink. Flowers large, full, good shape, well scented. Growth strong, branching. Bed.

W

Wadell (Spec.): Bright pink. Flowers large, plentifully produced. Growth short, compact, very thorny. Bu. G.

Walter Bentley (H.T.): Coppery-orange. A most striking rose of vivid colouring. Large, full flowers, which can be grown to perfect shape. The foliage and wood are red, shaded green. It is a poor grower and requires liberal cultivation. Only a rose for the keen exhibitor. Exh.

Warrawee (H.T.): Shell-pink. Flowers open flat; exceptionally fragrant. Growth moderate. Bed.

Watsoniana (Spec.): Whitish pink. Flowers very small, carried in large panicles, fragrant, followed by round fruits. Growth

strong with feathery blue-green foliage. Makes handsome 3- to 4-ft. bush.

Webbiana (Spec.): Pale pink. Flowers small, produced in sprays, fragrant and succeeded by red fruits. Good 3- to 6-ft. erect shrub.

W. E. Chaplin (H.T.): Deep crimson, deepening to carmine-crimson; very free flowering and perpetual; every bud produces a perfect flower, large and pointed; sweet-scented. Bed. Exh.

Westfield Scarlet (H.T.): Clear scarlet, very large and slightly fragrant. Light green foliage. Disease resistance; free flowering.

Wheatcroft's Yellow (Poly. Hyb.): A welcome addition to this class. Fine heads of golden-yellow flowers borne in great profusion. It is a vigorous grower, and has a fine habit. The green foliage is clean and healthy. Bed. Bu. Cut.

White Bath (Moss): Pure white and very beautiful in the bud stage. The unopened buds are liberally adorned with moss. Very fragrant, and one of the best of the old Moss Roses. Bu. G.

White Dorothy (Wich.): A pure white sport from the invaluable "Dorothy Perkins", which it resembles in all save colour. Ar. Perg. Pil. S. W.

White Maman Cochet (T.): A sport from "Maman Cochet", with snowy white flowers; usually tinged with bluish or cream. A. Bed. Cut. Exh. F.

White Provence (Prov.): Flower paper-white, free, summer flowering. Growth vigorous. Bu. G.

Wichuraiana (Wich. ramb.): Flower white with yellow anthers, single, fragrant. Growth creeping, very vigorous. Good for banks. The parent of most ramblers.

Wieland (Lam.): Yellow suffused red. Flowers medium size, single. Growth upright. Bu. G.

Wilhelm Breder (H.T.): Orange shaded yellow and pink. Flowers large, double, full, having true old-rose perfume. Growth vigorous, upright. Bed.

William III (Scotch): A charming little rose, only growing a few inches high, and producing typical blossoms of this class. The flowers are deep crimson. A gem for the rock garden. It was almost lost for a time, but is now in commerce again. Bu. G.

William Allen Richardson (N.): Flower varying from pale buff to apricot-yellow, medium, full, sweet-scented, pointed bud. Growth very vigorous, climbing. Distinct. Pil. W.

William Moore (H.T.): Carmine-pink. Flowers large, full, excellent shape, very

fragrant. Growth strong, comparatively thornless, mildew-proof. Bed.

William Orr (H.T.): Deep, crimson. Petals have distinct sheen. Flowers of perfect form, large, full, exceptionally fragrant. Growth strong, mildew-proof. Bed.

William R. Smith (T.): Flower creamy white, tinted lilac-rose, very large, very full. Growth vigorous. A. Cut.

Willmottiae (Spec.): Beautifully tiny foliage, which is fine for table decoration.

Willy den Ouden (Poly. Dwf.): An intense orange-scarlet sport from Gloire du Midi, and a great advance in the scarlet-coloured Dwarf Polyanthas. Has not the annoying habit of reverting to the parent. Moderate growth. Owing to its vivid colour it is best planted in a bed by itself. Bed. G.

Wilsonii (Spec.): Blush-white. Handsome, almost thornless foliage. 3-to 4-ft. bush.

Wintoniensis (Spec.): Rosy pink. Flowers fragrant and borne in clusters. Foliage has perfume of sweet-briar. Pitcher-shaped fruits in late summer. Good 6- to 7-ft. bush.

Wolley Dod's Rose (Spec.): Bright rose. Flowers semi-double, fragrant, succeeded by orange-red fruits. Growth strong, almost thornless. Makes good 5-ft. distinctive bush.

Woodsii (Spec.): Pink. Flowers small, single, succeeded by scarlet fruits. Growth bushy. Almost thornless. Good 6-ft. bush.

X.

Xanthina (Species): Flower lemon-yellow single, early summer flowering, known as "Ecae". Growth vigorous. G. H.

Xavier Olibo (H.P.): Flower velvety black shaded amaranth and fiery red, large, full, globular, high-centred, very sweet. Growth vigorous. A. Cut.

Y.

York and Lancaster (D.): Flower pale rose or white, sometimes striped, fragrant, summer flowering; "Rosa Mundi" is incorrectly called by this name. Growth, which is similar, is vigorous and free. Bu.

Yvonne (Wich. ramb.): Flower soft pink with deeper centre and yellow base, in large loose trusses, good foliage. Growth very vigorous. Ar. Perg. Pil.

Yvonne Rabier (Poly. pom.): Flower ivory-white, flowers in large clusters, free, perpetual flowering. Growth dwarf. Bed. B.

Z.

Zenobia (Mosa): Flower soft satin-rose, large, full, buds well mossed. Growth vigorous. Bu. But.

Zephyrine Drouhin (H.B.): Flower bright silver, pink, semi-double, very showy, delicate perfume, thornless. Growth very vigorous. G. Pil. H.

5

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