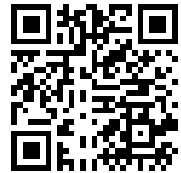

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*The Chrysanthemum; Its
History and Culture.*

John Salter



THE
CHRYSANTHEMUM.



PRINCE OF WALES.

Jas Andrews, Delt & Engr

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THE
CHRYSANTHEMUM;

ITS
HISTORY AND CULTURE.

BY
JOHN SALTER, F.R.H.S.

With Coloured Illustrations and Engravings on Wood by Andrews.

LONDON:
GROOMBRIDGE AND SONS,
5, PATERNOSTER ROW.
MDCCLXV.

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PREFACE.

THE author of the present volume neither lays claim to literary attainments, nor would he arrogate to himself any superiority in the execution of this work over existing treatises which may have been published bearing upon portions of the same subject, his sole object being to place before his readers a consecutive comment and complete history of the Chrysanthemum from the period of its first introduction into England, in 1764, up to the present date. Much research has been needed in order to trace the history of this plant in former days. The manifold changes which it has undergone, and its strides towards perfection of later years, are illustrated by a variety of statements drawn from numerous reliable sources. The Chrysanthemum is now so identified with floriculture that its origin, progress, and cultivation, are given at greater length and with more minuteness of detail than would have been necessary, or even interesting, had the plant not attained such great and deserved popularity, attributable, in a great measure, to the simplicity and ease with which it is cultivated, as well as the few and inexpensive appliances required to bring it to perfection.

There are few persons among the lovers of flowers who have not admired the Chrysanthemum; and when

geraniums, verbenas, and other beauties of the parterre, are withered, and the "last rose of summer faded and gone," then it shines forth in all its glory, and takes its place, *par excellence*, as chief among autumnal and early winter flowers. Scarcely any other plant is to be found so easy of cultivation, and yet possessing such variety of colour and elegance of form, or that so effectually enlivens the gloomy months of November and December.

The author has endeavoured to place before the public such directions as will not only enable all who feel an interest in the Chrysanthemum to cultivate it with a certainty of success, but also to produce, with comparatively little trouble, such plants and flowers as will be at once suitable for garden, conservatory, or exhibition purposes.

HAMMERSMITH, *April*, 1865.

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THE
CHRYSANTHEMUM.

CHAPTER I.

HISTORY.

THE Chrysanthemum family is not only very extensive, but widely scattered over the four quarters of the globe. Such species as *C. absinthifolium* and *C. arcticum* are found in the icy regions of Siberia and Kamtchatka, while others, *C. carinatum* and *C. paludosum*, inhabit the burning plains of Barbary. In the more temperate regions many interesting species are met with; our own country can boast of two—*C. leucanthemum* (white), and *C. segetum* (yellow); the former is the well-known May flower or Ox-eye daisy, which brightens our road-sides and meadows with its snow-white flowers in early summer; the other, *C. segetum*, is frequently seen in our ploughed fields, and known by the more common name of yellow ox-eye daisy or corn-marigold. One of the species, *C. coronarium*, is said to be used for culinary purposes in China. It is not, however, to any of these that attention will be drawn, but to the Japanese or Chinese Chrysanthemum described by botanists under so many various names, such as—

THE CHRYSANTHEMUM.

<i>Anthemis grandiflora</i>	. . . .	by Ramatuelle.
<i>Chrysanthemum indicum</i>	. . . .	„ Linnæus.
„ <i>Japonicum</i>	. . . .	„ Thunberg.
„ <i>sinense</i>	. . . .	„ Sabine.
„ <i>tripartitum</i>	. . . .	„ Sweet.
<i>Matricaria Japonica</i>	. . . .	„ Kœmpfer.
„ <i>maxima</i>	. . . .	„ Breynius.
„ <i>sinensis</i>	. . . .	„ Rumphius.
<i>Pyrethrum indicum</i>	. . . .	„ Cassini,

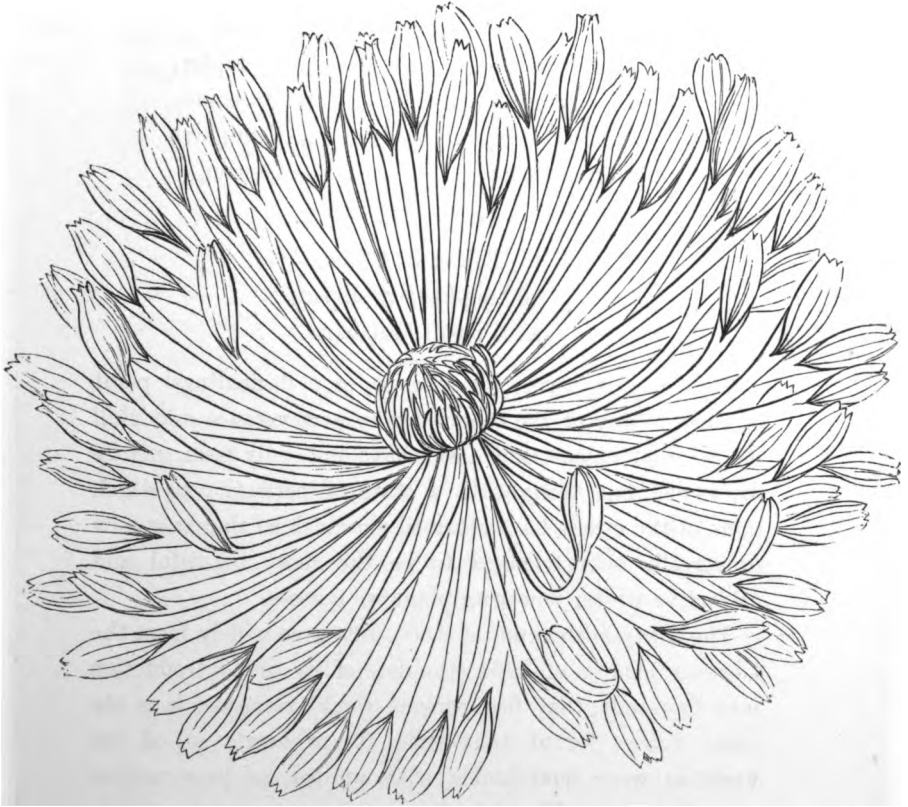
and called

Kikf, Kikku in China,
 Kychonophane in Japan,
 Tsjetto pu in Malabar.

This species is very far superior, in a floricultural point of view, to any of the others, for by perseverance and skill its original colour and form have not only been greatly diversified, but brought to a state of perfection to which none of the others have attained, so much so that it is now universally acknowledged to be the most beautiful and attractive winter flowering plant we possess.

The *Chrysanthemum* of 1865 differs so widely from the *Chrysanthemum* of 1764 (the date of its first introduction into England), that few persons would recognise it as the same flower, for at that time all, or nearly so, of the varieties were semi-double, with quilled, or long narrow ragged florets. The opposite sketch represents one of the first large flowering varieties imported from China.

This will serve to give some idea of what florists had to contend with before a flower so unsightly could be moulded into the symmetrical form it now possesses; but when we reflect upon the marvellous changes that have taken place in animal as well as vegetable life, the wonders that man has achieved by long years of diligent and persevering



CHINESE TASSELED FLOWER.

effort in improving the breed of our domestic animals, or how the sour wild crab apple has been metamorphosed into the Canada and Ribston pippins, and the wild Brassica of the seashore into the Drumhead and Savoy cabbages, to say nothing of other equally startling transformations,—then and not until then may we cease to wonder at the altered character of the Chrysanthemum. “Excelsior” should be the motto of every enterprising cultivator, and not “che sara, sara.” Every florist can tell of the pleasure experienced upon the discovery of a first sport or variation from a wild flower; to what a height his hopes immediately rose, and what unremitting care and culture he bestowed on that which he fondly expected, sooner or later, would become a perfectly double flower, as exemplified in the rose, the dahlia, or the carnation. Each one knows that the chief difficulty is in breaking through the original form and colour of the species, and will always be upon the lookout for any natural sport either from seed or branch; that being once obtained (however trifling the change may be), the result depends upon himself, and if he be thoughtful and persevering may to a certain extent mould the flower to his pleasure. “Labore vinces” is as applicable to horticulture as it is to every other pursuit.

The earliest botanists speak of the Chrysanthemum in its wild state as being a single yellow flower, but how and when the first varieties were obtained remains a mystery; it appears, however, to have been cultivated in Japan and China for ages before its introduction into Europe. It is generally believed that Breynius was the first to describe it, for in the “*Prodromus Plantarum Rariorum*,” published by him in 1689, he names it “*Matricaria Japonica maxima*,” and mentions several varieties—the white, blush, rose, yellow, purple, and crimson. That it was a favourite

plant with the Japanese appears certain, and from the fact of its being called "*Matricaria Japonica maxima*," it is most probable that Breynius knew of the existence of a variety producing smaller flowers.

The Dutch were the first Europeans to cultivate the small flowering variety, and by them it was taken to their establishments in Amboyna and Malabar, where it was known by the name of "Tsjetto pu," and was figured in the "*Hortus Malabaricus*" by Reede in 1699. By the Chinese it was known as "Kik, Kikf, or Kikku," and described by Kœmpfer, in 1712, in the "*Amœnitatis Exoticæ*," under the name of *Matricaria*. Linnæus, in 1753, noticed two species—*C. sinense*, with large white flowers, and *C. indicum*, with small yellow flowers; of this last there were two kinds, one single, the other double.

In 1764 a plant of the small yellow variety was growing in the Apothecaries' Botanic Garden at Chelsea, but was so little prized that in a few years it was lost sight of altogether. This was no doubt the type, *Chrysanthemum indicum*, or, as it was afterwards called, *Matricaria indica*, or *Pyrethrum indicum*, the varieties of which are now known as *C. matricaroides* or Liliputian. It was represented as being a dwarf branching plant, about eighteen inches high, with small flowers the size of the Feverfew, and found growing wild in several parts of India and China. The variety with small double yellow flowers, called "Kikf or Kikku," forms one of the principal ornaments in the gardens of the Mandarins.

In 1784 Thunberg published the "*Flora Japonica*," and after giving the name by which the Japanese knew it—viz., "*Kiko no fanne*"—describes it as the true *C. indicum*, and further asserts his belief in its being the same plant spoken of by Breynius as *Matricaria Japonica*.

Nothing further was heard of the Chrysanthemum until 1789, when an enterprising French merchant, Monsieur Blancard, of Marseilles, imported three varieties from China, the white, purple, and violet; only one, however, the purple, reached France alive; to him, therefore, belongs the honour of introducing the large flowering variety into Europe. In the following year (1790), a plant of this purple variety found its way to England, and was the first large flowering Chrysanthemum known (at least in modern times) in this country.



FAC-SIMILE OF THE FIRST LARGE CHRYSANTHEMUM
SEEN IN ENGLAND.

It was procured from Monsieur Cels, a celebrated nurseryman in Paris, and treated as a greenhouse plant. In November, 1795, it bloomed at the nursery of Mr. Colville, in the King's Road, Chelsea, and was looked upon as a most valuable acquisition. The flowers were about the size of a carnation, semi-double, and of a dark purple colour. It was figured in the "Botanical Magazine," of which the sketch on the preceding page is a fac-simile.

The success which had attended the introduction of this flower, added to its perfectly novel character, induced some of our own countrymen to procure other varieties from China—more especially the late Sir Abraham Hume and John Reeves, Esq., who had already imported many valuable plants from that country. Their endeavours were crowned with success, and in after years several others, of different colours, were brought over; in

- 1798. The rose and buff were added.
- 1802. The golden yellow, sulphur yellow, and quilled pink.
- 1806. The Spanish brown.
- 1808. The large lilac, and quilled white. From this time
few, if any, additions were made until
- 1816. The tasseled white.
- 1817. The superb white.
- 1819. The quilled pink, red purple, and flamed yellow.
- 1820. At this time only twelve distinct varieties were
known in England, some of these enumerated
being considered merely duplicates.
- 1821. The paper-white, large pale purple, and small single
yellow; probably the same that was cultivated at
Chelsea in 1764.
- 1822. The early crimson, a semi-double flower, with open
flat florets, in size and form like a marigold, with
a few others.

1824. Mr. Parks (who had been dispatched by the Horticultural Society to collect new plants in China) sent home twenty others—namely the brown purple, blush ranunculus, curled blush, changeable buff, clustered pink, early blush, golden lotus, late flowering yellow, pale pink, pale buff, Park's yellow, quilled pale orange, starry purple, tasseled yellow, two-coloured incurved, two-coloured red, Windsor yellow, and yellow warata'h; this last was an anemone flower, both ray and disc being entirely yellow, and the first of this interesting section. In

1826. There were forty-eight varieties growing in the gardens of the Horticultural Society at Chiswick, which was, doubtless, the largest collection in Europe, for in 1822 there were only fifteen varieties known in France.

Until this time it does not appear that any attempt had been made to save seed either in France or England; all the varieties existing in the two countries had been imported from the "flowery land of the Celestials," who little thought what a boon they were conferring upon the "Outer Barbarians," as they were pleased to designate us, or what a metamorphosis would take place in one of their favourite flowers—ay, a change almost as great as has been accomplished by us in their social and political relations. But notwithstanding the alteration that has taken place being so great that the Chinese would hardly recognise it as the same flower known to them hundreds of years ago, we must not forget that we are entirely indebted to them for the first sports or rude varieties, and that but for them the Chrysanthemum would, in all probability, never have got beyond its normal or wild state; and con-

sequently the skill of the horticulturists of England and France would never perhaps (at least, in the culture of this particular plant) have been called into action. The Chrysanthemum of China was then almost useless as compared with the Chrysanthemum which is now the most beautiful ornament of our winter gardens.

Upon carefully looking over the foregoing list, it appears doubtful whether more than six or seven of the original Chinese varieties are now to be found. As yet, the varieties (with one or two exceptions) had no specific names, but were distinguished either by their different form or colour; and so long as their number remained small no trouble was experienced in distinguishing them; but soon difficulties arose, and then Mr. Hayworth undertook to classify them, which he did as follows:—

Section 1. Ranunculus form, reflexed petals.

- „ 2. „ fringed petals.
- „ 3. Anemone form, with yellow disc.
- „ 4. Marigold form and size.
- „ 5. Tasseled form, with narrow petals and pendent blooms.
- „ 6. Quilled form.

It will be seen that the form now most highly esteemed, with incurved petals, was altogether omitted: perhaps it was then hardly known, as the two Chinese varieties possessing this property are not only late, but shy bloomers. We might, at the present time, add at least four other sections to Mr. Hayworth's list, namely—

Section 7. Incurved form, with broad petals.

- „ 8. Pompon ranunculus form.
- „ 9. Pompon anemone form.
- „ 10. Matricaroides, or feverfew form and size.

But even this classification did not entirely obviate the difficulty, for as the numbers increased so did the perplexity of distinguishing each merely by some peculiarity of form or colour.

Only one of the Chinese names, "The Golden Lotus," has been retained by us; some others were curious and fantastic. The following will serve as a specimen:—The White Waves of Autumn, the purple Pheasant's Tail, the yellow Gold-thread, the purple Butterfly, the Crystal White, the yellow Tiger's-claw, the golden Lotus.

In 1830, seed was first saved in the south of France, and the produce was of a totally different character from the original varieties. In a few years they had become so numerous that the former nomenclature was no longer possible, and gave place to the popular style adopted long before by the Dutch with tulips, hyacinths, and other flowers. Then began a sort of floral hero-worship; and surely the florist may, equally with the poet and historian, offer his homage at the shrine of beauty, bravery, and nobleness. The amateurs of Toulouse and Avignon freely availed themselves of this privilege, as we see by many of the names given to their seedlings, such as Jeanne d'Arc, Madame du Barry, Henry IV., Ninon d'Enclos, Grand Napoleon, Pierre le Grand, &c.

The most successful grower of Chrysanthemums in France at that period, and for many years afterwards, was the late Chevalier Bernet, of Toulouse; to him belongs the honour of having raised the first European seedlings, many of which are still highly prized; among others, "Marechal Duroc, Insigne, Ne plus Ultra, or Christine, and Chevalier Damage." Stimulated by his success, Messieurs Boisgiraud, Regnier, and Rantonet, followed his example, and obtained several both good and distinct kinds; then came

Messieurs Bonamy, Pele, and Lebois, who added many very fine varieties (more especially pompons) to those already in cultivation. Having had the privilege of friendship and personal acquaintance with these gentlemen, the writer has much pleasure in bearing testimony to the success which followed their unremitting zeal, and the labour and anxiety attending all their efforts.

It remains doubtful whether, as early as 1830, any trial had been made to save seed in England; in fact, the possibility of its ripening in our usually cold and sunless winter climate appeared so unlikely that no efforts seem to have been made. That opinion, however, no longer prevails, for experience has proved that it can and has been accomplished amidst the foggy atmosphere of London itself. That the result is attended with great difficulty is certain, but the zealous florist at all times takes a pride in overcoming difficulties which stand in the way of the accomplishment of his object, and as with many others, the greater the trouble the more pleasure is experienced when the desired end is reached. The first *bonâ fide* English seedlings were raised in Norfolk by Mr. Short and Mr. Freestone nearly thirty years ago. "Nonpareil, Norfolk Hero, Prince of Wales," and a few others, were the pioneers. About the same time, 1836, an amateur in Jersey turned his attention to the Chrysanthemum; having no doubt received some plants from his French neighbours, and heard of their success in saving seed, he was induced to attempt it, especially as the Channel Islands had long been celebrated for the production of seedling plants. The result exceeded his most sanguine expectations, for he raised upwards of five hundred seedling Chrysanthemums, which were purchased by Mr. Chandler, of the Vauxhall nursery. There are many persons who remember the *éclat* attending his

annual November exhibitions, especially when the Jersey seedlings became known, for not only were the flowers more beautifully incurved, but many were more double, and showed far greater diversity of colour than those already seen ; among them were, Adventure, Beauty, Calypso, Celestial, Champion, Chancellor, Countess, Defiance, Eclipse, Elegans, Enchantress, Formosum, Goliah, Hero, Imperial, Invincible, King, Lucidum, Magnet, Marquis, Paragon, Surprise, and Topaz. Several of these still remain as favourites in the conservatory, while Beauty, Formosum, and Lucidum are found in most prize-stands of cut blooms.

In 1838 the author took up his residence at Versailles, near Paris, and finding the climate of that city particularly suited to the cultivation of the Chrysanthemum, he imported from England all the Chinese varieties, besides most of the Norfolk and Jersey seedlings. Shortly afterwards about 250 good French sorts were added, so that in 1840 this collection numbered between 300 and 400 varieties. Upon looking over the list of that year, it does not appear that there were more than thirty with incurved florets or petals, and nearly all of these were obtained since 1830. In 1843 seedlings began to be raised in the Nursery at Versailles, and the first fruits of many succeeding years of labour were in

1844. Annie Salter, Madame Poggi, and Queen of the Yellows.

1846. Cyclops, Fleur de Marie, and Nancy de Sermet.

1847. Queen of England, which is acknowledged by all exhibitors of cut blooms to be, both as regards size and perfection of form, the finest Chrysanthemum extant.

About twenty years ago the Chrysanthemum took its

place among exhibition flowers. The first public show of cut blooms was held at Stoke Newington in 1846; this society is the oldest in England, and its annual exhibitions are still among the most attractive in the metropolis. Of late years many similar societies have been established, and at the present time there are no less than twelve in the immediate vicinity of London, besides many others scattered over the length and breadth of the country. In this way an increased impetus has been given to the cultivation of specimen plants and blooms. Fifteen years ago the flowers usually seen in stands were, Annie Salter, Beauty, Bixio, Christine, Campistroni, Defiance, Duke, Golden Chester, Goliath, King, Lysias, Madame Comerson, Madame Poggi, Nonpareil, Orlando, Pearl, Pilot, Phidias, Princesse Marie, Queen of England, Temple of Solomon, Vesta, and Two-coloured incurved." Most of these are still cultivated, but few would now be considered eligible for cut blooms. Since that time a vast improvement has taken place, and perhaps no other flower has made greater strides in the same period towards perfection; for as the demand increased so did the number of growers, not only in England, but also in France and the Channel Islands. In Guernsey Messrs. Clark, Smith, Davis, Wolsey, and Pethers have each contributed their quota of beautiful seedlings, which will long remain as proofs of their zealous exertions. To them we are indebted for "Alma, Abbé Passaglia, Beverley, Beauregard, Bouquet des Fleurs, Cherub, Caractacus, Dido, Globe, White, General Bainbrigge, General Harding, General Slade, Her Majesty, Lady Carey, Lady Harding, Lady Slade, Little Harry, Lord Clyde, Lord Palmerston, Mrs. Kaines, Mrs. Pethers, Negro Boy, Novelty, Orange Perfection, Prince Albert, Prince of Wales, Prince Alfred, Princess of Wales, Pandora, Rev. J. Dix, Rifleman, Robert James,

Sir G. Bowyer, Sir S. Carey, Seraph, Sparkler, Talbot, Wonderful, Yellow Perfection, and many others. Mr. Ingram, of the Royal Gardens, Frogmore, has also raised some fine varieties; his late-flowering pompon, "The Little Gem," will not easily be surpassed either for delicacy of colour or beauty of form.

Of many other seedlings it would be entirely unbecoming of the author to speak; but the estimation in which Queen of England, Golden Queen, Annie Salter, Alfred Salter, Cleopatra, Duchess of Buckingham, Duchess of Wellington, Mrs. W. Holborn, Versailles Defiance, Empress, Fleur de Marie, Lady Margaret, Nancy de Sermet, Andromeda, Capella, Diana, Fairest of the Fair, Florence, Helen Lindsay, Miss Talfourd, Miss Julia, Mrs. Dix, Rose Trevenna, and others are held, proves that long years of toil and care have not been altogether misspent.

In 1846 a new era commenced in the history of the Chrysanthemum, for at that time Mr. Fortune brought from China two small flowering varieties, known as "The Chusan Daisy and Chinese Minimum." These were similar in size to those now called Liliptians, and were probably varieties from the true *C. indicum* of Linnæus or *Matricaria Japonica* of Kœmpfer, a plant of which (as previously noticed) grew in 1764 in the Botanic Garden at Chelsea. These would in all probability have shared the fate of their predecessor had they remained in England, for although Mr. Fortune admired them in Chusan, they were considered too small and insignificant for English taste. The French opinion of them, however, was far different, for immediately upon their introduction in 1847 into the already well-known collection at Versailles, the little Chusan Daisy became a favourite. From these two varieties have sprung all the pompons now in cultivation. Chinese minimum

was a dark double flower, and produced but little seed; while the other, with its daisy-like semi-double flowers, seeded freely the first year, and the result surpassed the most sanguine expectations; the seedling flowers being more double than the original, and from their compactness and resemblance to a rosette, received the name of "pompon," and were called Pompon Bijou, P. Chapeau Rouge, P. La Liliputienne, P. Le Nain Bébé, P. Petit Poucet, and P. Tom Pouce. They were not such as would be valued now, although interesting to the florist as the precursors of such beautiful flowers as Adonis, Aigle d'Or, Andromeda, Aurore Boreale, Berrol, Bob, Bijou de l'Horticulture, Capella, Christiana, Comte Vigier, Danaë, Doctor Bois Duval, Drin Drin, Durnflet, Eulalie Laye, Fairy, Fairest of the Fair, Fioramesta, Florence, François 1^{re}, General Canrobert, Grand Sultan, Golden Aurore Boreale, Graziella, Helene, Helen Lindsey, Ida, Jane Amelia, Julia Engelbach, Justine Tessier, La Petite Brunette, La Vogue, La Escarbonele, Louise Piton, Madame de Vatry, Madame Eugène Domage, Madame Fould, Madame P. Deschamps, Madame Pepin, Madame Rousselon, Madame V. Verdier, Marabout, Mdlle. Marthe, Miranda, Miss Julia, Miss Talfourd, Modèle, Mr. Marsac, Mr. Van Houtte, Mrs. Dix, Moustapha, Nitida, President Decaisne, Riquiqui, Rose Pompon, Rose Trevenna, Saint Thais, Salomon, Satanella, Sunset, The Little Gem, Trophée, Turris Eburnia, White Trevenna, Astrea, Cedo Nulli, Golden Cedo Nulli, Lilac Cedo Nulli, Madame Montels, Madame Sentir, Mr. Astie, Reine des Anemones, and very many others.

From 1850, the varieties both of large and small flowers became greatly augmented. In 1860, the author's collection numbered upwards of 750 distinct varieties, comprising 500 large flowers, of which no less than 150 were raised in

England, and 250 Pompons mostly of French origin. The mere increase of varieties would not, however, have proved of any advantage in fact, rather the contrary, had there not been a corresponding improvement in form and colour; but this being made of primary importance, many flowers of first-rate excellence were the result, such as Alarm, Alma, Aimée Ferière, Alfred Salter, Beauregard, Bouquet des Fleurs, Cassandra, Dr. Rozas, Excelsior, General Harding, Golden Queen, Jardin des Plantes, Julie Lagravère, Leon Leguay, Le Prophète; L'Emir, Mrs. W. Holborn, Negro Boy, Novelty, Prince Albert, Progne, Queen of the Isles, Raymond, Saccoi Vera, Sulphurea Superba, Versailles, Defiance, White Queen, White Globe, Wonderful, and Yellow Perfection.

In 1862, Mr. Fortune introduced several Japanese varieties, some of which were spotted and striped; others were of fantastic forms called Dragons, and one Lacinatum was a beautifully fringed white flower, most invaluable for bouquets, having the appearance of a Japan Pink rather than of a Chrysanthemum. Another variety which unfortunately did not reach England alive, was even more curious than any which have yet appeared, the petals being edged with a long narrow hair-like fringe.

From 1860 to 1865, the progress of cultivation has been so rapid and decisive that one rarely sees at exhibitions any cut blooms that are not perfectly incurved, and many seedlings which but few years ago were considered good, are now entirely discarded. During this period the following have been raised: Abbé Passaglia, Albert Helyer, Antonelli, Attraction, Bella Donna, Beverley, Blanche of Castile, Caractacus, Cardinal Wiseman, Carissima, Cherub, Cleopatra, Dido, Donald Beaton, Dr. Brock, Duchess of Buck-

ingham, Duchess of Wellington, Emperor, Empress, Eve, Florence Nightingale, General Bainbrigge, General Slade, Golden Eagle, Golden Beverley, Golden Dr. Brock, Golden Ball, Grange Lodge Rival, Her Majesty, Hercules, Imogene, Ion, John Salter, Julia Grisi, King of Denmark, Lady Carey, Lady Harding, Lady Slade, Lady Margaret, Little Harry, Lord Clyde, Lord Palmerston, Lord Ranelagh, Miss Margaret, Margaret Vatcher, Mr. Brunlees, Mrs. Brunlees, Mrs. Haliburton, Mrs. Kaines, Mrs. Miles, Mrs. Pethers, Nil Desperandum, Oliver Cromwell, Orange Perfection, Pelagia, Pink Pearl, Prince of Wales, Prince Alfred, Princess of Wales, Princess Louis of Hesse, Pandora, Psyche, Prometheus, Quilled Beauty, Queen Margaret, Ranunculus, Rev. J. Dix, Robert James, Sam Slick, Sam Weller, Saumarez, Sanguinea, Sir G. Bowyer, Sir S. Carey, Sparkler, St. Margaret, St. Patrick, Sunflower, Sylphide, Talbot, Venus, Virgin Queen, White Christine, and many others which will long continue favourites either for conservatory or exhibition purposes.

Of those originally introduced from China very few are now to be found; they are Golden Lotus, Quilled Pink, Quilled White, Tasseled White, Tasseled Yellow, two coloured incurved and yellow Warata'h. Some of the best tasseled varieties are, it is feared, entirely lost.

We have now traced the history of the Chrysanthemum from its introduction into England in 1764; we have seen how the long quilled or ragged semi-double flowers have given place to those with broader and more compact florets; how these again have been surpassed by those of the reflexed or ranunculus form, to be at length developed into the perfectly symmetrical incurved flower, as seen in the accompanying drawing of Alfred Salter.

Let it not, however, be supposed that this plant has now



Chrysanthemum



ALFRED SALTER.

Jus Andrews, Delt. & Zinco.

Printed by C. Chabot

attained to such a degree of perfection as to leave no room for further improvement. Many additions are still necessary before even our ideal can be reached. The form of the flower has become so beautiful, that it seems scarcely possible that any amount of cultivation can improve that; but size may be augmented, and as regards colour much remains to be done. It is true, we have many very fine selfs—white, yellow, orange, rose, and crimson—but violet and scarlet are at present unknown. There are but few edged, mottled, striped, or tipped varieties. The improvements which have already taken place warrant the belief that much more may be achieved; and no enterprising florist will rest satisfied until he sees combined with perfection of form that diversity of colour which at present only exists in his imagination. "*Aide toi, le ciel t'aidera.*"

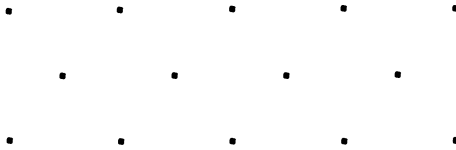
In writing upon the cultivation of the Chrysanthemum, it is impossible to lay down any general rule, the varieties are so numerous, and the habit, size of flowers, and other characteristics so different, that the treatment requisite for some may be quite inappropriate to others. Some kinds bloom early, and are most suitable for the garden; others require the protection of a conservatory or orchard house to enable the blossoms to arrive at perfection, and this is particularly the case where specimen plants or cut blooms are desired. As each class requires special treatment, the following hints will be found useful.

CHAPTER II.

GARDEN CULTURE.

ALTHOUGH the Chrysanthemum is quite hardy, and will grow in almost every situation and soil, yet, inasmuch as it is a native of a land where the thermometer stands at 100° Fahr. in the shade during the months of July, August, and September, there can be no doubt that for anything beyond the most ordinary purposes a southerly aspect, as well as prepared soil, are very desirable. When vigorous foliage and fine flowers are required the soil should consist of two-thirds loam and one-third rotten stable manure, mixed with river or silver sand, to assist the drainage. This compost, if allowed to remain in ridges during the winter, will be in a proper condition to receive the plants in spring. Some persons prefer planting the suckers or offsets in autumn, but to this there are many objections, as they are liable not only to be eaten off by slugs and other vermin, but destroyed by frost, and if not actually killed, are so crippled as to be incapable of making handsome plants. When the plantations are made in April and May, no injury is to be apprehended from any of these causes, the temperature at this time stimulating a rapid growth.

Chrysanthemums in borders can be planted in double or single rows thus :—



Pompons, on account of their height, being placed in the front. The number of rows may be increased according to the space devoted to the purpose ; but in order to ensure healthy foliage and allow a free circulation of air, the distance between each plant should never be less than three feet. The intervening spaces will be filled up by the foliage long before the blooming season.

In forming such a plantation much care is required not only in the harmonious selection and arrangement of colour, but also in the gradual elevation or height of the plants, so as to ensure a pleasing *coup d'œil* in November ; this may easily be accomplished by planting each row with varieties of the same natural growth, and if any irregularity should occur during the summer or autumn, it can be remedied by careful training. It should be borne in mind that healthy spring-made plants, or suckers, produce larger and finer flowers than pieces of old roots, and that one, or at most two, are quite sufficient to form a large bush. Towards the end of June a stake should be put to every plant, each row differing in height according to its order ; thus those in the second row should be six or nine inches taller than those in the front, and those again in the third row six or nine inches higher than those in the second. The main stem of the plant should, from time to time, be firmly secured during the growing

season, the laterals also being kept in place by tying, and any unsightly branches removed. In September, the buds usually appear, and as one large flower upon each branch is preferable to several small ones, and amply sufficient to ensure a fine head of bloom, the disbudding should at once be commenced. Three or four flower buds always terminate each branch, but only the crown or middle one (if perfect) should be left; all the others must be carefully removed. This practice was adopted by the Chinese upwards of a hundred years ago. Rumphius, in the "Herbarium Amboinese," tells us that, by this method, the flower was increased to the breadth of a man's hand.

The beauty of the foliage, and size of the blooms, may still further be increased by giving liquid manure frequently during September and October; this, however, must be discontinued as soon as they begin to expand.

The success attending Mr. Broome's labours may be cited as an illustration of what may be accomplished in open garden cultivation even in the midst of the City of London itself; and his perseverance and zeal, in spite of smoke, fog, and other obstacles, have been rewarded by seeing the high appreciation in which his flowers are held by the thousands of visitors who, during the month of November, throng the Inner Temple Gardens.

The following varieties are adapted for open air culture :—

Abbé Passaglia, Albert Helyer, Albin, Alfred Salter, Alma, Anaxo, Annie Salter, Ariadne, Attraction, Auguste Mie, Aurea Multiflora, Beauty, Bella Donna, Bernard Palissy, Beverley, Bixio, Bossuet, Cardinal Wiseman, Cassandra, Cassy, Cherub, Chevalier Damage, Christine, Cloth of Gold, Daphne, Defiance, Deucalion, Diadem, Dido, Don Quixote, Dr. Brock, Dr. Maclean, Dr. Rozas, Eve, Fair

Rosamond, Florence Nightingale, Garibaldi, General Slade, Golden Ball, Golden Beverley, Golden Christine, Golden Cluster, Golden Hermine, Golden Queen, Golden Trilby, Goliah, Her Majesty, Hermine, Hercules, Jardin des Plantes, Jenny Lind, Julia Grisi, Julie Lagravère, La Belle Blonde, Lady Harding, Lady Slade, Le Prophète, Little Harry, Lord Clyde, Lord Palmerston, Lord Ranelagh, Lord of the Isles, Louis Barthère, Madame Damage, Madame Poggi, Miss Slade, Mr. Brunlees, Mr. Murray, Mr. Wynes, Mrs. E. Miles, Mrs. Haliburton, Mrs. W. Holborn, Mulberry, Nell Gwynne, Nil Desperandum, Novelty, Pelagia, Pink Pearl, Prince Albert, Prince of Wales, Prince Alfred, Princess of Wales, Princess Louis of Hesse, Princesse Marie, Prometheus, Psyche, Queen of England, Queen of Lilacs, Quilled Beauty, Saccoi Vera, Sir S. Carey, Snowflake, Striped Queen, Sulphurea Superba, Talbot, Temple of Solomon, Trilby, Triomphe du Nord, Vesta, Virgin Queen, White Christine, White Queen, Zephar; with many others, for which see Chapter X.

CHAPTER III.

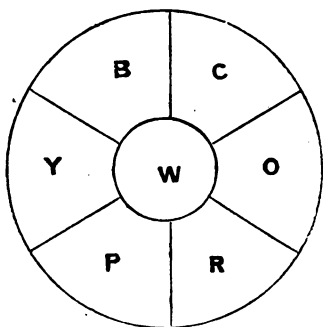
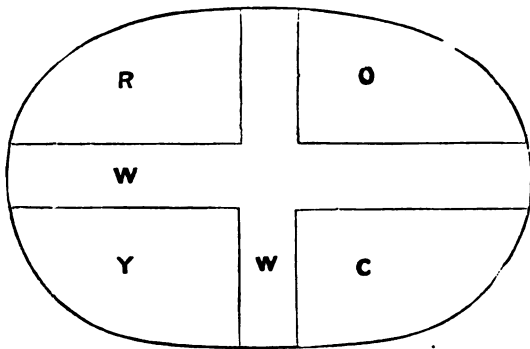
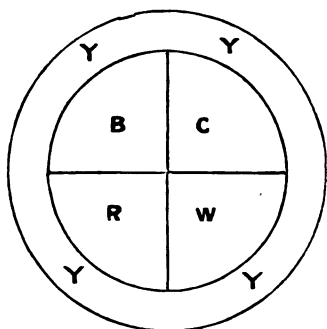
GARDEN CULTURE, POMPONS.

THESE may be advantageously planted in many ways, either, as already mentioned, in front of large flowering varieties or in beds by themselves, by which means they may be made as ornamental in October and November as geraniums and verbenas are in summer and autumn. The size of the beds must, of course, be regulated by the amount of available space and the number of plants intended for the purpose. Their shape may be geometrical or otherwise, as taste and fancy dictate. Circular or oval beds with rising centres will be found very effective if planted as shown on the opposite page.*

It should always be borne in mind that the general effect depends as much upon the harmony of colour as the masses of bloom.

Plantations should be made in early spring, each root being set at least twelve or eighteen inches apart. When the plants are about eight inches high they should be stopped—that is, the head of the leader taken off, to stimulate the growth of the lateral branches, and these

* The letters in the diagrams denote colours. B, blush; C, crimson; O, orange; R, red; W, white; Y, yellow.



DIAGRAMS FOR BEDDING CHRYSANTHEMUMS.

when six inches long should be pegged down in the same way as the heliotrope, verbena, and other bedding plants. This operation of stopping should be repeated from time to time until the beginning of July, when the branches must be carefully arranged, so as to leave no vacant spaces, the whole bed being in this manner covered with foliage. During the summer the plants must have a liberal supply of water, for if they are once allowed to droop it will be found difficult to recover them. Occasional syringing in the evenings will be of great benefit. In autumn the uneven branches should be regulated in order to ensure an equal surface of bloom. During the month of September liquid manure will be needed once a week. Mr. Dale was the first successfully to adopt this style of plantation, and his bedding Pompons in the Middle Temple Gardens have become the annual admiration of a multitude of visitors. The following varieties are most suitable for the purpose.

White or Blush.

Argentine, Cedo Nulli, Fairest of the Fair, Louise Piton, Modele, Madame Eugene Domage, Miss Talfourd, Turrus Eburnea.

Yellow or Orange.

Aigle d'Or, Aurore Boreale, Danæ, Drin Drin, General Canrobert, Golden Aurore, Golden Cedo Nulli, Golden Circle, Mr. Astie.

Rose or Purple.

Adonis, Durnflet, Florence, Hélène, Lilac Cedo Nulli, President Decaisne, Rose Pompon, Salamon, Trophée.

Red or Crimson.

Bob, Brilliant, Capella, Dr. Bois Duval, Madame Pepin, Miss Julia, Mustapha, Riquiqui.

CHAPTER IV.

SPECIMEN PLANTS, LARGE FLOWERS.

IN the choice of plants for specimens, not only must free blooming varieties of clear and distinct colours be selected, but the general character of each should be studied, and only such as possess graceful habit and fine foliage chosen. These qualities are essential for all exhibition plants. At many of the London shows it is no uncommon thing to see noble specimens, from three to four feet in diameter, covered with fine blooms and green healthy foliage—in fact, the size and beauty of these plants can only be realized by those who are in the habit of visiting our annual exhibitions in November.

There exists among florists no absolute rule as to the standard of form, varieties with reflexed petals being quite as eligible for exhibition as the incurved flowers; but there can be no doubt (all other properties being equal) that the latter are preferable for the purpose; although exhibitors in this class are at liberty to introduce into their collections specimens of both these varieties if they see fit. This remark does not apply to cut blooms, which are always required to be of an incurved form, as noticed in Chapter VIII.

Specimens should be grown upon a single stem, and

that must be distinctly visible above the surface. The size of the plant will, in a great measure, depend upon the time allowed for training; the largest are obtained from cuttings or suckers taken in autumn, and kept growing throughout the winter, which will enable the process of stopping to commence at an early period. It is, however, equally certain that fine plants (although not attaining to the same size) can be made from spring cuttings; in either case the one thing to be aimed at is rapid and continuous growth, so that the wood may be well ripened by autumn, without which it is impossible to obtain fine flowers. Formerly specimens were grown much taller than they are now, and certainly the change is an improvement, dwarf plants being more manageable, and offering greater facilities for displaying their beauty. Some specimens exhibited in November last were marvels of skilful cultivation.

The compost generally used is two-thirds loam and one-third rotten manure. Some persons prefer a lighter soil; thus two parts loam, one part rotten manure, and one part decayed leaf-mould, with silver sand, to render the whole porous.

In order to ensure large specimens, cuttings should be made in autumn, and only such as are healthy and robust selected; all the eyes below the surface of the soil must be extracted, so as to prevent any suckers from absorbing the nourishment required for the full growth of the plant.

Three-inch pots are generally used at first, and if placed in a cool pit or frame the cuttings will root freely, and by Christmas will have become good plants. When about eight inches high they will require shifting into larger pots, and the heads taken off to encourage the growth of the laterals, of which five or six will be found sufficient; these as they increase in length should be pegged down, and great

care taken that they are not broken or injured, as many good specimens have in this way been spoiled in the first operation of training.

Fresh air must be freely admitted whenever the weather is fine and clear, and as soon as the laterals are six inches long they must be stopped; this same process may be advantageously carried on until the end of June, when the plants should be finally shifted into nine, ten, or even twelve-inch pots. Ample time will thus have been allowed for the formation of bushy plants well covered with foliage and buds. Potsherds or broken oyster-shells should be freely used to assist the drainage.

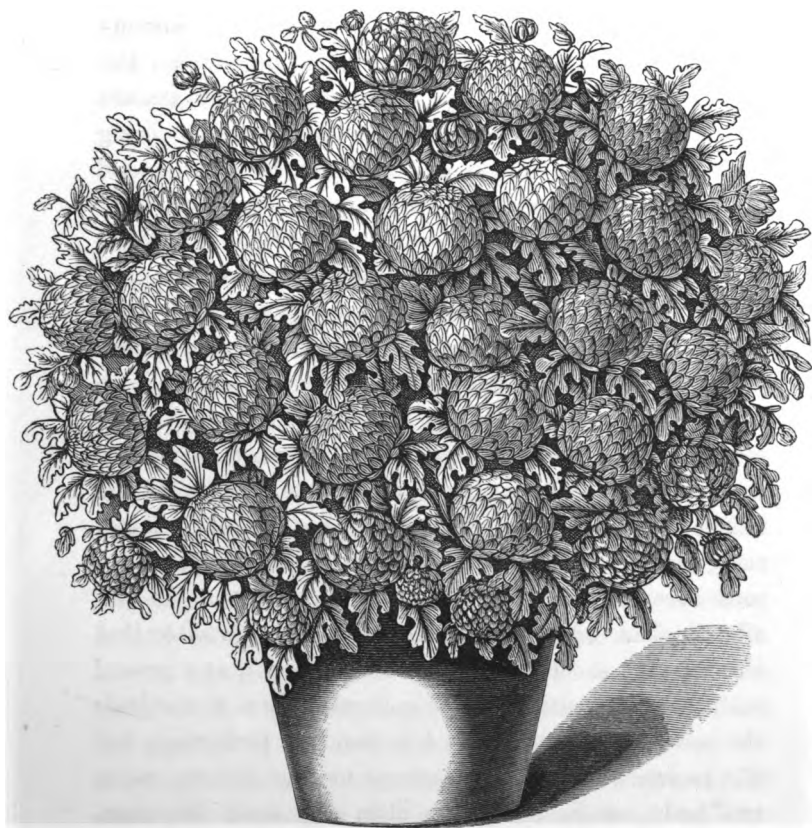
If it is required that the plants should all be in bloom at the same time, the habit of each must be considered, the late-flowering varieties requiring less stopping than the earlier ones. Constant and regular watering is necessary during the summer to ensure green, healthy foliage, and in the hot evenings of July, August, and September, a profuse syringing will not only be most beneficial, but effectually remove the insects which might otherwise injure the vegetation. It is hardly necessary to say that they should be placed out of doors early in May, in a warm, airy situation, fully exposed to the sun, and remain there until the buds begin to open. Small sticks should be used as supports to the branches, in order to guard against wind and other accidents. As the growth progresses, the process of tying must be constantly repeated.

In August the branches should be arranged and trained into the shape they are required to take. On the first appearance of flower-buds in September, the disbudding must commence; this, as before noticed, is done by removing all the buds except the one on the crown or centre of each branch, for if the plant be vigorous these will be quite

sufficient to ensure a fine head of bloom, as illustrated by the accompanying engraving.

There are many persons who have neither time nor inclination for growing specimen Chrysanthemums, and yet require their plants to attain sufficient size and circumference for effective table or conservatory decoration; this may be accomplished with a comparatively small amount of labour. For this purpose the cuttings, instead of being made in autumn, should be taken off in spring; and although the first process of potting and stopping is the same, the plants must be shifted into blooming pots in May, immediately after which they should be plunged within three inches of the rim in an open border, fully exposed to the sun, and as the branches develop themselves they will from time to time require pegging down close to the ground, round the outside of the pots, so as to form a compact bush. Great attention must be paid to watering and syringing, for if this is once neglected the foliage becomes shabby, and the beauty of the plant materially injured. Liquid manure may with advantage be used once or twice a week during the autumn, but not after the buds begin to expand. It is not advisable that any stopping should take place after July, for, as a general rule, the sooner plants can be induced to form flower-buds the better. Disbudding must be carefully performed; but if a profusion of bloom is preferred to large flowers, one or two buds can be retained a little way down the stem. About the last week in September the pegs should all be removed, and the pots lifted from the ground to allow the process of sticking to be performed.

When trained in this way they naturally take a globular form, the sides of the pots being nearly hidden by the foliage. They may, however, be made to assume various



SPECIMEN PLANT—LARGE FLOWERS.

shapes; but this must be left to the taste of the cultivator.

- The following varieties are best suited for these modes of training:—

Abbé Passaglia, Alfred Salter, Alma, Annie Salter, Ariadne, Arigena, Attraction, Bixio, Cardinal Wiseman, Chevalier Domage, Christine, Defiance, Dido, Dr. Maclean, Duchess of Buckingham, Golden Christine, Golden Hermine, Golden Queen, Her Majesty, Insigne, Jardin des Plantes, Julia Grisi, Julie Lagravère, Lady Carey, Lady Harding, Lady Slade, Lord Clyde, Lord Palmerston, Lord Ranelagh, Mrs. Haliburton, Pelagia, Pink Pearl, Prince Albert, Princesse Marie, Queen of England, Queen of Lilacs, Rifleman, Sam Slick, Sparkler, Sulphurea Superba, Vesta, Virgin Queen, White Christine, White Queen.

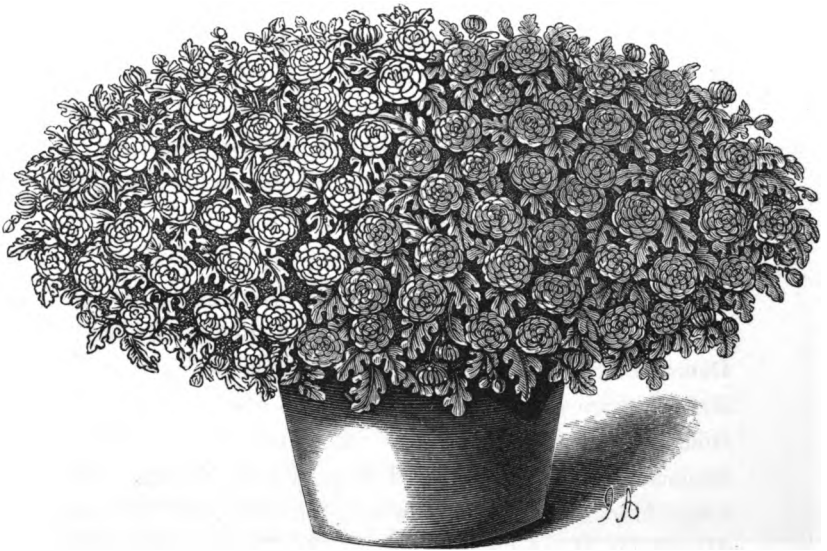
Although the *Chrysanthemum* (as before noticed) naturally blooms in November, it may be made by particular treatment to produce flowers in early spring or summer. Many of the horticultural societies in France offer prizes for plants in flower at the farthest period from their natural season; the *Chrysanthemum* is generally one of the plants chosen for the purpose, and is frequently exhibited in bloom in May and June; this is done by allowing some of the suckers which appear in winter to remain around the old plant, which will merely require a little top-dressing; these will form an after growth and second flowering season. To effect this the temperature must be entirely altered, for although a moderately cool atmosphere is most suitable for blooming the *Chrysanthemum*, yet growth can only be induced by heat; therefore the old plant should be placed in a hothouse or pit with bottom heat to encourage a rapid growth, so necessary to the formation of flower-buds. By following this plan *Chrysanthemums* may be made to bloom throughout the year.

CHAPTER V.

SPECIMEN PLANTS. POMPONS.

THESE in their early stages are cultivated in the same manner as the large flowering varieties. The great beauty of a Pompon consists not only in fine foliage and good habit, but in a multiplicity of bright, distinct, and well-formed flowers. In growing specimen Pompons for show, exhibitors usually train the plants into the shape which will at a glance present the largest amount of bloom—namely, a flat or slightly convex surface; but, however advantageous this plan may be for the purpose, it is not by any means the most elegant, for the more we can retain the natural growth of any plant, the greater will be its beauty.

The time for striking cuttings, their preparation, potting, stopping, soil, tying and watering, being the same as that already described as requisite for other varieties, it will be unnecessary to repeat the remarks. The plants may be put into eight-inch pots for blooming, and the stopping discontinued at the end of July. This last observation, however, refers to those varieties which naturally bloom in November; the late flowering kinds should not be stopped after the first week in July, when the branches should be finally pegged down and arranged. Wire supports are sometimes



SPECIMEN PLANT—POMPON.

used, and when properly hidden are preferable to a number of sticks. It is not necessary that disbudding should be carried to the same extent as with the larger varieties; the crown bud must always remain, but those below only require judicious thinning. Liquid manure should be used, and its strength increased until the buds are fully formed, when it must be entirely discontinued.

To prevent any injury from early frosts, it is always advisable to put the plants into pits in October, giving them air whenever the weather is fine. Syringing in the evening will improve the foliage, but must be discontinued as soon as the blossoms expand. It will sometimes be necessary to shade the blooms from the sun, otherwise the brightness of the colours run the risk of being impaired.

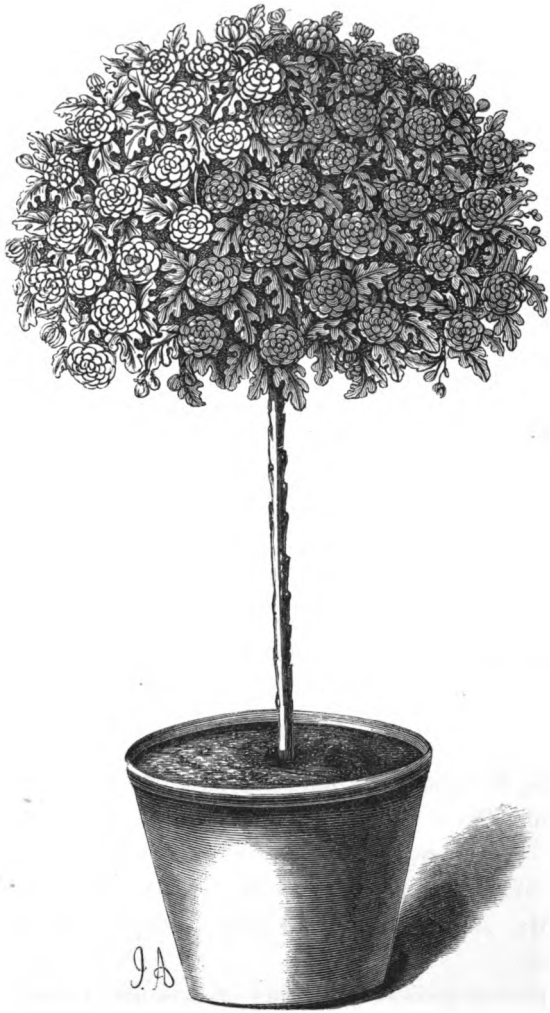
The accompanying engraving represents a specimen Pompon.

The following varieties are suited for this purpose:—
Adèle Priset, Adonis, Andromeda, Antonious, Astrea, Aurore Boreale, Berrol, Bob, Brilliant, Capella, Cedo Nulli, Danæ, Drin Drin, Durnflet, Fairest of the Fair, Florence, General Canrobert, Golden Aurore, Golden Cedo Nulli, Golden Circle, Hélène, Lilac Cedo Nulli, Lizzie Holmes, Madame Eugène Domage, Madame Fould, Madame Chalonge, Madame Montels, Marabout, Miranda, Miss Talfourd, Miss Julia, Mr. Astie, Mrs. Dix, Rose Trevenna, Riquiqui, Salamon, Sunset, St. Thais, Trophée, White Trevenna.

CHAPTER VI.

SPECIMEN PLANTS.—STANDARDS.

FINE-GROWN plants of this description are very attractive, and to ensure success it is necessary to choose short-jointed and free blooming varieties. In large flowering sorts, as well as Pompons, vigorous autumn cuttings or suckers should be selected, and the young plants kept in a warm close pit during the winter. In spring the same shifting process must be followed as that already described in former pages, and the growth assisted by liberal treatment. As the main stem advances it will need the support of a strong but neat stick, as plants of this kind are very brittle, and consequently all the more liable to injury. It is not desirable that the large flowering varieties should be more than three or three and a half feet, and the Pompons two and a half or three feet high; and when once they have attained this growth they should be stopped. No laterals must remain, except three or four at the top, which are to form the head, and when these are four or six inches long they must also be stopped and tied out at equal distances, so as to leave plenty of room for the foliage to develop and the branches to form into a bushy head. Constant care and supervision will be necessary that no coarse or irregular



SPECIMEN PLANT—STANDARD.

shoots appear, or are allowed to remain, to the detriment of the whole symmetry of the plant. Regular and frequent watering and syringing, especially in hot weather, are most necessary, as any neglect in this respect will show itself in the loss of leaves, &c.

The plants require a warm, sheltered situation, where the pots may be plunged, and easily protected from the wind.

There is another way in which a Standard may be made—namely, by grafting, one, two, or three varieties of different colours being inserted upon the laterals which are to form the head of the specimen; but great care is necessary that the grafts are not broken off. Mr. Fortune informs me that the “*Artemisea Indica*” is used in China as the stock upon which to graft the *Chrysanthemum*, and that very pretty little standards are thus formed; in England it is generally performed upon the *Chrysanthemum* itself.

The varieties best suited for Standards are as follow:—

Pompons.

Adonis, Andromeda, Antonious, Bob, Brilliant, Capella, Cedo Nulli, Danæ, Drin Drin, Fairest of the Fair, Florence, General Canrobert, Golden Aurore, Golden Cedo Nulli, Hélène, Madame Eugène Domage, Madame Montels, Miss Julia, Mr. Astie, Mustapha, Rose Trevenna, Salamon, St. Thais.

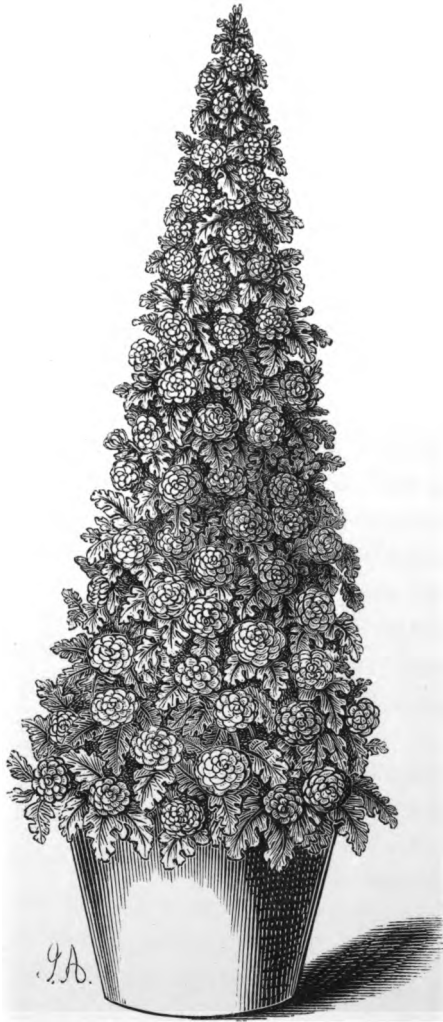
The accompanying engraving represents a specimen standard.

CHAPTER VII.

SPECIMEN PLANTS, PYRAMIDS.

IN order to the carrying out of this novel and ornamental mode of growth, great care and attention are necessary, but the amateur will have all his trouble amply repaid by the fine effect produced in his conservatory by specimens of this form.

Autumn cuttings, or suckers of varieties which possess branching habits, good foliage, and bloom freely, should be chosen for this purpose. The plants must be kept continually growing in a light, well-ventilated frame or pit until the beginning of May, much care being taken that the leading stem is not injured, or the laterals broken. As the growth advances a support will be necessary to keep the whole in a vertical position. A few sticks, or supports, must be placed round the inner circle of the pot in order that a good base may be formed, and to ensure the plant assuming the desired shape; the lower laterals must not be allowed to exceed five inches in length; the same treatment applies to the middle branches, but the upper ones will require no shortening unless they become too vigorous, in which case they must be stopped or trained downwards. In some cases where the plant is very strong, the lower



SPECIMEN PLANT—PYRAMID.

laterals as well as some of the higher branches, will require a second stopping, and this will ensure a larger amount of foliage at the base. By the time the buds appear the plant should have assumed the shape of a perfectly covered and graceful pyramid, as here illustrated.

The following Pompons are well adapted for pyramids—.

Andromeda, Bob, Brilliant, Capella, Cedo Nulli, Drin Drin, Fairest of the Fair, Florence, General Canrobert, Golden Aurore, Golden Cedo Nulli, Hélène, Lilac Cedo Nulli, Madame Eugène Damage, Mdlle. Marthe, Miss Talfourd, Miss Julia, Mustapha, Rose Trevenna, Trophée.

CHAPTER VIII.

CUT BLOOMS FOR EXHIBITION.

THE exhibitions of cut blooms have now become so numerous that some remarks upon the special culture of plants for this purpose will be found useful. It must be remembered that only incurved flowers are eligible at the London shows; those with reflexed petals or florets are not admitted in stands, unless in separate and distinct classes. This rule may to some appear arbitrary, but if it has its disadvantages, it at least ensures a harmonious *tout ensemble*. Symmetry of outline and proportionate height are essential to perfection, and the flowers should as nearly as possible resemble two-thirds, or three parts of a globe, as is not unfrequently seen in Queen of England, and other flowers, as here illustrated.

The largest and most perfect blooms are obtained from maiden plants — that is, from cuttings or suckers of the year, and not from parts of an old root, for this reason, that the young plants can be kept constantly growing, whereas the old stools soon become exhausted, and vegetation receives a check which greatly injures the blossoms. Cuttings struck in February pro-



MODEL OF AN INCURVED FLOWER.

duce quite as fine flowers as those made in autumn; in fact, in some instances, cuttings struck in May have been known to produce flowers measuring five inches in diameter.

In the early stages of their growth, the same soil and treatment are necessary as those already described for all the other specimens, except that in this case the leader, instead of being stopped, must be allowed to shoot up and concentrate the entire vigour of the plant in the stem. In the middle of May they must be shifted into the blooming pots, and placed in an open situation fully exposed to the sun. A strong stake will now be necessary to guard against accidents arising from wind and other causes. All laterals must be removed as soon as they appear. If the plants are strong at the beginning of August, the crown will branch into two or three leaders which must be allowed to grow. Constant watering and syringing are indispensable not only in destroying aphid and other vermin, but in keeping the foliage healthy. In September, flower buds will appear at the extremity of each branch, and as the centre bud produces the largest bloom, this should be the one retained, all the others must be carefully removed without bruising the stem. It will sometimes happen that the middle bud is imperfect, in which case one of the others must remain instead of it. Liquid manure applied twice a week from the time the buds appear until they show colour, will greatly conduce to the size and beauty of the flowers. As soon as the blossoms begin to expand the plant should be removed and placed under glass, either in a conservatory, vinery, or orchard house, where air may be freely admitted, otherwise they will become unhealthy, and the petals lose their essential stiffness and rigidity.

Should none of these appliances be available, a canvas covering placed against a south wall and supported in front by poles, will generally prove sufficient protection against rain or frost.

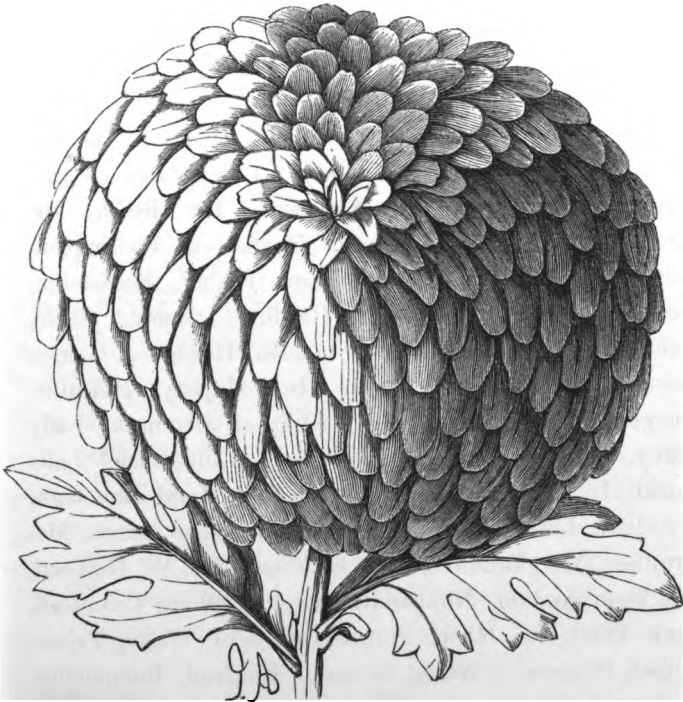
The two accompanying engravings represent flowers of the reflexed and anemone form.

The following varieties have incurved flowers suitable for stands of cut blooms:—

Abbé Passaglia, Aimée Ferière, Alarm, Albert Helyer, Alfred Salter, Antonelli, Arigena, Beauty, Bella Donna, Beverley, Boadicea, Campistroni, Carissima, Cassandra, Cherub, Cleopatra, Dr. Brock, Dr. Rozas, Duchess of Buckingham, Duchess of Wellington, Dupont de l'Eure, Etoile Polaire, Fabius, Formosum, General Bainbrigge, General Harding, General Slade, Golden Ball, Golden Eagle, Golden Hermine, Golden Queen, Grange Lodge Rival, Her Majesty, Hermine, Imogene, Jardin des Plantes, King of Denmark, Lady Carey, Lady Harding, Lady Russell, Lady Slade, Lalla Rookh, Little Harry, Lord of the Isles, Lord Ranelagh, Lucidum, Lutea Formosa, Lysias, Marechal Duroc, Mr. Brunlees, Mrs. Brunlees, Mrs. E. Miles, Mrs. W. Holborn, Nil Desperandum, Nonpareil, Novelty; Oliver Cromwell, Pink Pearl, Pio Nono, Plutus, Prince of Wales, Prince Alfred, Princess of Wales, Queen of England, Ranunculus, Raymond, Rev. J. Dix, Rifleman, Robert James, Sam Weller, Seraph, Sanguinea, Sir G. Bowyer, Sir S. Carey, Sparkler, St. Patrick, Sylphide, Talbot, The Globe, Themis, Venus, Virgin Queen, Versailles Defiance, White Globe, White Queen.

Anemone Flowers.

Empress, Emperor, Fleur de Marie, George Sand, Gluck,



REFLEXED FLOWER.



ANEMONE FLOWER.

Jardin d'Hiver, King of Anemones, Lady Margaret, Louis Bonamy, Madame Godereau, Marguerite d'Anjou, Miss Margaret, Mrs. Pethers, Nancy de Sermet, Prince of Anemones, Princesse Marguerite, Queen Margaret, St. Margaret, Sunflower.

CHAPTER IX.

SPORTS.

THE phenomenon of Floral Sports has never been satisfactorily accounted for. Botanists differ in their theories respecting them, some attributing these changes to chemical agency, while others suppose them to arise from disease; some infer, as the result of their observations, that during or after a wet season, plants will sport more frequently than after a continuance of hot, dry weather, while others are equally ready to bring forward proofs to the contrary. Sports are accidental changes occurring in the colour of leaves or of flowers, and appearing without any apparent cause in an entire stem or in a single branch, without in the least affecting the other parts of the plant. As a general rule, sports are much more likely permanently to retain and perpetuate their changes when propagated from the branch which has undergone the alteration, than when the propagation takes place from seed; in fact, in the latter case, very little, if any, dependance can be placed on the result. Many plants are known to be subject to these diversities, but none to so great a degree as the Chrysanthemum; and as the phenomenon has been going on for many years, it is but natural to conclude

that the *Chrysanthemum* is particularly liable and favoured in this respect.

This mutability was observed so long ago as when the first importations from China took place, when it was noticed that the buff, the sulphur, and the rose were more or less subject to it; but these sports differed widely from those which occur in the present day, inasmuch as instead of being fixed or permanent as they are now, as, for instance, in Golden Queen, Golden Trilby, Golden Cedo Nulli, &c., they were so uncertain and erratic, that it was extremely difficult to tell which was the original colour and which was the sport. The variety called "Changeable Buff" is a remarkable instance of this, and has been known to produce on the same plant buff as well as rose-coloured flowers; another season the blooms from the same root have been entirely buff, while the following year every flower has been rose. The same mutability occurred in the sulphur variety, which was apt to change either wholly or in part to golden yellow, and after a lapse of time to return to its original colour, as is now sometimes the case with "Formosum." It is to be regretted that, although these and others having a similar tendency are still found in China, they are no longer cultivated in England, consequently precluding the possibility of experimentally arriving at any solution of the nature and cause of such diversified effects.

All varieties have not the same tendency to sport; some have it far more than others, and the most singular instance of a distinct change has occurred of late years in "Queen of England," which has given no less than six different and permanent sports from the original blush, two of them being produced from the same root during two successive years. The first change was from blush to

rose, the second to golden yellow, the third blush pencilled rose, the fourth to ivory white, the fifth to pure white, the sixth to variegated foliage, to which might be added several other alterations of minor importance. Another variety, "Cedo Nulli," has undergone four changes, "Dr. Brock" three, "Bob" three, and many that could be cited one.

In the majority of cases the sport has been yellow, from which it may be inferred that they, like seedlings, are prone to return to the typical colour. As before noticed, it has become a theory with some that sports usually appear after hot, dry summers, but so uncertain is the result that no one can foretell either the time or manner of their coming. Many instances might be adduced in proof of this; but the following, which occurred in 1864, will suffice. Two cuttings of "Beverley" having been potted to grow for cut blooms, one plant produced the true white flowers, while those on the other were golden yellow. In 1863 "Dr. Brock" gave a striped sport, which was propagated, and in 1864 most of the plants retained the stripe, but some produced bright yellow flowers. In 1863 "Rose Trevenna" gave a beautiful white sport; in the following year some of the plants propagated from it continued to produce white flowers, while others returned to the original rose, thus proving that no sport should be considered permanent until after a good trial during two or three seasons; in fact, many of the changes have in this way been proved to have such a transient duration that the year following their appearance they have altogether ceased to exist.

At times these sports take place in suckers, and then the whole stem becomes affected, but more frequently they occur in the side branches: in any case, however, it is

desirable to propagate them as soon as possible, as there is always a difficulty in rooting side branches if the wood is hard.

So common have sports now become that scarcely a year passes without additions being made to those already in cultivation, but none are of any use unless the colour be bright and distinct from any variety of the same description.

Every sport should be thoroughly tested in different soils before it can be really considered fixed, as many have been known to run back when planted in rich compost, but when sufficient care and time are expended in proving, there will exist little danger of subsequent disappointment, several of the specimen plants and cut blooms which are now exhibited being nothing more than sports from well-known varieties.

CHAPTER X.

CLASSIFIED LISTS.

THE following lists contain the names of fine large flowering varieties, arranged in their different colours, and the purposes for which they are best adapted.

B denotes Cut blooms.

C „ Conservatory.

G „ Garden.

L „ Late flowering.

S „ Specimens.

White and Blush.

Antigone . . .	G C	Duke	B G
Beverley . . .	B C G	Emily	C L
Blanche of Castile . . .	C L	Eve	C G S
Cassandra . . .	B C G	Gem	B G
Celestial . . .	C	Globe White . . .	B C
Defiance . . .	C G S	Goliah	C G S
Diadem	B G	Her Majesty . . .	C G S
Dido	C G S	Ion	B C
Duchess of Buck- ingham . . .	C G S	La Belle Blonde . .	B G C
		Laciniatum . . .	C L

Lady St. Clair . . .	B C G	The Globe	C G
Leda	C L	Vesta	B C G S
Madame Damage . . .	C G	Virgin Queen . . .	B C S
Mrs. Haliburton . . .	C G S	White Queen . . .	B C G S
Mrs. Kains	B C L	White Christine . .	C G S
Mrs. W. Holborn . . .	B G C		
Novelty	B G C		
Princess Alexandra . .	C G		
Princess Mary	C G		
Queen of England . . .	B C G S		
Queen of the Isles . .	C G S		
Queen of Whites . . .	C L		
Snowball	C L		
Snowflake	C G		

ANEMONES.

Fleur de Marie . . .	B C G
Juno	C G
Lady Margaret . . .	B C G
Madame Godereau . .	B C G
Miss Margaret . . .	B C G
Nancy de Sermet . .	B C G

White or Blush, Edged or Shaded, Rose and Purple.

Aimée Ferrière . . .	B C G	Mrs. Brunlees . . .	C L
Ariadne	G S	Princess of Wales . .	B C G
Attraction	C G S	Pink Pearl	B C G S
Bella Donna	B C G	Striped Queen . . .	B C G
Carissima	B C G S	Sylphide	B C G
Cleopatra	B C G	Trilby	B C G
Hermine	B C G S		
Lady Slade	B C G S		
Little Pet	C G		
Margaret Vatcher . . .	B C G		

ANEMONES.

Empress	B C G
Prince of Anemones . .	B C G

Sulphur, Yellow, or Orange, of various Shades.

Abbé Passaglia . . .	B C G S	Cherub	B C G
Annie Salter	C G S	Chevalier Damage . .	C G S
Aurea Multiflora . . .	C G	Cloth of Gold . . .	C G
Cardinal	C G	Croesus	C L

Grange Lodge		Sam Weller . . .	B C G S
Rival	B C G	Sir S. Carey . . .	B C G
Lord of the Isles .	B C G S	Sparkler	B C G S
Lord Ranelagh . .	B C G S	Souvenir	C G
Mr. Brunlees . . .	B C G S	Two-Coloured In-	
Mr. Jay	C G	curved	B C L
Pandora	B C G	Warden	B G
Pelagia	C G S	Zephar	C G
Penelope	C L		
Prometheus . . .	C G S		
Quilled Beauty . .	C G S	ANEMONES.	
Quintus Curtius . .	B C G	Captain Montels .	C G
Rev. J. Dix . . .	B C G	George Sand . . .	C G
Samuel Broome . .	C L	Marguerite D'An-	
		jou	B C G

Rose and Lilac of various Shades.

Albert Helyer . .	B C G S	Grand Ture . . .	B C G
Alfred Salter . .	B C G S	Holman Hunt . .	C G S
Ambrosia	C L	Imogene	B C G
Aristée	B C G	Insigne	C G S
Artemis	C G	John Bunyan . .	C G S
Aspasia	C G	Julia Grisi . . .	C G S
Baron Scalebert .	C G	King	C L
Beauty	B C G	King of Denmark	B C G
Boadicea	C G	Lady Carey . . .	B C G S
Caractacus . . .	B C G	Lady Harding . .	B C G S
Christine	C G S	Lady Russell . .	C G
Deucalion	C G	Madame Clos . .	C G
Don Quixote . . .	C G	Madame Lebois .	C G
Dr. Maclean . . .	C G S	Marceau	C G
Edith Dombrain .	C G	Maréchal Duroc .	B C G S
Favourite	C G	Miss Kate	B C G

Nell Gwynne . . .	C G	Stellaris Globosa . . .	C G S
Nonpareil . . .	B C G	Themis	B C G
Phidias	C G		
Princess Louis of		ANEMONES.	
Hesse	C G S	Emperor	B C G
Princesse Marie . . .	C G S	Louis Bonamy . . .	B C G
Queen of Lilacs . . .	C G S	Mrs. Pethers . . .	B C G
Rosa Mystica . . .	B C G	Princesse Margue-	
Saccoi Vera . . .	B C G	rite	B C G

Rose and Violet Purple of various Shades.

Alarm	B C G	Othello	B C G
Albin	C G S	Pictorium Roseum . . .	C G S
Alix	C G S	Prince Consort . . .	C L
Alma	C G S	Prince de Condé . . .	C G
Arigena	B C G S	Prince of Wales . . .	B C G S
Atro-rubens	C G	Ranunculus	B C G S
Bixio	C G S	Rifleman	B C G S
Bossuet	C G	Rolla	C G
Campistroni	B C G	Sam Slick	C G S
Dr. Rozas	B C G	Sir G. Bowyer	B C G
Edwin Landseer	C G S	Sydenham	C G
Lalla Rookh	B C G	Talbot	B C G
Leon Leguay	C G S	Versailles Defiance . . .	B C G
Lord Palmerston	C G S		
Luther	C G	ANEMONES.	
Mr. Murray	C G S	Handel	B C G
Mr. Wynes	B C G	Jardin d'Hiver	B C G
Mulberry	C G S		

Red and Crimson, of various shapes.

Beauregard	B C G	Cardinal Wiseman	C G S
Bouquet des Fleurs	B C G	Draco	C G

Dragon	C G	Prince Albert	C G S
Excelsior	C L	Prince Alfred	B C G
Garibaldi	C G	Pio Nono	C G S
Harold	B C G	Progne	C G
Hercules	B C G	Red Dragon	C L
Iago	C G	Sanguinea	C G S
Julie Lagravère	C G S	Saumarez	B C G S
L'Emir	C L	St. Patrick	B C G
Louis Barthère	C G	Triomphe du Nord	C G
Lord Clyde	C G S	Victor Hugo	C G
Madame Poggi	C G S	Vulcan	C L
Mont Etna	C G	Wonderful	C G
Mont Vesuve	C G		
Negro Boy	B C G	ANEMONE.	
Nil Desperandum	B C G	King of Anemones	B C G
Oliver Cromwell	B C G		

POMPONS.

White and Blush, of various shades.

Arabella	C L	Marabout	C G S
Argentine	C G S	Mary Lind	C G
Augusta	C G	Mdlle. Marthe	C G S
Bijou d'Horticulture	C G S	Miss Talfourd	C G S
Cedo Nulli	C G S	Modèle	C G S
Cinderella	C G	Nitida	C G
Diana	C L	Turris Eburnea	C G S
Fastigioso	C L	White Trevenna	C G S
Helen Lindsey	C G S	ANEMONES.	
Justine Tessier	C G S	Madame Sentir	C G S
Louise Piton	C G S	Miss Nightingale	C G S
Madame E. Domage	C G S	Reine des Anemones	C G

Priscilla	C G	Eugene Lanjaulet	C G
Satanella	C G S	Golden Cedo Nulli	C G S
ANEMONES.		Mr. Astie	C G S
Antonious	C G S		

Pompons, Red and Yellow, or Bronze of various Shades.

Alexander Pélé . .	C G S	Madame Pépin . .	C G S
Apollo	C G	Mr. de Marsac . .	C G S
Capella	C G S	Mr. Minet	C G
Chedeville	C G	Mr. Van Houtte . .	C G
Figaro	C G S	Sainte Justia . . .	C G
François Ire . . .	C G	Sainte Thais . . .	C G S
Gaiety	C G	Signora Pépin . . .	C G
Gloire de Mont- rouge	C G	Sunset	C G S
La Petite Bru- nette	C G	ANEMONES.	
La Rousse	C G	Ariane	C G
		Président Morel . .	C G S

Pompons, Rose and Purple, of various Shades.

Adèle Prisetete . .	C G S	Rose Pompon . . .	C G
Durnflet	C G S	Rose Trevenna . .	C G S
Emily	C G	Salamon	C G S
Eulalie Layé . . .	C G	Trophée	C G S
Florence	C G S	Uranie	C G
Grand Sultan . . .	C G	ANEMONES.	
Hélène	C G S	Lilac Cedo Nulli . .	C G S
Jane Amelia	C G	Mabel	C G
Le Nain Bébé . . .	C G	Medora	C G
Madame Bachaux . .	C G	Queen of Ane- mones	C G
Madame de Vatry . .	C G		
Miranda	C G S		
Président Decaisne	C G S		

CHAPTER XI.

CALENDAR OF OPERATIONS.

JANUARY.

TAKE off suckers and strike cuttings; if for specimens, remove all eyes below the soil, plant the cuttings and suckers in light, sandy compost, and keep them in a greenhouse or pit until rooted. Young plants made in November should have air in mild weather. Compost should be turned over and exposed to the frost.

FEBRUARY.

Seeds of chrysanthemums may now be sown either in pans or pots in gentle heat. Other operations as last month.

MARCH.

Cuttings may still be made; pot off those taken in January into three-inch pots, keeping them in a close pit or frame for a few days; afterwards give all air possible. Young plants made in November, and intended for specimens, will require stopping and shifting into larger pots. Prick out seedlings six or eight in a pot.

APRIL.

Give plenty of air, remove decayed leaves, and attend to stopping of specimens; syringe before closing the pit in warm weather. Pricked-out seedlings should be put into a cool pit. Prepare garden border or beds for future reception of plants.

MAY.

Cuttings may still be taken off where large quantities are required; these will make nice little blooming plants by November. If the weather is mild, all young plants should be placed out of doors; those intended for exhibition purposes should be firmly tied to supports; those for cut blooms should have the laterals taken off, and specimen stopped and tied out. Attend to watering; an oyster-shell placed on the surface of the earth (the hollow side uppermost,) and the water poured into it, will prevent the soil being washed out of the pot. Open ground plantations of Chrysanthemums should now be made, and seedlings planted out from nine to twelve inches apart.

JUNE.

Water must be liberally given, also the syringe used in dry weather, and the plants kept clean from aphis by diluted tobacco-water, or very finely powdered tobacco dusted over the leaves. The last stopping of specimens should now be performed.

JULY.

Attend to watering as directed last month, also to the tying and training of specimens, as well as plants in the borders or beds.

AUGUST.

Earwigs and caterpillars now becoming troublesome, should be carefully looked after and destroyed. Other operations as directed in July.

SEPTEMBER.

By this time the plants will have nearly ripened their wood, and the crown as well as side buds will appear; if large flowers are required for exhibition, the centre bud only should be allowed to remain; those either under or near it should be rubbed off as soon as they can with safety, care being taken that in doing this the crown is not injured. In this month the plants should be carefully looked over, as there are many insect enemies to guard against, such as green fly, thrip, earwigs, caterpillars, &c., all of which must be got rid of. Syringe frequently in warm evenings; liquid manure (not too strong) may be given twice a week, and the pots top dressed with rotten manure.

OCTOBER.

Finish regulating and tying specimen plants as well as those in the borders or beds; look over all the flower-buds, and rub off any that are not required, or imperfect; destroy earwigs and other injurious insects; continue giving liquid manure until the buds expand and show colour. About the middle of the month place specimens under glass, giving air every day.

NOVEMBER.

Most of the plants will now be in bloom, and fresh air on every possible occasion is absolutely necessary, for without this the blooms will get damp and flimsy, and soon

lose their beauty, and the foliage its green, healthy appearance; remove decayed leaves. Suckers will now be coming up; as many as are wanted may be potted off and put into a cool house or pit.

DECEMBER.

Take suckers from any varieties that may be required for specimens or stock, and place them in a cool pit; remove all decayed leaves as well as any attacked by mildew; give air on every fine day. Prepare compost for Spring—namely, good yellow loam one half, rotten horse manure one quarter, and decayed leaves one quarter; this must be well mixed or turned over, and exposed to the frost during winter.

CHAPTER XII.

ALPHABETICAL AND DESCRIPTIVE LIST OF THE FINEST
CHRYSANTHEMUMS IN CULTIVATION.

CHRYSANTHEMUMS—LARGE FLOWERS.

- Abbé Passaglia (Smith), brassy amber, broad incurved petals.
- Admiration, light carmine and orange, incurved.
- Aimée Ferière, silver white, beautifully tipped rose pink, incurved.
- Alarm (Clark), violet crimson, finely incurved.
- Alba Multiflora (Salter), white, of medium size, dwarf, and fine for pot culture.
- Albert Helyer (Davis), large rose purple, beautifully incurved.
- Albin, crimson violet, fine.
- Alfred Salter (S), delicate pink, incurved. (Illustration.)
- Alix, syn. Voltaire, rose carmine, incurved.
- Alma (C), rose crimson, very fine.
- Ambrosia (C), rosy nankeen, incurved.
- Anaxo, red orange, large incurved flower.
- Annie Salter (S), golden yellow.
- Antigone, incurved, white.

- Antonelli (Smith), salmon orange, large and incurved.
 Ariadne (C), cream and rose, new colour.
 Ariel (S), lilac blush, incurved.
 Arigena, amaranth, fine incurved.
 Aristée, delicate pink, incurved.
 Artemis (Downton), rose lilac, incurved.
 Arthur Wortley (S), rosy amber with gold tips, incurved.
 Aspasia (Smith), rose purple, incurved.
 Astrolabe, orange nankeen.
 Atro Rubens, dark red carmine.
 Attraction (Smith), large blush margined rose pink.
 Auguste Mie, red tipped gold, fine.
 Aurea Multiflora (Smith), bright pure yellow, of medium size.
 Bacchus (Salter), rosy fawn, incurved.
 Baron Scalebert, rosy lilac, very large.
 Beauté du Nord, see "Bixio."
 Beauregard (C), dark maroon, incurved.
 Beauty, peach blush, incurved.
 Bella Donna (Smith), delicate lilac with light centre, incurved.
 Bernard Palissy (Smith), bright fiery orange, very distinct.
 Beverley (Smith), large ivory white broad incurved petals.
 Bixio, violet carmine, fine colour.
 Blanche of Castile (Smith), pure white, incurved.
 Boadicea (C), rose and cream, large and incurved.
 Bossuet, rosy carmine, free and fine.
 Bouquet de Fleurs (C), large dark red, incurved.
 Campistroni (S), deep rose, incurved.
 Canute, large red, with gold points, incurved.
 Caractacus (C), rose carmine, incurved.
 Cardinal, golden amber, large and fine.

- Cardinal Wiseman (Smith), bright red crimson, dwarf compact habit.
- Carissima (Smith), ivory white, pencilled rose, incurved.
- Cassandra (S), white with rosy tips, incurved.
- Cassy (S), orange and rose, fine large flower.
- Celestial, white, fine.
- Cherub (Smith), golden amber with rosy tint, incurved.
- Chevalier Damage, bright gold.
- Christophe Columb, reddish violet, incurved.
- Christine, rosy blush, fine large flower. (Syn. "Ne plus ultra.")
- Chrysipe, rose purple and silver edge, incurved.
- Cleopatra (S), blush, with rosy shade, incurved.
- Clipper (C), carmine and gold, incurved.
- Cloth of Gold (S), gold, large flower.
- Comet (C), orange and red, large.
- Count Cavour (C), rosy carmine, incurved.
- Cræsus (Smith), dark orange, incurved.
- Cyclops (S), large orange salmon, incurved.
- Daphne (Smith), sulphur, incurved.
- Defiance, white, fine.
- Delight, see "Lutea Formosa."
- Demosthenes, red orange, incurved.
- Desdemona, fawn and salmon, very double.
- Deucalion, large rose pink, early.
- Diadem, syn. "Lucidum," early white incurved.
- Dido (Smith), sulphur white, with stiff incurved petals.
- Dobreii (C), rose lilac.
- Donald Beaton (Smith), dark orange red, incurved.
- Don Quixote, large mottled rosy lilac.
- Draco (Smith), dark red, incurved.
- Dr. Brock (Smith), reddish orange, incurved.
- Dr. Maclean, mottled rose, fine.

- Dr. Rozas, rose crimson, incurved.
- Dragon (C), puce with light centre.
- Duchess of Buckingham (S), pure white, incurved.
- Duchess of Wellington (Salter), delicate rose, tipped silvery blush, incurved.
- Duchesse de Montebello, syn. "Stoke Newington Beauty," delicate rosy blush, incurved.
- Duc de Conegliano, large red tasseled.
- Duke, blush, incurved.
- Dupont de l'Eure, orange and carmine, incurved.
- Edith Dombain (Smith), lilac and blush, incurved.
- Edwin Landseer (Smith), rosy ruby; large and very double.
- Emily (C), delicate blush, incurved.
- Eole, rosy primrose, incurved.
- Etoile Polaire, golden yellow, incurved.
- Eugénie, rose and blush; fine.
- Euterpe, large incurved blush.
- Eve (Smith), sulphur yellow, incurved, and delicate flower.
- Excelsior, bright crimson, double and fine.
- Fabius, orange and salmon, incurved.
- Fair Rosamond (Smith), rosy fawn, incurved.
- Favourite (C), large rose pink, incurved.
- Florence Mary (Pethers), bright salmon red, medium size.
- Florence Nightingale (Smith), pale sulphur, incurved.
- Formosum, pale sulphur, incurved.
- Garibaldi (C), red chesnut, very large.
- General Bainbrigge (Clark), dark orange amber and gold centre, incurved.
- General Hardinge (C), Indian red and gold shade, incurved.
- General Slade (Smith), Indian red, tipped bright orange, large and incurved.
- Glendower (Smith), rose carmine, large and incurved. B.
- Globe White, syn. "White Globe," incurved.

- Gloire de Toulouse, incurved white.
Glory, syn. "Sarnia Glory," rosy lilac, incurved.
Golden Ball (Smith), bright orange with golden back and tips, beautifully incurved.
Golden Cluster, gold.
Golden Christine (Merry), golden buff, large and fine.
Golden Dr. Brock (Salter), bright golden yellow, incurved.
Golden Eagle (D), Indian red and orange, incurved.
Golden Fleece, light canary yellow, incurved.
Golden Hermine (S), bright golden orange, incurved.
Golden Queen of England (S), golden canary, very large and fine.
Golden Trilby, clear yellow, incurved.
Goliath, large white, incurved.
Grandpapa, large red and orange, incurved.
Grand Sultan (C), amber, large and incurved.
Grand Turc (B), rose purple, incurved.
Grange Lodge Rival (Pethers), orange salmon, incurved.
Harold (Clark), bright chesnut, incurved.
Hecuba, dark orange, incurved.
Henrietta, golden fawn, incurved.
Her Majesty (Smith), silvery blush, beautifully incurved.
Hermine, blush tipped purple, incurved.
Hercules (Davis), very large red carmine, incurved.
Holman Hunt (Smith), rose pink, large.
Iago (Pethers), dark purple violet, incurved.
Imogene (Salter), rose with silvery shade, incurved.
Ion (Smith), pure white, large and incurved.
Insigne, lilac and purple, incurved.
Ino, rosy blush, incurved.
Invincible, large tasseled white.
Isaure, large cream and rose, very free.
Jane (S), silvery pink, incurved.

- Jardin des Plantes, bright golden orange, splendid colour, and incurved.
- Jenny Lind (S), rosy sulphur, incurved.
- Jewess (C), orange and red, large.
- John Bunyan (S), bright rose, large and incurved.
- Julia Grisi (Smith), light rose pink, new colour, with odour of violets.
- Julie Lagravère, dark velvety crimson.
- King, light peach, incurved.
- King of Denmark (Smith), bright rose lilac, incurved.
- Lady Hardinge (C), delicate rose pink, tipped blush, large and incurved
- La Belle Blonde (Smith), blush white, large and incurved.
- Lady Blanche (Smith), cream white, early.
- Lady Carey (Davis), large rose lilac, with silvery back, incurved.
- Lady Russell (Smith), blush lilac, incurved.
- Lady Slade (Smith), delicate lilac pink and blush centre, incurved.
- Lady St. Clair (Downie, Laird, and Laing), like "White Queen," incurved.
- Lalla Rookh (Pethers), dark ruby rose, incurved.
- Le Bourreau, red tipped gold, very double.
- Leda (C), large white; late-flowering variety.
- Léon Leguay, lilac, incurved.
- Le Prophète, golden fawn, large flower. S.
- L'Emir, light red crimson, incurved.
- Lingot d'Or, gold.
- Little Harry (Smith), bright golden amber, very double, incurved; of medium size.
- Little Pet (Smith), incurved blush.
- Little Rosetta (Smith), amber, incurved.
- Lord Clyde (Smith), bright glowing crimson.

- Lord Elgin (C), rose, large and incurved.
Lord of the Isles (Clark), rosy orange, incurved.
Lord Palmerston (Smith), rose amaranth, tipped silvery
blush, incurved.
Lord Ranelagh (Salter), light red orange, incurved.
Louis Barthère (B), red crimson, incurved.
Lucidum, very early white, incurved.
Lutea Formosa, syn. "Delight," incurved golden yellow.
Luther (Smith), large rosy crimson, incurved.
Lysias (S), red orange, incurved.
Madame Albert Puymirol, rosy orange and gold back,
incurved.
Madame Boucharlet, incurved white.
Madame Chauvière (S), large incurved blush.
Madame Clos, rose lilac, very double.
Madame Comerson, crimson tipped gold.
Madame Domage, silver white, very double.
Madame Guillaume, syn. "Christine" and "Ne plus
ultra."
Madame Lebois, pink and yellow, incurved.
Madame Leo, ivory white, very double.
Madame Poggi (S), chesnut crimson.
Madonna (C), large pink, tasseled.
Marceau, hybrid, rose bordered white.
Marchioness, large blush.
Maréchal Duroc, rose and lilac, incurved.
Maréchal Lannes, dark blood red.
Maréchal Niel (B), large red and orange.
Margaret Vatcher (Smith), large rose pink, and light
centre, incurved.
Mars (S), light red, incurved.
Memnon (Downton), rose and lighter centre, incurved.
Minerve, creamy rose.

- Miss Kate (S), delicate lilac.
Miss Prim, hybrid, clear yellow.
Miss Slade (Smith), pale sulphur, incurved.
Monica (Smith), golden orange, incurved.
Mont Etna, red.
Mont Vesuve, large fiery red.
Mr. Brunlees (Smith), large Indian red, with gold tips,
incurved.
Mr. Deschamps, canary yellow.
Mr. Jay, red orange, incurved.
Mr. Murrey (S), violet rose, very full.
Mr. Wynes (Pethers), violet puce, incurved, very rich
colour.
Mrs. Brunlees (Smith), delicate rose pink and light centre,
incurved.
Mrs. E. Miles (Smith), bright yellow, incurved.
Mrs. Haliburton (Smith), sulphur white, incurved.
Mrs. Kaines (Davis), transparent blush, incurved, a beautiful
late-flowering variety.
Mrs. W. Holborn (S), ivory white, large and incurved.
Mulberry (Downton), dark mulberry, incurved.
Negro Boy (C), dark crimson, incurved.
Nell Gwynne (S), rosy peach.
Ne plus ultra, syn. "Christine."
Nil Desperandum (Smith), large dark red, incurved.
Novelty (C), large blush, incurved.
Nonpareil, rosy lilac.
Oliver Cromwell (Smith), dark chesnut, incurved.
Orange Brilliant, bright orange, incurved.
Orange Perfection (Smith), salmon orange, incurved.
Orlando (S), rosy buff.
Othello (S), dark rose, incurved.
Pan (C), large red salmon.

- Pandora (Smith), rosy nankeen, incurved.
 Pearl (S), white pearl, incurved.
 Pelagia (Smith), bright orange cinnamon, of dwarf habit.
 Penelope (C), rosy orange, incurved.
 Phœbus (C), bright dark orange.
 Phaeton, large dark golden orange.
 Phidias New, rose and blush.
 Picturatum Roseum (C), red salmon, incurved.
 Pilot, deep rose.
 Pink Pearl (Smith), delicate pink, with silver shade, finely incurved.
 Pio Nono, Indian red and gold points, incurved.
 Plutus, bright gold, incurved.
 Pompeii (C), cinnamon and orange, incurved.
 Pomona, dark orange fawn, incurved.
 Poudre d'Or, reddish orange, very early.
 Prince Albert (Wolsey), bright crimson, large and fine.
 Prince Alfred (Davis), splendid rose crimson, very large, incurved.
 Prince Consort (C), large violet crimson, incurved.
 Prince of Wales (Davis), dark purple violet, with lighter shade, beautifully incurved. (See Frontispiece.)
 Prince of Wales (F), bright fiery red.
 Prince de Condé, rosy violet.
 Princess Alexandra (Smith), delicate lilac blush, incurved.
 Princess of Wales (Davis), pearl white, delicately tinted rose lilac, very large, and incurved.
 Princess Louis of Hesse (Smith), rose pink, incurved blush.
 Princess Marie, rose, incurved.
 Princess Mary (Smith), large pearl white, incurved.
 Progne, amaranth or crimson carmine, brilliant colour.
 Prometheus (Pethers), bright fiery red salmon, incurved.
 Psyche (Smith), pure yellow, incurved.

- Pygmalion (S), red carmine.
- Pyron, red chesnut, tipped gold, incurved.
- Queen of England (S), splendid blush, incurved.
- Queen of Lilacs (Smith), rose lilac, incurved.
- Queen of the Isles (S), pure white, incurved.
- Queen of the Whites, large white, incurved.
- Quilled Beauty (Smith), orange cinnamon, very double.
- Quintus Curtius, salmon and orange, incurved.
- Rabelais, carmine and yellow, incurved.
- Ranunculus (Smith), purple maroon, of medium size, incurved.
- Raymond, golden fawn, incurved.
- Rev. J. Dix (Davis), orange red and lighter centre, incurved.
- Rifleman (C), dark ruby, incurved.
- Robert James (Smith), vivid cinnamon and orange, incurved.
- Rolla (S), purple lilac and silvery shade.
- Rosa Mystica, creamy rose, incurved.
- Sam Slick (Smith), ruby, with bronze points.
- Saccoi Vera (C), large lilac and rose, incurved.
- Saint George (C), golden yellow.
- Samuel Broome (Smith), red cinnamon, with orange centre, incurved.
- Sam Weller (Salter), Indian red and golden tips, incurved.
- Sanguinea (Pethers), light red crimson, incurved.
- Saumarez (Smith), bright chesnut red, incurved.
- Seraph (Smith), sulphur with yellow centre, incurved.
- Sir George Bowyer (Pethers), dark rose purple, incurved.
- Sir H. Havelock, see "Insigne."
- Sir Stafford Carey (Pethers), dark brown chesnut, with golden points, incurved.
- Snowball (Smith), pure white.

- Snowflake (Salter), pure white.
Sparkler (Smith), red tipped bright orange, incurved.
St. Andrews (Davis), orange nankeen, incurved.
Saint Patrick (Davis), ruby red, incurved.
Stafford, rosy purple, incurved.
Stellaris Globosa, carmine, crimson and white, incurved.
Striped Queen of England (D. L. and L.), a sport from
 "Queen," sometimes striped, incurved.
Sulphurea Superba, clear sulphur yellow.
Superbe, tasseled blush.
Sydenham, carmine red, incurved.
Sylphide (Smith), delicate lilac and blush, incurved.
Talbot (Smith), rose purple tipped blush, incurved.
Temple de Salomon, bright yellow.
The Globe (Smith), incurved blush.
Themis, rose, incurved.
Trilby, blush, incurved.
Triomphe du Nord, large light red chesnut, early.
Uranus, mottled rose, with light centre.
Valerie, cinnamon orange.
Variegated Queen of England, blush white, with variegated
 foliage.
Venus (Salter), large delicate lilac peach, finely incurved.
Versailles Defiance (S), bright rose lilac.
Vesta, ivory white, incurved.
Victor Hugo (Smith), dark brown, incurved.
Virgile, golden buff, fine. B.
Virginie Miellez, rose and carmine.
Virgin Queen (Smith), pure snow white, incurved.
Vtesse de Belville, silvery rose, early.
Vulcan, bright red crimson, incurved.
Warden (S), orange, incurved.
White Christine (Simmonds), cream white.

- White Cockade (Smith), milk white.
 White Queen of England, a sport of "Queen of England,"
 ivory white, incurved, very fine.
 Wonderful (C), large crimson.
 Yellow King (Salter), large yellow, incurved.
 Yellow Perfection (C), golden yellow, incurved.
 Zephar, salmon red and yellow, incurved.

ANEMONE FLOWERED.

- Captain Montels, salmon buff.
 Cleopatra, reddish buff.
 Diamant de Versailles (S), pure white and rose centre.
 Emperor (S), large blush and sulphur centre.
 Empress (Smith), very large lilac, and light centre.
 Fleur de Marie (S), large white.
 George Hock, large white.
 George Sand, red with gold centre.
 Glück, golden orange.
 Handel (Smith), dark rose.
 Jardin d'Hiver (C), dark rose.
 Juno, large white.
 King of Anemones (S), large crimson purple.
 Lady Margaret (Salter), large pure white.
 Louis Bonamy, large lilac.
 Madame Goderau, sulphur.
 Marguerite d'Anjou, nankeen.
 Margaret of Norway (S), light red and gold centre.
 Marguerite d'York, canary and dark yellow.
 Miss Margaret (Salter), pure white anemone, with full
 high centre.
 Mrs. Pethers (Pethers), rose lilac.
 Nancy de Sermet (S), white.

- Prince of Anemones (Brown), lilac blush anemone.
 Princesse Marguerite (Salter), lilac pink, with lighter centre.
 Queen Margaret (Smith), rose lilac.
 Regulus, cinnamon.
 Saint Margaret (Pethers), brassy orange.
 Sunflower (Salter), very large sulphur, golden centre.

CHINESE AND JAPANESE CHRYSANTHEMUMS.

- Bronze Dragon (Japan), bronzed salmon.
 Dragon's Tooth, rose purple.
 Fortune's Two-coloured Incurved (China), scarlet chesnut and orange, incurved.
 Grandiflorum (Japan), golden yellow tasseled.
 Golden Lotus (China), bright golden orange, incurved.
 Japonicum (Japan), claret striped yellow.
 Laciniatum (Japan), fringed white, resembling a pink.
 Quilled Pink (China), rose lilac.
 Quilled White (China), pure white.
 Red Dragon, Indian red and bronze.
 Rosea Punctata (Japan), white spotted rose.
 Striatum (Japan), white striped rose.
 Tasseled Yellow (China), golden yellow.
 Two-coloured Incurved (China), large orange and salmon, incurved.
 Yellow Dragon (Japan), yellow.
 Yellow Fringe, golden yellow.

POMPONS AND LILIPUTIANS.

- Acis (Salter), pale straw yellow.
 Adèle Prisetete, fringed lilac.
 Adonis, rose and white.

- Aigle d'Or, canary yellow.
Alexander Pélé, salmon bronze.
Alphonse Bois Duval, orange buff.
Andromeda (S), cream with brown points.
Annie Henderson, pale yellow.
Apollo (Smith), chesnut and yellow.
Arabella, blush.
Argentine, silvery white.
Augusta (S), blush white, early.
Auréole, crimson scarlet and orange.
Aurore Boreale (P), dark orange.
Aurore Boreale (B), yellow buff.
Autumna, buff.
Bernard de Rennes, yellowish buff.
Berrol, golden yellow.
Bijou de l'Horticulture, sulphur white.
Bob (Smith), dark brown.
Brazen Mirror (Pethers), brassy yellow, Liliputian.
Brilliant, crimson scarlet.
Canary Bird (S), clear yellow.
Capella (Salter), dark red chesnut, with orange centre.
Ceres (S), dark orange.
Cendrillon, silvery lilac.
Chedeville, reddish crimson and orange.
Christiana (S), canary yellow, with brown points.
Cinderella (Salter), white Liliputian.
Citronella (Smith), pure clear yellow.
Cleobis, rose carmine and white.
Comte Achille Vigier, pale salmon mottled.
Danæ (S), bright gold.
Diana (Salter), pure white.
Distinction, blush.
Doctor Bois Duval, carmine red.

- Doña Alba Gonzales, gold.
Drin Drin, clear yellow.
Duruflet, rose carmine.
Elise Conté, rose carmine and white centre.
Emily (S), rosy bronze.
Emma, rosy purple, early.
Esmeralda (S), salmon red and orange.
Estella, rosy yellow.
Eulalie Laye, silvery rose.
Eva (S), golden yellow.
Fairest of the Fair (S), lilac blush, with silvery tips.
Fairy (Salter), lemon with dark orange border.
Fanny, dark rosy red.
Fastigouso, blush white.
Figaro, red and yellow.
Fioramesta, blush tinted rose.
Florence (S), dark cherry.
François 1^{re}, reddish orange.
Gaiety, bright red with orange border.
Galatea (S), clear lilac.
General Canrobert, pure yellow.
Gloire de Montrouge, orange and red.
Golden Aurore (Hayes), bright golden sport of "Aurore Boreale."
Golden Circle (Salter), golden orange.
Goldfinder (S), golden yellow.
Grand Sultan, carmine.
Graziella, blush lilac.
Hélène, rosy violet.
Helen Lindsay (S), cream white.
Ida, pale clear yellow.
Jane Amelia (S), rose carmine.
Jessie (S), orange amber.

- Julia Engelbach (Smith), yellow and brown points.
Justine Tessier, sulphur white.
Lady Dorothy Nevill (Smith), bright yellow
La Petite Brunette (Salter), fawn.
La Rousse, orange red.
La Vogue, bright gold.
Lara, cream tipped cherry.
Le Nain B  b  , rosy lilac, with the odour of violets.
L'Escarboucle, bright yellow.
Lizzie Holmes (Smith), canary yellow, with rosy tint.
Louise Piton, silvery blush.
Lucinda (Salter), rosy lilac.
Madame Bachaux, lilac.
Madame de Vatry, rose lilac.
Madame de Merlieux, gold.
Madame Eug  ne Domage, pure white.
Madame Fould, cream.
Madame Pauline Deschamps, white and carmine.
Madame P  pin, red and orange.
Madame Pichaud, white and crimson.
Madame Rousselon, white tipped rose.
Madame Victor Verdier, rose and blush.
Maid of Saragossa (S), rose and blush.
Marabout, white fringed, fine.
Mary Lind (Smith), sulphur blush.
Mdlle. Celestine Philopal, yellow.
Mdlle. Marthe, white.
Minnie Warren (Salter), rosy blush, with yellowish centre.
Miranda, bright rose, fringed.
Miss Eleanor, reddish cinnamon.
Miss Fox, golden yellow.
Miss Julia (S), dark chesnut.
Miss Talfourd (S), pure white.

- Modèle, white.
Mr. de Marsac, red orange.
Mr. Lefevre Valère, chrome yellow.
Mr. Minet, red and orange border.
Mr. Van Houtte, chesnut.
Mrs. Dix (S), blush bordered rose.
Mrs. Turner (S), pure white.
Musidora (S), Liliputian, chesnut red and orange.
Mustapha, dark brown.
Nanon, bright orange.
Ninette, Liliputian, rosy sulphur.
Nitida, white.
Oranger, orange.
Orange Boven (Salter), dark orange.
Polycarp, chesnut and orange.
Président Decaisne, rosy carmine, violet scented.
Princess Alice (S), carmine.
Priscilla, orange, quilled.
Reine des Panachées, blush pencilled rose.
Riquiqui, violet plum.
Rose Pompon, silvery lilac.
Rose Trevenna (S), rosy blush.
Sagitta, blush.
Saint Justia (H), red and orange.
Sainte Thais, chesnut orange.
Salamon, dark rose carmine.
Satanella (H), orange amber.
Sienna (Salter), dark red orange.
Signora Pépin, red carmine and yellow.
Stella (Salter), golden orange, tipped with chesnut.
Sunset (H), orange and bronze.
The Little Gem (Ingram), peach blush.
Trophée, rose mottled.

Turris Eburnia, white.

Uranie, amaranth pencilled white.

Viola (Smith), violet lilac.

White Trevenna (Mount), a fine white sport of "Rose Trevenna."

Zanetta, rose pink.

POMPONS ANEMONE FLOWERED.

Antonious, yellow and orange centre.

Ariane (B), amaranth and gold centre.

Astrea (S), lilac blush and gold centre.

Atropos, reddish crimson.

Boule de Neige, pure white.

Calliope (S), ruby red.

Cedo Nulli, white with brown points.

Daphnis, carmine.

Eugène Laujaulet, yellow with orange centre.

Firefly (Smith), capucin scarlet.

Golden Cedo Nulli, golden canary.

Golden Drop (Salter), gold.

Lilac Cedo Nulli, rose lilac.

Madame Chalonge, blush and yellow centre.

Madame Montels, white with yellow centre.

Madame Sentir, pure white.

Mabel, rose.

Medora, rose lilac.

Miss Nightingale (Brown), blush with white centre.

Mr. Achille Dutour, pure white.

Mr. Shirley Hibberd (S), rose lilac and gold centre.

Mr. Astie, golden yellow.

Mrs. Wynes (Wynes), rose lilac, high centre.

Queen of Anemones (Bird), rosy red.

Reine des Anemones, white.

SUMMER-FLOWERING POMPONS.

- Adrastus, mauve.
Bordeaux (Pelé), sulphur white.
Coquillage, rosy bronze.
Cromatella (Pelé), yellow.
Delphine Caboche (Pelé), violet rose.
Frédéric Pelé, bright crimson.
Hendersonii, yellow.
Le Luxembourg (P), salmon.
Madame Alphonse Dufoy (Pelé), white.
Madame Lemaire, white changing rose.
Marseille (Pelé), rose lilac.
Mexico (Pelé), bright yellow.
Observation (Pelé), red and salmon.
Scarlet Gem (S), scarlet crimson.
Sicile (Pelé), lilac and blush.

THE END.

LONDON:
SAVILL AND EDWARDS, PRINTERS, CHANDOS STREET,
COVENT GARDEN.

