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BOSC, *Photographed and engraved from a sample grown in 1898.*

THE CANADIAN HORTICULTURIST.

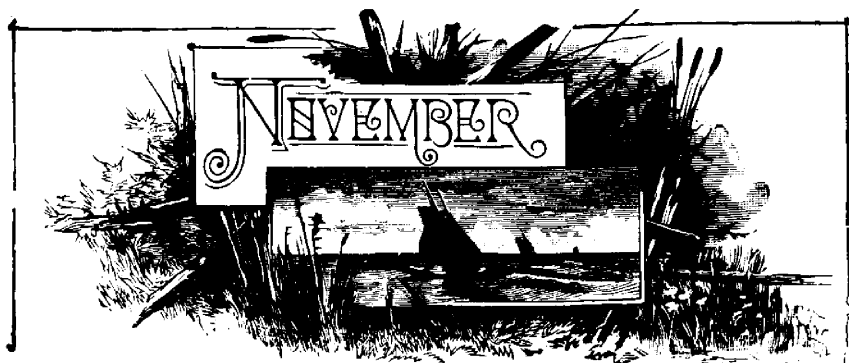
VOL. XXI.

TORONTO,

1898

NOVEMBER.

NO. 11



THE BOSC.

(BEURRE BOSC *Downing*).

NOW that the export trade in Canadian pears bids fair to prove remunerative, it is most important that our fruit growers consider seriously what varieties best suit the British market, and what are best adapted to such long distance shipments. We are much disappointed that our peaches and our grapes have not met with more encouragement in the English market; but it is some satisfaction to know that our finer varieties of pears, such as Bartlett, Anjou, Howell, Louise, Clairgeau, Bosc, and even Kieffer command a fair price in England. A few years ago, when our home markets gave us 75c. to \$1 per basket for these pears, there was no object in exporting them, but now that pears only bring 25c. to 45c. in our markets, our only hope for profitable fruit culture is in its export. To do this we must plant or top graft the best

varieties as soon as we have experience enough to know which they are.

The Bosc pear is not as widely known among cultivators in Canada as its merits deserve. Though a russet, it yellows as it ripens; the pear is large in size, and uniform on the tree as if thinned purposely; and the texture is such that it can be exported in fine condition. In quality, a well grown Bosc is first-class. On the whole, we would place this pear among the valuable kinds for planting for export to the foreign markets.

Origin.—A chance seedling found in France, and dedicated to M. Bosc, the eminent director of the Jardin des Plantes at Paris, about the year 1835.

Tree.—A vigorous grower, and a regular bearer, carrying its fruit singly and not in clusters as is the habit of some varieties.

Fruit.—Large, 4 inches long by 3

THE CANADIAN HORTICULTURIST.

inches broad, elongated acute pyriform, covered with slight indentations, color, greenish yellow ground nearly covered with cinnamon russet; stalk, $1\frac{1}{2}$ to 2 inches long, stout and usually curved, inserted without a cavity; calyx open in a shallow basin.

Flesh.—White; texture, fine, breaking, juicy; flavor, sweet, rich, delicious.

Season.—October.

Quality.—1st class for dessert.

Value.—1st class for either home or foreign markets.

Adaptation.—Southern Ontario.

THE ASPARAGUS BED.

FOLLOWING is part of the summary of a recent Missouri bulletin on asparagus growing: For the asparagus bed the soil should be pulverized thoroughly to a good depth, and plants set twelve to eighteen inches apart in straight rows four feet apart. Vary the depth of setting the plants in the ground from four inches at one end of the bed to eight inches at the other; the shallow set plants will come up earlier in the spring, thus giving a longer producing season. Give clean cultivation during the summer, and in the early winter mulch heavily with old fine manure. In early spring ridge up the rows by turning the soil between the rows over the sprouting plants. The sprouts coming through this depth of soil will be long, well bleached and tender. This ridging also

facilitates subsequent cultivation, as after the asparagus is cut these ridges may be raked or lightly harrowed to kill weeds without injuring the crowns below.

No asparagus should be cut until the plants are two or three years old, but after they have become thoroughly established, cutting may continue daily for six or eight weeks in the spring. Allow no stem to make leaves until cutting ceases about the first of June. After that time the best cultivation should be given until autumn. Under no circumstances should the tops be cut after harvesting ceases until they have died in the fall. This summer growth makes the plants strong and ready for the next spring's crop. A bed treated in this way every year should produce well for forty years.

FAULTS OF THE ELBERTA PEACH.

THERE appears to be one drawback to our growing the Elberta in the north, and that is its tendency to curl leaf. Everywhere in Ontario this year we hear the same complaint, that it is more subject to this fungus than any other variety. We hope further test may be more favorable to a variety that has received such high commendations.

Even Mr. Glen, who has been championing this peach as it appears in the New

York market, coming from the Southern States, writes under a recent date.

"During the last few days I have purchased some beautiful specimens which have been tasteless. They may have been grown upon young trees with redundant foliage and therefore of poor quality, and it may be that it will not prove to be a peach of best quality in a Northern climate. All those I have eaten from the South were as good as they were beautiful."

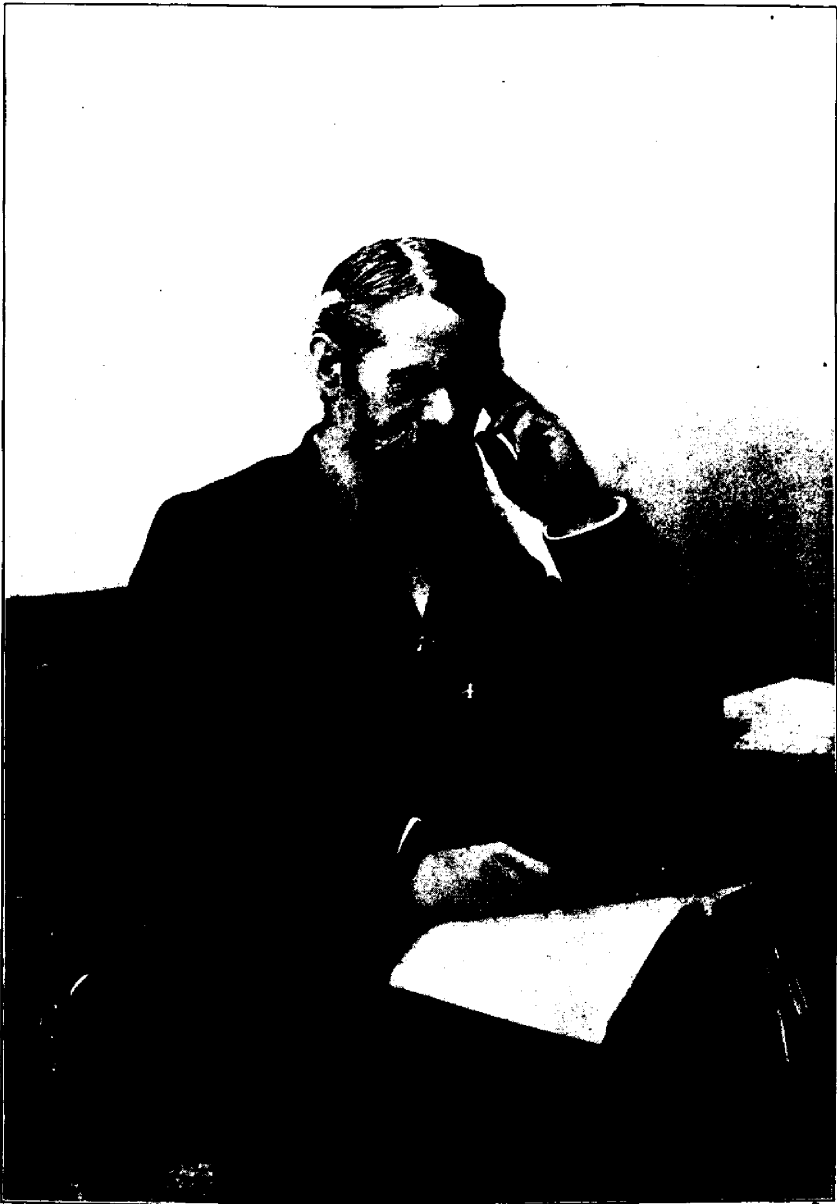


FIG. 1454—A. ALEXANDER, F.S.Sc., LONDON, ENG., *President of the Hamilton Horticultural Society.*

SKETCH OF THE LIFE OF MR. A. ALEXANDER.



R. A. ALEXANDER, President of Hamilton Horticultural Society, was born at Errol in the Valley of the Tay (Carse O' Gowrie), Perthshire, Scotland, where his boyhood was spent amid beautiful surroundings. He has inherited his love of flowers from his mother, of whom his earliest recollection is of watching her attending to her garden in which she had all the old favourites, auriculas, polyanthus, sweet williams, and a rockery containing many varieties of saxifrages and other Alpine plants; his first task being that of assisting her in keeping the weeds down.

His first venture in floriculture was made when about ten years of age. Some person had said that Primroses planted in soot would produce purple flowers, so he hied him to a neighboring plantation, and dug about fifty plants from the stiff clay bank of a little stream, transporting his treasures in his new clean pinafore, a proceeding which did not meet with maternal approval when discovered.

The plants were set on the north side of a hawthorn hedge, where they thrived amazingly, being treated to occasional doses of soot surreptitiously scraped from the kitchen chimney.

The opening of the first buds was anxiously watched for, and great were the expectations, but alas, the longed for purple did not materialize, the yellow primroses were yellow still, but the bloom was abundant, lasting through April and June, and was so much improved by cultivation as to attract public attention, church goers pausing on their quiet Sabbath journey to admire the display.

The partial success quickened the youthful interest, and the patch was filled out in the following spring, the result being that the young enthusiast could soon have supplied the whole of his county with seed, if such had been required. Fifty years later, on revisiting the place of his birth, he found these primroses or their descendants, growing luxuriantly in the same spot, although the old garden had long since passed into the hands of strangers. Mr. Alexander received his early education in the parish school, and intended to study for the ministry, but when about to enter St. Andrew's University, his health failed and the family doctor ordered out-door employment. Civil engineering was suggested, but his desire was for horticulture, so he was apprenticed in the gardens of Lady Allen, near his home, where he remained three years, thence going to England to widen his knowledge. Here he was fortunate in obtaining good positions having charge of the Marquis of Northampton's conservatories and orchid houses for some time. His health having in the meantime become thoroughly restored, he entered Homerton College, London, remaining at that institution until he had graduated, when he removed to Yorkshire, where he dwelt for fourteen years, teaching school, but always dabbling in botany, collecting specimens, etc., never failing to have a flower garden, in fact being sometimes charged with monopolizing ground that might be much more profitably utilized in producing vegetables for family use.

In 1871 Mr. Alexander brought his family to Canada, intending to settle in Muskoka, where he had heard land was plentiful, offering strong inducements for farming and gardening.

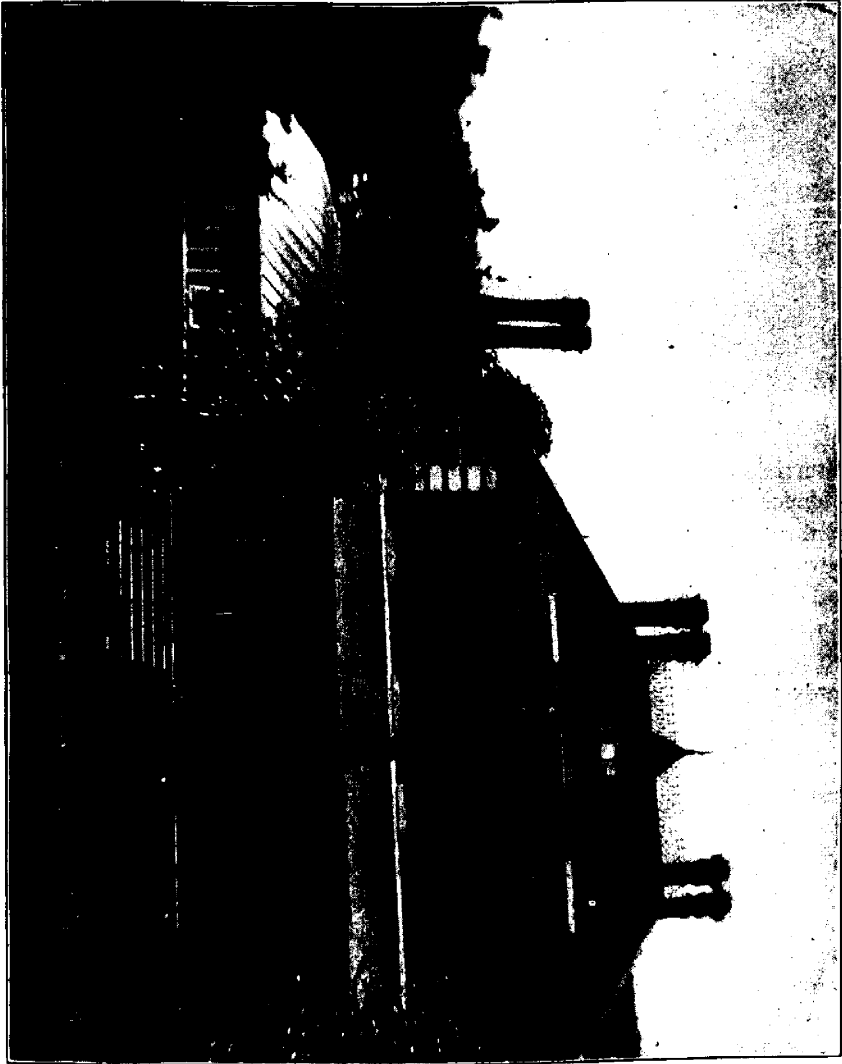
He journeyed beyond Bracebridge, a

SKETCH OF THE LIFE OF MR. A. ALEXANDER.

night's ride through a burning forest being the most striking feature of the trip, but found the country too rocky and the hardships of the pioneers too great for one not accustomed to rough-

positions until the final disbandment. When the present Society was organized, Mr. Alexander was unanimously elected President. He has been President of the Hamilton Scientific Associa-

FIG. 1455.—SIDE VIEW OF MR. A. ALEXANDER'S HOUSE AND GREENHOUSE, HAMILTON.



ing it. Mr. A. then removed to Hamilton, securing a position on the "Spectator" staff which he filled until entering the civil service in 1884.

He joined the old Horticultural Society in 1875, filling various official

positions for several terms, and in conjunction with Dr. Burgess, F. R. S. C., now of Montreal, founded last year, the Herbarium in its Museum. A catalogue of the plants now in this collection was issued by Mr. Dickson, Secretary of the Horti-

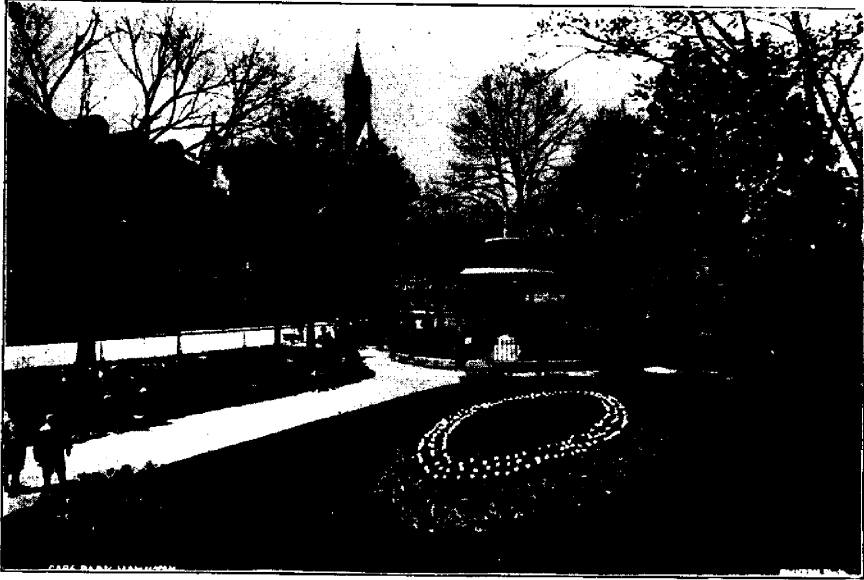


FIG. 1456.—GORE PARK, HAMILTON, showing bed of tulips in spring.

cultural Society and Mr. Alexander. His residence and grounds at the corner of Wentworth and Stinson Streets are well known to all members of the Society, interested callers always being welcome to inspect the conservatory and lawn, and also to share in the products thereof. Hardy perennials are largely grown, al-

though showy annuals are not neglected, and choice natives such as anemones, bloodroots, phloxes, trilliums, cypripediums, hypericums, aquilegias, monardas etc., form no inconspicuous portion of the display, illustrating what intelligent cultivation can do with our common wild flowers. J. M. D.

A GOOD QUINCE FOR MARKET.

HERE are but few fruits that are as easily and quickly grown as the quince, or one that requires as little labor in harvesting. The Orange quince is too well known to need any comment, but for me I prefer Meech's Prolific. It has awakened not a little interest among fruit growers in general. It is a vigorous grower, an early and prolific bearer, and bears regularly, and I have known it to bear when but two years old. It is a fine combination of beauty of form, flavor, color and size. It is pear shape, and of a bright golden color. As a cooking variety I believe it to be unequaled, as its

flesh is very tender, fragrant and free from hard lumps, which makes it excellent for marmalades and jellies.

Its beauty of form, together with its tendency to hold its leaves until late autumn, renders the tree very attractive, and the rich golden color of the tree in bearing reminds me of an orange orchard.

I believe it to be the best quince grown for market and home use, and I would advise all who set out quinces, to try one or more of Meech's Prolific, by all means. I do not think you will be disappointed.—Herbert Johnson.

DIGITALIS PURPUREA. (*Foxglove.*)

"An empty sky—a world of heather
Purple of Foxglove—yellow of broom."
—Jean Inglow.

THUS the gifted poetess quaintly but truthfully paints the moorlands in many parts of the Motherland—No tree to brink the sky-line—the beautiful heather everywhere, only broken here and there, by patches of the yellow broom. It is there that the stately Foxglove, the subject of this brief sketch, is found and seen to advantage, standing as upright as a sentry on guard, in gorgeous uniform, perhaps in the shelter of a broom or gorse bush or surrounding some huge granite boulder, sometimes gently swaying in the sweet breezes wafted over the heath, vocal with the hum of bees, and laden with the fragrance of the moorland flowers. It was in the shadow of a large rock not far from Dunsinane Hill, where Macbeth's castle of historic fame stood, that I made my first acquaintance with the foxglove. Years afterwards I found the descendants of the same sentries keeping watch over the same rock, reminding one of the customs of times gone by, when certain

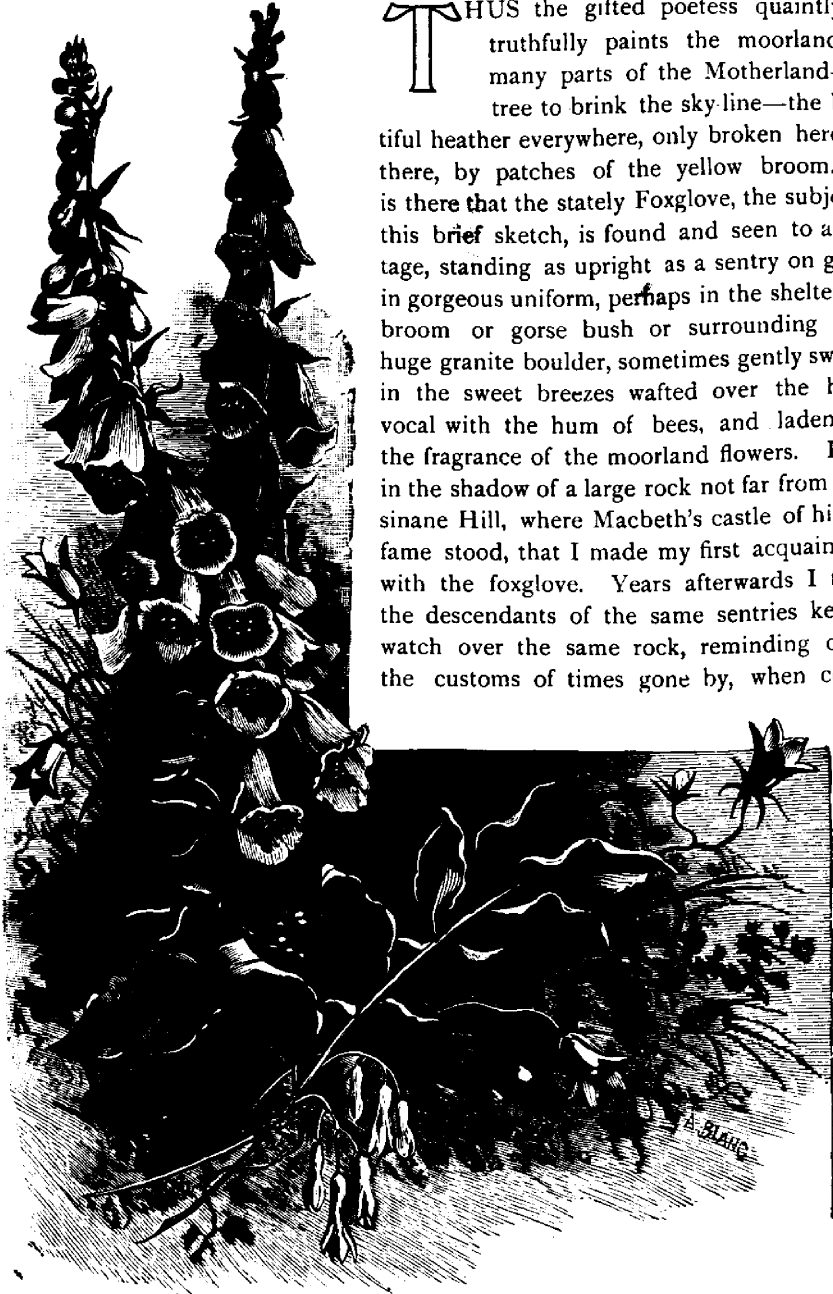


FIG. 1457.—A FOXGLOVE.

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posts of honor were hereditary in one family, and handed down from father to son. It is not only on the heaths and moorlands that this most stately and beautiful of herbaceous plants is found, but in Scotland and some parts of England many a hillside, and dry sandy

(rarely white) companulate flowers marked inside with eye-like spots. The flowers are in shape like the finger of a glove, hence the name, and hang on one side of the stem. It is found distributed very widely in Britain from Lands End to the Orkney Islands and also in West-

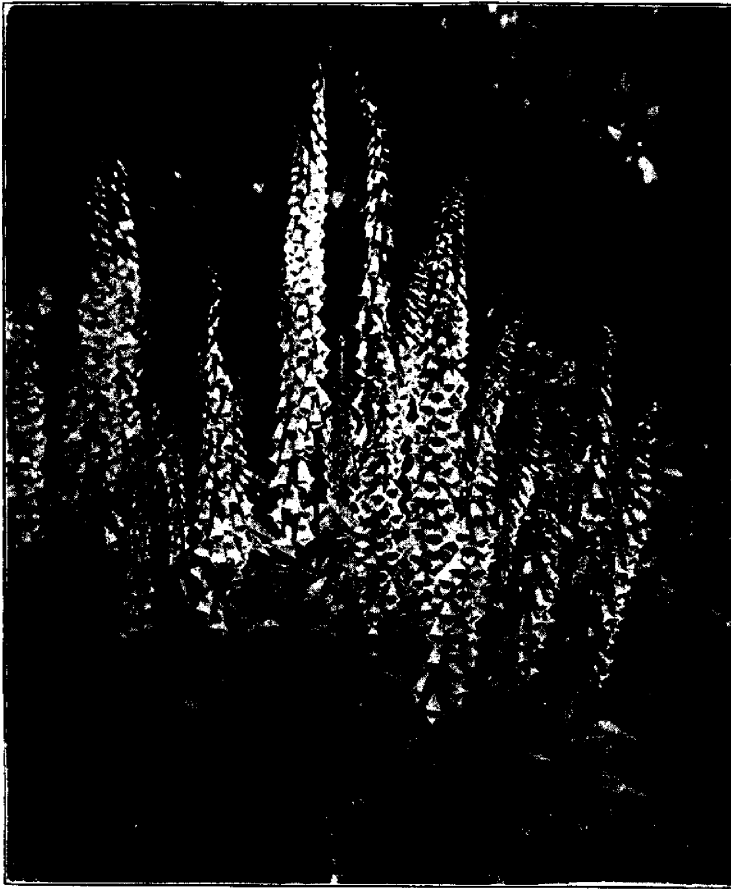


FIG. 1458.—*DIGITALIS PURPUREA* (*Foxglove*).
As growing in the garden, Wentworth S., June, 1897, from self-sown seed.

bank, or moorland margin, is made gay with the large purple flowers of the *Digitalis*. It belongs botanically to the order Scrophulariaceæ. In Britain, its native country, it grows to the height of from 2 to 4 feet perfectly upright, bearing from 50 to 100 beautiful purple

ern and Central Europe where there are found also two other species; *D. lutea* and *D. grandiflora*.

The *digitalis* had from early times a great reputation as a medical plant, being applied externally to ulcers and scrofulous tumors, and taken internally

DIGITALIS PURPUREA. (*Foxglove.*)

for diseases of the heart and for dropsy. For these purposes the leaves are used, being gathered when the plant is in bloom. It thrives best in a gravelly or sandy soil. The common name is from the Anglo-Saxon *foxes-clife* or *foxes glove*. It is known by a great variety of

The German name of thimble suggested to the botanist Fuchs in 1542 the Latin adjective *digitalis* as a designation for the plant, which it has retained ever since. The earliest known description of the plant is that by the botanist just named, about the middle

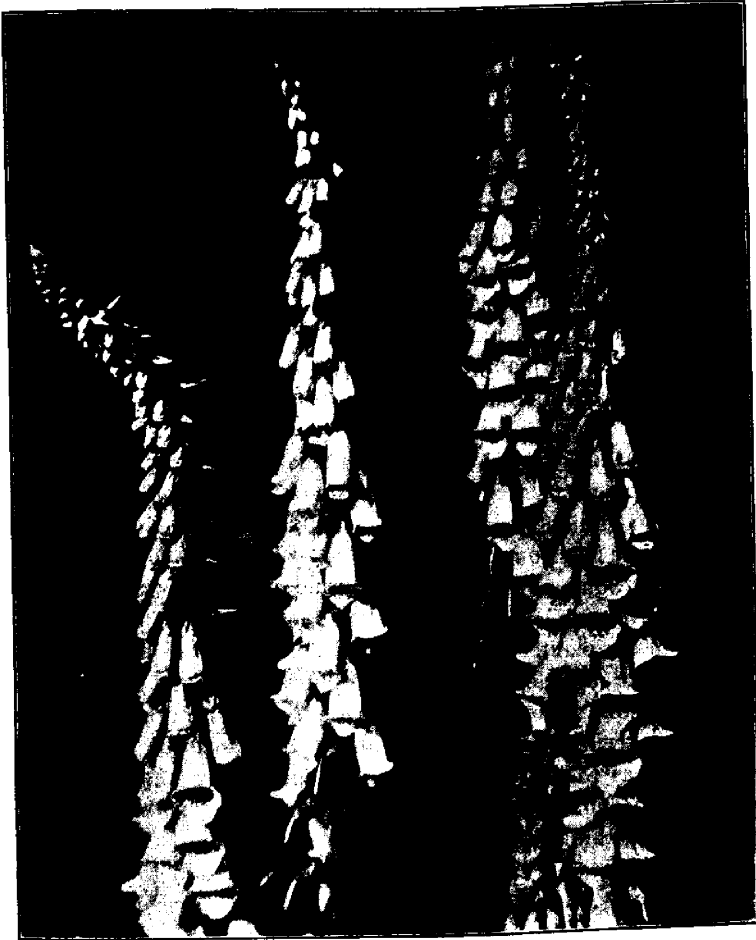


FIG. 1459.—THE FOXGLOVE.

names in Britain. In the south of Scotland it is called *bloody fingers*, farther north, *deadmen's bells*, and on the eastern borders *ladies thimbles*, *wild mercury* and *Scotch mercury*. In Wales the synonyms are *elvé's gloves*, *foxes-gloves*, *red fingers* and *dogs fingers*.

of the 16th Century, though it is certain that it was known to herbalists at a much remoter period, for it is mentioned in two distinct MSS. written before the Norman Conquest.

However, I must remember that my purpose in writing this article was not

so much to give the history of the fox-glove as to call attention to its usefulness in the herbaceous border of our grounds, or as a foreground of a shrubbery or margin of a lawn. It will thrive in odd corners. Its own dignified bearing when in flower seems to be communicated to all around it. I have grown it for many years in great abundance and in great luxuriance, for it seems to like the sandy soil of my garden. It comes up everywhere. Fig. No. 1458 will give some idea of how they grow when *self-sown*. This is from a photograph of *part* of a patch of fox-gloves which came up where some old seed stems had been thrown down. In a wild state in their native land we seldom find more than two or three flower stems to one plant, but as I grow them I have sometimes as many as 18 or 20, each with from 100



FIG. 1460.—Three plants of Foxglove planted in long bed of bulbs, 100 feet long, containing 1000 tulips.

to 125 flowers on each. Fig. No. 1460 taken from three plants planted 6 feet apart to break the flatness in a bed of tulips, the one in the foreground had 15 spikes of bloom. Some of the spikes shown at Mr. Woolverton's house in June last were cut from this plant. I find that a cedar or spruce hedge forms a fine background to show them to good advantage. They seem to like a partial shade, at least, so as to be spared the glare of the midday sun in this climate. They require no care and no protection in the winter with me. I can see the seedlings by the tens of thousands now in my garden coming up round the old plants. Through the agency of the bees I have every conceivable shade of color from the purest white up to crimson-purple. Seed sown late in the fall or very early in the spring will flower the following summer in June and July. The seed is very fine and evidently needs no covering but a little shade. The seed is produced in great quantities. I made a calculation about a year ago of how many seeds one plant of

digitalis produced by counting the seeds in one capsule or seed vessel. I found it contained 250, a second one 310 seeds. Taking the average number of capsule on each flower stem of fifteen to be 100 there would be at least 375,000 seeds produced by one plant, a wonderful illustration of the generous provision made by nature for the propagation and continuance of her "earth-born blossoms." Fig. 1459 is from a photograph of a few spikes of a Foxglove at close range.

All I need add to this already too lengthy and discursive article, is, to say, that in moving the plants from one place to another, say from the seed patch, as much earth as possible should be retained about the roots.

I trust that as a result of the bringing of this plant to the notice of the readers of the HORTICULTURIST, many of them will be induced to give a place in their flower gardens and shrubberies to *Digitalis purpurea*.

A. ALEXANDER.

Hamilton, Ont.

PACKING TENDER FRUITS FOR EXPORT.

AT last we believe it is being proved that we can reach the world's best markets with some kinds of our tender fruits, and get even with California, or any other country in our operations.

The prices obtained in Covent Garden for choice Astrachan, Duchess and Alexander apples, viz., about \$1.25 for a case containing scarcely a half bushel of fruit, shows how our fine fruit is going to capture the British market. This was no extraordinary shipment. Anyone in Canada was open to have done the same thing, and perhaps many have done so, and have kept the secret for fear others would try it; ours was a private shipment, but since the writer is also contributing to the Government's shipments, we will contribute all the information we can to the general good.

Now, because we have succeeded with the apples above mentioned, let no one run away with the idea that indiscriminate shipments of early apples would pay. There are too many risks in such an undertaking for the careless man to succeed; but the possibility is before us, and the wise man will cautiously try, by the most careful handling, packing and shipping, to attain success.

The fact is, we have over-stocked our Canadian markets with all kinds of fruit, and we must reach out, or enter upon some other industry; and we appreciate the efforts being made by the Department at Ottawa to open the way for successful export in cold storage.

The important thing now before us is to follow a uniform style of package and packing. Fortunately, we have hit upon the best package in the world, which every exporter of tender fruits should adopt, viz., the one shown on

page 303. This case is 22 inches long, $12\frac{1}{4}$ inches wide, and varies in depth to suit the fruit to be packed. Thus, for pears or apples 3 inches in diameter, we use a case 6 inches deep, to take 60 apples, *i.e.*, 5 layers, two deep and 6 apples long; for fruit $2\frac{1}{2}$ inches in diameter, a case 5 inches deep, to take 80 apples or pears; and for fruit $2\frac{1}{4}$ inches in diameter, a case $4\frac{1}{2}$ inches deep, to take 100 apples. If the fruit is properly sized before wrapping and packing, it is evident that just a certain number, neither more nor less, can be put in a case, and the number should be stamped on the outside end, so that the buyer can tell exactly what sized apple he is selling. To grade for size to suit this special trade in apples and pears, a grader is necessary, because one can never judge entirely by the eye. Our friend, Mr. E. H. Wartman, of Kingston, deserves the credit of being the first to invent a grader for apples which can be made at a reasonable price, compared with the expensive graders used in California for oranges.

By means of this the fruit can be sized to fit each case, and is then ready for wrapping. We have been using thin Manilla tissue, ten inches square for apples and pears, and 8 x 8 inches for plums and peaches. This can be purchased wholesale at about 18 cents a thousand squares.

It is also important to stamp the grade on each box. We use two grades of our choice fruit, viz., A No. 1 and No. 1; with occasionally a case of very large and very fine samples, which we labelled Extra A No. 1.

It would manifestly be absurd to put up in these small packages anything of an ordinary grade; for such a course would make a failure of the business by

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simply multiplying packages and not creating any increase in the demand. The special package must mean a superior class of product, and then it will command a ready sale among a certain class of buyers. Ordinary fruit should be put up in barrels as usual, and so it will not come in competition with our higher grades.


During the past season, 6 car-loads of this superior class of apples, pears, tomatoes, peaches, and plums have been forwarded to the British markets, and for the most part have done well, but full account sales are not yet to hand.

It is evident that English fruit growers are somewhat troubled about the prospect of our invading their markets with our tender fruits, if we may judge

from the following extract from the *Fruit Grower*, published in London, England:—

With further reference to the Canadian fruits, we find that shipments are to be sent to Liverpool, Manchester, Glasgow and Bristol. The fruit will come over in cold storage. There can be no doubt that if these various attempts to flood our markets with soft, fresh fruits from several centres are successfully carried out, that the home grower will have a serious state of things to face. Though it may not be brought about very quickly, there is always the possibility of its being done when once the possibility of the scheme has been demonstrated. For instance, there are as we write some enormously sized eating pears on our markets from California. They are better than any French ones ever seen here, and beautifully coloured. They are as large as our largest Pitmaston Duchess, and though we can raise plenty of this kind of pear as large as any produced by the outside grower, it is clear if we are to more than hold our ground that we must raise dessert pears of fine appearance and of large size.

CHESTNUTS FOR PROFIT.

 CURIOUSLY enough the fruit growers of Ontario, like a flock of sheep, are given to follow in whatever line any one takes the lead. If one man plants Burbank plums, or Kieffer pears, and gets a paying crop, forthwith you see every fruit grower planting Burbank plums or Kieffer pears. A short time ago the Niagara grape was the thing, and every one planted it until now it is becoming a drug in the market. Why would it not be wiser for each man to show an independent spirit, and plant out such a selection of fruits as his own judgment shows him will command a market, and such as he himself has the skill to cultivate with success.

Neither do we approve of the inconstant ways of some growers, who are continually changing from one thing to another. One year sees them digging out their apple orchards because for one or two seasons the markets were over-

stocked, and another year planting them because better prices were received.

As a sensible variation from fruit growing we are glad to notice that attempts are being made to make nut culture a profitable department for the horticulturist. Much has already been written about the walnut, and especially that hardy and productive variety, *Juglans Sieboldiana*. Now we note with interest a recent article by Mr. H. E. Van Deman, of Virginia, on the cultivation of the Chestnut for profit. This nut may not be hardy enough to succeed far north, but across southern Ontario there are old chestnut ridges where the native American sweet variety flourishes even to a good old age, and on such high, sandy knolls, we hope to prove that the more productive and profitable varieties may be grown with success. Mr. Van Deman writes as follows in the *American Agriculturist*:—

“Of all the varieties of the chestnut,

CHESTNUTS FOR PROFIT.

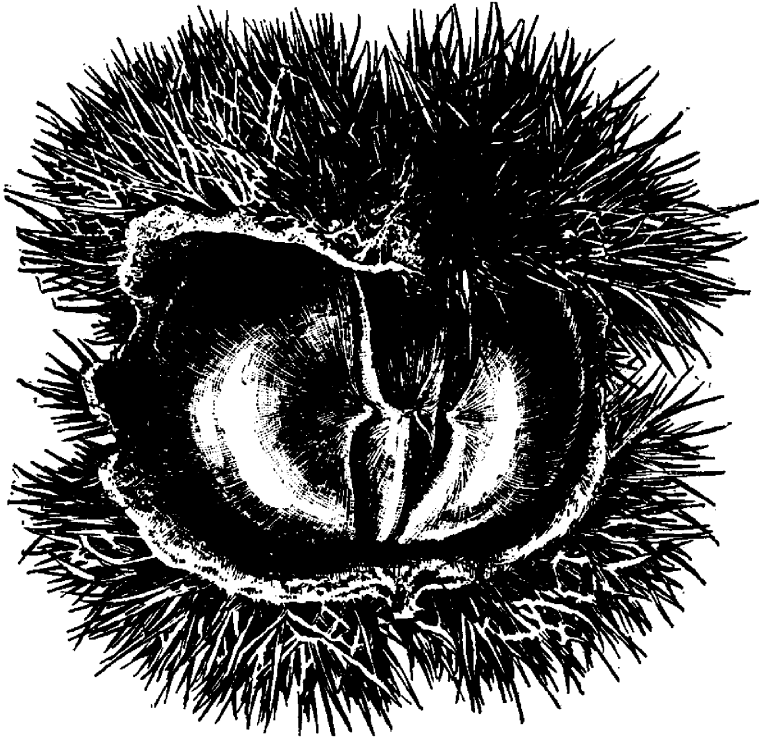


FIG. 1461.—THE KILLEN CHESTNUT.

either European, Asiatic or American, the Killen is the largest I have seen, and I do not believe there is any other as large in this country. The Giant, which is of Japanese origin, is the nearest to it, and some of the Parry seedlings are almost as large.

“The Killen is a seedling of the Japanese species, *Castanea Japonica*, and originated from a nut planted within the last 10 years by J. W. Killen of Delaware. The tree began to bear very early, and it was a remarkable sight to see the large burrs on so small a tree. The first time I saw it was in 1893; it was then bearing several burrs and not so high as my head. Mr. Killen began to graft the scions in other trees and found that they bore the next year after being set. This precocity and abundant fruitfulness seems to be typical of the variety, judg-

ing by all the young trees and grafts as well as by the old tree.

“The nuts are very large, as may be seen by the accompanying life-size illustration. Last fall I weighed three nuts from one burr which aggregated $3\frac{1}{4}$ ozs. and another nut from a burr which had two in it turned the scales at $1\frac{1}{4}$ ounces and measured almost six inches in circumference. There are rarely less than three nuts to the burr, and the above sizes are not uncommon, and single nuts, when they do occur, are even larger. In quality the Killen chestnut is not equal to our native wild chestnuts, nor are any of the varieties of the foreign types, so far as I have tested them. But it is better than the average of either the European or Japanese kinds.

“In habit the tree is not so robust as some of the Japanese varieties, but it is

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not feeble or so dwarfish as some of them. It makes a very satisfactory orchard tree and grafts well on our native stocks, but does best on seedlings of the Japanese species.

"The culture of the chestnut is getting to be an industry of considerable importance in America, as well it might be; but our people seem surprisingly slow to take it up. There are millions of acres of suitable chestnut land in this country, and much of it that is peculiarly adapted to its culture. Sandstone, shale or sandy, well-drained soil is the best. Limestone land does not seem to suit the wild chestnut trees, for they are seldom found on it. The hills and mountains from Massachusetts to Georgia are the home of our great wild chestnut forests. There are vast areas in Pennsylvania, both the Virginias, and the Carolinas in particular, which have been chopped over that would make ideal chestnut groves if worked over with the improved kinds, such as Paragon, Ridgely, Numbo, Killen and some others. But it has been done already to a considerable degree in Pennsylvania and New Jersey, and with only tolerable success. The burrs do not seem to be as well filled on these grafted sprouts as on

trees grown in the nursery set out in orchard form. Cultivation, perhaps, has something to do with this, and insects also for the chestnut weevil is the bane of the business. And it is hard to combat, for the eggs is laid in the growing nut by a very long-snouted curculio, and spraying seems futile. Jarring may be a feasible plan, but it has not been demonstrated as yet.

"Gathering the nuts is another point of importance. In rough, stumpy, rocky and trashy land this would be a considerable task, if the nuts had to be picked from the ground every few days. Perhaps sheep would keep down the undergrowth and help to clear the ground somewhat. Picking the burrs before the nuts were quite ready to fall out would do while the trees were small, but this would only be possible for a short time. But in smooth, clean ground that was kept clean of weeds and brush, the gathering would be much easier. The best stocks for the varieties of the European chestnut are seedlings of the same species, and the best for the Japanese kinds are seedlings of the same type. When grafted on our wild or native stocks the union is not always good."

TYDÆA HYBRIDA.

TYDÆA are Gesneraceous plants bearing most beautiful, spotted flowers in shape not unlike a Gloxinia. The scaly tubers resemble a large white "grub worm" in general appearance. The bulbs should be potted in the spring in light, rich, porous soil, watered sparingly till growth begins, then more freely, and given good light and partial shade from direct sunlight. Avoid wetting the foliage during damp weather, and also

while the sun is shining brightly upon it. After blooming in autumn gradually withhold water, and when the soil is dry set the pots away in a dry room where the temperature is from 50° to 55°. The plants are easily grown and deserve a place in every window garden. Plants may be propagated from the seeds. They are very small and require the same treatment as seeds of Gloxinia or Tuberous Begonias.

CULTURAL DIRECTIONS FOR GINSENG.

HERE is no doubt but that Ginseng (*Aralia quinquefolia*) can be successfully grown. At present, Ginseng commands a cash price in the open market of from \$2.50 per pound for poor, to \$4.00 for the best quality, and there is apparently an unlimited demand for it at these figures. That the supply, which has been in the past entirely sustained by native collectors throughout the region where Ginseng is indigenous, is inadequate to the demand, is plainly shown by the steady increase in price from year to year, and sections of country where it was abundant but a few years ago are almost entirely depleted. Eventually it must become a cultivated crop, but the fact that it takes from four to six years' growth before it is ready for the market will always militate against its general cultivation, as will also the fact that it takes special conditions of soil and treatment to make its growing a success. This makes returns more certain for those who devote care and attention to its cultivation.

It must have a rich, cool, loamy loose soil, always preferring shade, and should have a heavy mulching of wood leaves in autumn, which are to be left on during the next summer to decay and conserve moisture. It will thrive in almost any rich garden soil, if given shade and moisture and constant cultivation.

Cultivated Ginseng, properly cured, is always classed finest grade, which means large smooth, clean and sun-dried roots, and should an acre produce but a thousand pounds in five years,

the profits would be very large, and it would not be unreasonable to expect double this yield. For those who intend planting on a large scale, the following suggestions will aid in making a proper start.

First, where possible, select a cool, moist piece of ground, preferably where there is natural loam, or where the ground is loose and rich. Well rotted stable manure is good for bringing up garden soil to a proper condition, as is leaf-mould, rotted sods, etc. Sandy soil, if rich and moist, is not objectionable, but rather desirable.

Plant in rows 8 inches apart, 4 inches apart in the row, leaving an alley 2 feet wide every sixth row, thus making beds nearly 8 feet wide, each with 6 long rows to the bed. Over these beds you can erect artificial shade by making lath covers with 4 foot laths, 1 inch apart, on frames 8 feet long and 4 feet wide, made out of 2 inch strips, $1\frac{1}{4}$ inch thick; then put in posts along each side of the beds—5 feet high—to which nail 2 inch strips to support the lath frame. These frames will last for many years, and can be taken in in winter. If natural shade is provided under trees, frames of course are not needed; but it will always pay to have some shade that will keep the ground moist.

Cultivation under the frames can thus be prosecuted without disturbing the shade. Keep the plants free of weeds, and cultivate the same as for any garden crop, and success should result.

H. P. KELSEY.

Boston, Mass.





Flower Garden and Lawn. ❀

REPLIES TO ROSE QUERIES.

Ever-blooming Hardy Rose.

Reply by T. H. Race, Mitchell.

In reply to inquiries about roses on page 331, except in the mind of the nursery agent and the story he oftentimes so persuasively tells, there is no such thing as a really ever-blooming outdoor rose. After an experience of years in testing nearly everything that has been offered to the public, I have arrived at the conclusion that the Gen. Jacqueminot when properly treated will give more "after-bloom" and continue it up to a later season than any other so-called ever-bloomer grown in this latitude. Next to the Jacque comes the Coquette des Blanches, in ever-blooming qualities, offering a strong contrast in colors, and there are a few among the pink shades which under good treatment will bloom more or less throughout the season. The semi-hardy varieties, such as La France, Meteor, Ulrich Brunner, etc., should do as well at Mount Forest as here, for they need winter protection anywhere, but they do not pay, and will not at least give as much after-bloom as the two varieties I have named.

To answer the questions of "amateur gardener" would require an essay on roses. What I have already said may be taken as an answer to questions 2 and 5. If you have room for an essay I could answer all the rest for this climate at a future time.

Reply by Webster Bros.

Your correspondent has not succeed-

ed in getting the La France into proper shape we fear, for a constant blooming hardy rose there is nothing better in existence than the La France and its varieties. The La France is rarely ever out of flower with us; even as late as October first, opening buds and flowers are to be seen in profusion. It would hardly repay the trouble to winter the ever-blooming roses outside in the vicinity of Mt. Forest. It would be better to lift the plants after a few frosts and winter them carefully in a suitable cellar or good cold frame.

Best Varieties.

*Answers to Budget of Questions, p. 331,
by Webster Bros., Hamilton.*

1. The best 20 hardy roses, La France, Gustave Piganeau, Paul Neyron, Augustine Cuinnoiseau, Margaret Dickson, Baroness Rothschild, Merveille de Lyon, John Hopper, Mrs. John Laing, Magna Charta, Mme. G. Luizet, Capt. Christy, Maurice Bernardin, Pierre Notting, Marchioness of Dufferin, Alfred Colomb, Baron de Bonstetten, Earl of Dufferin, Ulrich Brunner, Prince Camille de Rohan.

2. The 12 best hardy roses, Autumn bloomers. Mme. C. Wood, La France, Augustine Guinnoiseau, Louis Van Houtte, Comtesse de Serennye, Abel Grand, Alfred Colomb, Françoise Michelon, Mdlle. A. Wood, Hippolyte Jamain, La Reine, John Hopper.

3. The 12 best dark colored hardy roses. Prince Camille de Rohan, Gus-

WINTER ROSES IN POTS.

tave Piganeau, Pierre Notting, Louis Van Houtte, Baron de Bonstetten, Xavier Olibo, Grand Mogul, Star of Waltham, Alfred Colomb, Jean Liabaud, Abel Carrier, Earl of Dufferin.

4. The 12 best hardy roses highly perfumed. Alfred Colomb, Xavier Olibo, La France, Gustave Piganeau, Margaret Dickson, Earl of Dufferin, Mdlle. A. Wood, Augustine Guinnoiseau, Mme. G. Luizet, Duchess of Albany, American Beauty, Gen Jacqueminot.

5. The best Hybrid Teas worthy of garden culture (with slight protection). Cheshunt Hybrid, La France, Augustine Guinnoiseau, Duchèss of Albany, Duchess of Leeds, Augustine Halem, Capt. Christy, Mme. Caroline Testout, La France de '89, Mme. Pernet Ducher, Kaiserin Augusta Victoria.

6. The best hardy climbing roses. Crimson Rambler, Empress of China, and the Prairie roses; the White and Yellow Ramblers might be included; they are not as worthy as the Crimson variety however.

7. The best half-hardy climbers with perfume. Climbing La France, Mary Washington, Climbing Meteor, Gloire de Dijon.

8. The best Hybrids of *Rosa Rugosa*. We have grown none of these except Mme. Georges Bruant, this is a very satisfactory and hardy sort, having long pure white buds resembling *Niphetos* in shape. Mrs Anthony Waterer is a new deep red semi-double flower highly recommended. Agnes Emily Carmen is a deep crimson colored variety, and the best of the batch of Hybrids raised by E. S. Carmen of the Rural New Yorker.

9. Hardy Carnations. We have had no experience with the European hardy varieties of the Carnations.

10. The best three Clematis for veranda. Jackmanii, Henryi and Kermesina Splendens, for a large veranda the small flowered variety *Paniculata*, is quite unexcelled.

NOTE.—As a rule not much gain in flowering is noticed in plants of equal size whether budded or on own roots. This pertains to garden culture, from a number of budded plants of the La France and Augustine Guinnoiseau, (White La France), we have had finer and more satisfactory supply of flowers this summer than we have ever noticed before, whether this is the result of being budded has not yet been decided.

WINTER ROSES IN POTS.

WOULD you enjoy a few roses in the house during the winter? No doubt you would, but unless you have a very sunny window to devote to them, in a room where you can regulate the heat so as to have the temperature at about 50 degrees during the night and 75 during the day, grow something else.

But, given the sunny window with the right heat, a few roses will thrive as well as geraniums, but not with the neglect that geraniums will bear. Pur-

chase the plants in the spring, preferably two-year-olds, because of their size. The yearling plants are as thrifty as the older ones, and will be as good eventually, but of course the larger plants will give more bloom at once. Have rich soil, and four-inch pots for the yearling plants, and six-inch pots for the two-year-olds. Unglazed pots are better than the glazed. Put a piece of broken flower-pot over the drainage hole, and a handful of pebbles, or something for drainage, on top of which place a few

THE CANADIAN HORTICULTURIST.

spoonfuls of dry, pulverized hen manure. Fill the pot nearly full of soil composed of good garden loam, mixed with about one fourth its bulk of old stable manure, preferably from a stable where cows are kept. Place the plants in the pots with the roots spread out, cover with soil, and press the whole down firmly, adding soil and firming down, particularly around the stems, until the pot is full. Water and keep in a cool, shady place for a few days. Then select some sheltered spot in the garden, and plunge the pots a few inches below the surface. After they are well established, keep the soil above the pots lightly stirred, and water sparingly throughout the summer, not neglecting to frequently sprinkle the foliage.

Keep a sharp lookout for insects, and if hand-picking, and sprinkling with clear water will not keep them off, try some insecticide. A spoonful of powdered white hellebore stirred into a pail of water, and applied to both the upper and under sides of the foliage, will usually do the business. An ordinary whisk broom, if you do not have a crooked-neck sprinkler, will enable you to spray the under side of the leaves. This is really the most important part to reach, as there is where the bugs and worms congregate. Watch closely for buds, and keep them all picked off. On the approach of frosty nights, lift the pots and remove as much of the soil from them as possible without disturbing the roots, and replace with very rich soil. Give the outsides of the pots a thorough scrubbing, not a mere washing, but a scrubbing with a brush. Take the plants to a warm, sunny room, water freely, and look for blossoms. As soon as each bloom shows any sign of fading, cut it off with all the stalk on which it grew, excepting two or three eyes. This pruning will encourage new growth, and that means more blossoms. After the

plants are done blooming, cut them back from one to two-thirds, and put them in a cool cellar to rest for a few months. When it again becomes warm enough to plant the roses out, they can be transplanted to larger pots, and again plunged in the garden, where they will thrive and store up vitality for another winter's flowering.

While your roses are growing in the house you will have to fight the red spider, and your best weapon is clear water. Keep, if possible, a dish of water on the stove or radiator, and every day fill bowls with boiling water and set near your roses. Every other day spray both lower and upper sides of the foliage with tepid water. A quart of water used as a preventive is worth gallons of the same remedy used as a cure.

The following list of roses, with a short description of each, makes a good collection for the window: Enchantress—creamy white, with buff tinted centre; free bloomer and thrifty. Perle des Jardins—a free blooming, lovely, yellow rose, second only to Marechal Niel in popularity. The Bride—a pure white, delicately scented rose; a free bloomer, with lovely buds. Papa Gontier—a remarkably free blooming, strong and rapid growing rose, of an intense shade of rich crimson. Belle Siebrecht—in color, a deep, rich pink; commences to bloom when very small; fine in both bud and flower. Sunset—free blooming, strong and robust in growth, with large and elegantly formed flowers and buds; in color it is a rich golden amber, or old gold, elegantly shaded with dark, ruddy crimson, resembling the beautiful tints seen in a summer sunset. Ni-phetos—the loveliest of all white roses for winter blooming; lovely, long pointed, snow-white buds; one of the freest blooming roses in cultivation. — Am. Agriculturist.

CACTUS DAHLIAS.



FIG. 1462.—CACTUS DAHLIAS.

WE are much pleased to receive from a member of our Society in Prince Edward Island, Mr. G Herbert Hazzard, of Charlottetown, Prince Edward, Island, a photograph of some of his Cactus Dahlias, which we think well worth engraving for the benefit of our readers. Mr. Haggard writes:

“I have over forty varieties of Cactus Dahlias and about twenty of Decorative, besides Show, Fancy and Pompon. The white one on the table below the dark cactus is a real beauty. I took first prizes in Halifax, for Cactus, Show and

Fancy, but in Pompon they threw mine out because I had several more than the prescribed number. I also took first for collection of not less than twelve varieties; also first for collection of gladiolous twenty-five varieties and six in each variety; and for sweet peas, collection eight varieties in this lot, I showed forty-two varieties so did not do so bad considering I had to pick my flowers two days before they were judged, and carry them such a long distance, leaving in the morning at seven o'clock and not getting to Halifax until 7.30 p.m., flowers not being opened until next morning.

THE CYCLAMEN.



FIG. 1463. —

THESE delightful winter and early spring flowering plants have of late years been so much improved that we shall scarcely recognize the small, comparatively insignificant blooms we used to meet with, in the splendid, large, broad-petalled, distinctly-colored forms and highly-scented types of this flower, now so plentiful. For this great change we are much indebted to such men as Mr. Warren, of Isleworth, also a Mr. May of the same place. Each of these growers have low spanned houses, graded in temperature, in St. Margarets, West Middlesex, in which the culture is about the same, but there is a difference in the strain. The old type of the grandiflora family, with its long stems and large flower, has given place, in response to the persistent efforts of these and other London florists, to a dwarf stem of leaf and flower, without any diminution in size of bloom. They are now of a very robust constitution, remarkably free-blooming, and in every way well adapted to house cultivation, and as house plants have few equals, if any superior. Few flowers respond with such a generous profusion of bloom, to moderate care and cultivation, as does

this plant. This fact is impressed upon me more every season as I look upon the magnificent array of color, smiling as they stand upon the benches, clean, bright and cheerful, like the refreshing greetings of the sunbeams after dark and dreary days. It gives a thrill of real delight, such as the millionaire cannot abstract from the intrinsic worth of his gold, as we approach them and count, as I did this morning, on one plant nearly 100 perfect blooms, and buds uncountable, nestling at the base of the leaf stems and on the crown. To the ladies, let me say, this attractive and very useful flowering plant, flowering from October till August, is very easy to manage, even to growing from seed. Get the best strain of seed—Williams' prize strain is even now superseded. Sow in a small box about two inches deep, in soil of a light nature, press the seed its own depth into the soil with a flat piece of board or shingle and cover lightly. Place in temperature of 55°, or thereabouts, cover with glass for a while in order to keep slightly moist, not wet. After a while lift the glass and keep evenly damp. You will soon see the bulblet appear.

Then, as soon as they have two leaves, if they need more room prick off into another box farther apart, or better still, into small or two inch pots singly. This is the better way, not five or six in a pot. Grow on and give plenty of air, and don't let the hot sun strike them directly, as they are fond of shade, specially in hot days of fall and spring months. Re-pot as soon as roots move well to the pot, and let the soil have a little well-decayed manure mixed with it; drain the pots well, keep them growing at 55° to 65°, and you will soon be rewarded with bloom that will delight you. I like the gran-

THE CYCLAMEN.

diflorum type of the French growers at the present time. Having now on the benches over 1,000, I am able to see the difference of type in color, form and flowering nature. If you prefer buying a plant already in bloom, you can get of your nearest florist your choice of color, etc., and treat it as I have indicated, taking good care to keep off the green-fly (perhaps its worst enemy), also the thrip—a thin, long, black bug which will quickly destroy the foliage by eating its fleshy underparts. Watch them closely on the younger leaves, and you can easily destroy without the aid of any insect destroyer. If your husband smokes tobacco, ask him to throw a whiff or two under their leaves, and Mr. Fly will soon grow dizzy and fall on top of the pot, then shake him off and destroy. If you try to keep your corms or bulbs to a second or third season, don't dry them out to a withering degree; but simply let them rest, with sufficient life in the soil to give nourishment to the bulbs, in which lies all the force, energy, or vitality preparing for another and greater effort next season in abundance of bloom and foliage. Start them afresh by watering more freely any time from August to October, as you may wish them in succession; also grade the temperature, as you may wish to keep back or hasten into bloom. By all means try and get a packet of seed of the pure white, heavily scented strain, or a bulb, and you will be delighted. Sow in the house, we would say in the greenhouse, in August, September or October. The cut blooms also you will find lasting and very useful. Should any reader like to ask a question, I shall be pleased to give an answer, if able, through these columns.

I may say this plant has some six species, bearing such names as *Cyclamen European* (hardy), *Cyclamen purum* (small flowering), *Cyclamen gigan-*

thus grandiflorum (large flowers). Another one is, *Alpina asperula* (or violet of the Alps), so-called because the Alpine ranges are its native home, but of them all I would advise you to get the *Cyclamen giganthus grandiflorum*.

As a rule the cyclamen grows slowly, but for the gardener who will have patience its culture from seed is perhaps surer and easier than that of any other plant of its class. The seeds may be sown any time between September and March, the sower fixing upon it according to the time bloom is wished from the plants. It takes from twelve to fifteen months from the time the seed is sown to get the most willing cyclamen plant into bloom. The seed-pan, pots, or boxes must be well drained, containing about two-thirds rough drainage and one-third light, loamy soil. I have found it a good plan to make this loam rich with well decayed manure from cattle stalls, in order to hurry up the slow growing, little tubers from the very first. If the soil is made quite rich all through the subsequent repottings, considerable time may be saved in getting the plants into bloom.

If the seeds are sown thinly the first usual transplanting may be omitted. It is not necessary to cover them more than an eighth of an inch. The seed-pans should then be set where they will have good light, but no direct sunshine. If the temperature can be kept near 60° it will be better for the young plants. At the first transplanting, necessary when they are three weeks old unless sown thinly, the seedlings should be set two or three inches apart in boxes of rich soil, or in small pots. When large enough, transfer them singly to five-inch pots. If plenty of water and fertilizers are given they should grow actively all spring and summer.

The best soil that I have tried for

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them is three parts of sod loam to one of well decayed fertilizer from cattle stalls. In fine weather syringe or sprinkle the plants every day unless they are in bloom; morning is the best time for this in summer, the afternoon in winter. Insects that cut off the stems of the cyclamen or eat the leaves, can be kept away by scattering fresh tobacco stems under and around the plants. The cyclamen is now largely treated as

an annual by many of the best gardeners, fresh seeds being sown every year, and the plants thrown away after their first season of bloom is over. We amateurs usually prize them too much for this, and know from experience that a well-grown cyclamen will give fine bloom until three years old.

WM. BACON.

Orillia.

CARE OF VINES.

THE care of vines is something that requires a good deal of thought if the best results are desired. The close-clinging Ivies and the Virginia creeper grow nearly smoothly, covering any surface exposed to them. But Roses, Honeysuckle, Wisteria, Clematis and many others are inclined to grow in masses or clumps that are not graceful nor desirable. To avoid this they should be taken from the trellises every autumn. This gives an opportunity for repairing and painting the framework, as well as for trimming the vine. Honeysuckles should be pruned severely. The flowers are produced on new spring growth. This vine is inclined to grow in masses, and the inner limbs die. The effect on a piazza is unsightly, so the vine should be pruned well. Cut off all the slender limbs along the main vines, and train the strong limbs as you wish them to grow. Roses should

be cut free of most of the old wood, and the long new sprays securely fastened with soft strings. In cutting do not shorten the vine. Wisteria is prettier trained horizontally just under the eaves. It tangles badly in the most intricate manner, and the pruning knife is good for it, but keep the long, flexible limbs.

There is much complaint of vines rotting walls and fences. Pruning is at least a partial remedy for this. No vine is handsome if allowed to tangle and twist about itself, and any vine is lovely if properly trained. Very beautiful effects may be produced with even our annual climbers. If these are planted deep and early, enriched and watered, they will prove very satisfactory, and are preferred by many persons to vines that must remain in place all winter.—
Park's Floral Guide.



HOW TO PLANT A BULB.

IN the accompanying sketch I have tried to show how a Hyacinth bulb would look when planted correctly, if the jar was transparent. The figures represent the kinds of soil used. No. 1 is an inch layer of burnt bone, charcoal or pebbles to insure good drainage. No. 2 is an inch layer of whole decayed manure, placed over the drainage so that the rich, prepared soil (which is No. 3) cannot settle in the bottom of the jar and wash away. No. 4 is clean, sharp sand which is placed around the bulb to keep it from decaying by coming in contact with noxious matter, which, even with the best care, will sometimes slip into our potting soil. No. 5 is fine, rich manure to supply the bulb with nutritive matter. The jar is

a six-inch one, and only one large-sized bulb is set in it. Never crowd a bulb; it will resent it.—Park's Floral Magazine.

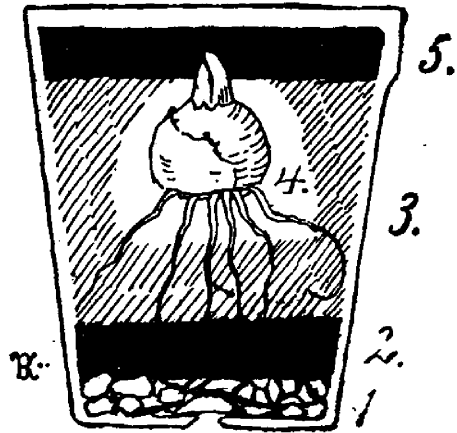


FIG. 1464. —HOW TO PLANT A BULB.

POTTING PLANTS.

THE first essential is to get the right kind of soil for the pots—a nice black, friable soil, full of leaf mould, is best. In order to plant trees, principal elements of plant food are necessary—1st nitrogen, 2nd oxygen, 3rd phosphoric acid. Leaf mould supplies the first. Each element has a specific effect on the plant. If fed too much nitrogen the effect is an excess of leaf; if too much potash, the result is more fruit or flowers but a stunted growth. A well balanced plant ration comprises one part garden soil; one part turf sod, full of fine root fibres and one part of half-rotted manure and sand in equal proportions. It is possible to have the soil too rich, so sand is added to make it porous and assist drainage. Manure from the cow yard is best, as it is not as strong as other kinds. Soap suds is also a good fertilizer. It is a good idea to keep a box of suitable soil in the caller

where it will be handy for winter potting. Fragment of broken pottery or brick should be placed at the bottom of the pot to help the drainage. One of the first things to do when potting is to give the plant a good drink—thoroughly saturate the soil, and in planting cuttings compact the soil firmly about the tender shoot, in order that the food in the soil may be made available.

In re-potting, many people make a mistake in changing from a small pot to one too large in order to save trouble. Growers will obtain more bloom by keeping the plants in small pots, changing to the larger sizes gradually. By giving the pot a slight jar and turning it upside down the pot can be lifted easily off. And if fine shoots are seen to be interlacing the outside of the earth the plant should be transferred to a larger vessel. PROF. CRAIG before Port Hope Horticultural Society.

↪ Our Affiliated Societies. ↩

HORTICULTURAL SOCIETY EXHIBITION AT ORANGEVILLE.—The members of the Orangeville Horticultural Society have every reason to feel proud of their first exhibition. The affair took place in the Town Hall, on the afternoon and evening of Thursday, October 6th, and was a success in every sense of the term. The Society has been in existence for less than a year, but the display of plants, flowers and fruits which was in evidence in the Town Hall on the above date would have done ample credit to many an older and more pretentious organization. Particularly gratifying was the exhibit, in view of the fact that prizes were not awarded, and the exhibitors had therefore no pecuniary inducement to stimulate their interest in the show.

That the Society's first effort in the exhibition line has attracted a good deal of interest was very evident from the immense throng of townspeople who crowded the hall on Thursday evening, to view Orangeville's choicest in fruit and flower, and listen to the sweet music rendered by the town orchestra. That the visitors to the show were satisfied and delighted was very apparent to even the ordinary observer. On all hands could be heard comments of the most favorable nature. There seemed to be but one opinion, and that was that the show was a success.

To make room for the exhibit, the seats were removed from the hall, as far back as the raise in the floor, and replaced by five long tables, and a short one which was placed crosswise at the back end. The three tables on the south, the short one in the rear, and the front of the stage, were laden with a profusion of beautiful plants and flowers, whose arrangement was at once tasty, artistic and symmetrical.

The two north tables were covered with fruits, nicely interspersed with cut flowers, and a background of plants. The orchestra occupied the stage, but was well-nigh hidden from view by the mass of flowers and foliage with which the front part of that structure was thickly adorned. Above this the front of the stage was neatly hung with red, white and blue bunting, flags, etc.

In the evening the scene was one of animated beauty. The brightly lighted hall, the moving throngs of people, the hum and chatter of merry conversation, the handsome dresses of the best and prettiest of Orangeville's fair ones, set off and relieved by the sombre green of the wealth of the conservatory, and the soft and delicious strains of the dreamy waltz or livelier march, combined to effect a particularly pleasing *tout ensemble*.

Altogether, the show was an unqualified success, and the officers of the Horticultural Society have every reason to be satisfied with their first exhibition.

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THE HAMILTON HORTICULTURAL SOCIETY has made a liberal distribution of fall bulbs

to each member, at a cost, wholesale, of 65c. per member. This distribution took place on Saturday, 15th October, and each member received the following collection of eighteen bulbs, viz. :—3 hyacinth bulbs, white, Grandesse, blue, Chas. Dickens, pink, Norma; 9 Narcissi, 3 Don Sion, 3 Incomparable, and 3 other kinds; 1 *Lilium Harrisii*, 1 *L. speciosum rubrum*, 1 *L. speciosum album*, and 3 Giant snowdrops. These liberal gifts to each member must be far more helpful to the interests of the Society than the same money given in prizes to a few professional prize seekers; for each member shares equally in the benefits.

BULBS.—At a recent meeting of the Hamilton Horticultural Society, Mr. Charles Webster read a fine paper on winter flowering bulbs, a copy of which we hope to secure for our readers at a later date.

The President, Mr. A. Alexander, after the discussion of Mr. Webster's paper, supplemented what had been said by referring to the usefulness of an abundance of hardy bulbs to make the garden bright and increase the interest in our favorite pursuit. He also named those bulbs most useful for out-door work, strongly urging the planting of only hardy ones, and gave a detailed account of how he potted and cared for bulbs for indoor culture, whether in the greenhouse or house-windows. The soil he recommended was a mixture of loam, thoroughly rotted manure and sand in equal proportions. If the manure could not be had thoroughly decayed, the leaf mould from the woods, with a few handfuls of bone-meal would do. The pots to be used should be the five or six inch size. Before using see that they are cleaned inside and out by steeping and scrubbing in water. Place over the hole in the bottom of the pot a piece of broken pot or slate or flat stone, over this put about an inch of beach gravel or potsherds broken small, with a thin layer of moss or half decayed leaves, to keep the soil from being washed into the shingle and so destroy the drainage. Fill in on this the soil, if for hyacinths to within two inches of the top. Tap the pot on the ground or something solid to make the soil settle. When filled as indicated, set the bulb in the centre, but do not press it down, and fill in another inch of soil, so that when finished a clear inch is left so as to ensure perfect watering from time to time. Gently press the soil around the bulb, which will be about half out of the soil when finished. In a six inch pot sometimes three medium sized hyacinths are placed, say a red, white and blue; but if the bulbs are full sized, first class, one only will give the best results.

OUR AFFILIATED SOCIETIES.

Of Von Sion, Paper White and other narcissi having good sized bulbs, three or four or five may be placed in one pot. In the case of narcissus the soil should just cover the bulbs. If the soil is fairly moist when used, it is better not to water for a few days, but on no account are they to be allowed to become dry after growth of the roots has begun. After potting, bulbs should be set in a dark and rather cool place in the cellar or outhouse for several weeks. In the case of most of the narcissi, Frezias and others, they may be brought up to the light, and a slightly higher temperature, as soon as they have made about an inch of growth; but hyacinths and tulips should not, and cannot be forced into bloom before their time. The exception to this is the Roman hyacinths, which may be treated as the narcissus without much harm.

With proper drainage in the pots, there is not much danger of over-watering after the plants have fairly started to grow, although the soil should never be in a sodden condition. Of course some hyacinth bulbs may be grown in a smaller pot than I have named, say a four inch, but the spike of bloom is not so fine in size or form.

With a little care and planning, a succession of bloom may be secured through all the bleak weeks of winter, which will more than repay the labor and money expended, and be a daily source of joy in watching the development of the beautiful blossoms. I would never recommend the forcing of tulips. Their place is in the garden in May; and I think so of the crocus. They and the tulips give the least satisfaction when grown indoors.

PORT DOVER HORTICULTURAL SOCIETY.—
SIR,—I enclose to you for publication the Secretary's Report of the Port Dover Horticultural Society, read at the September meeting, held in the Town Hall, Pt. Dover, on the evening of September 22nd. The following is the report:

"On the 7th day of February, 1896, there met in this hall 17 gentlemen, who came for the purpose of organizing a Horticultural Society. Thinking at that time, that there could be a union society of the Township of Woodhouse and of the Village of Pt. Dover, but on receiving instructions from the department of Agriculture we found that Horticultural Societies were only allowed in cities, town and incorporate villages, never the less, these gentlemen elected their President, Mr. James Symington, who is with us this evening, and as Vice-President, Mr. C. C. Olds. It was through the untiring efforts of these two gentlemen, aided by our worthy Editor, Mr. L. G. Morgan, (who has ever been ready to help by means of the press), that this society has an existence, but in justice to the members who formed the first Board of Directors, they found men who were willing to do their utmost to further the interest of the society. We had monthly meetings during the whole year with the exception of the month of November, of course our attendance

was small but those who attended always felt well paid for coming, for there was always some subject for discussion. We had no sweet strains of music to cheer as now. By the 1st of September we had sent to Mr. L. Woolverton 39 names as subscribers to the *HORTICULTURIST*. On the evening of January 13, 1897, as per statute governing Horticultural Societies, officers were elected, and the society received its name of "The Port Dover Horticultural Society," in affiliation with the Provincial Society. By the 1st of September we had a membership of 70 and received a grant from the Government of \$30, based upon the membership of last year. At the present time our membership is 74, included in that number we have seven lady members. We hope for the year 1899 that that number will be thribbled. All who have attended these meetings for the past two years cannot but realize the fact that this institution has been a great educator in the management of fruit trees and flowers.

During the year 1898 this Society has given to its members (who saw fit to avail themselves of the gift) a present of 50 cents worth of wild flowers, shrubs, bulbs, etc., to which each member which came from the following four sources:—trees and shrubs, from Grimsby Nurseries; cannas and gladioli, from H. H. Groff, Esq., Simcoe; coleus and geraniums, Campbell Bros., Simcoe; sweet peas, nasturtiums, mignonette, hops, etc., from Vaughan of Chicago. This Society has given through its secretary, together with orders, more than 50 cents worth, the following trees, etc.:—apple trees 88, pears 36, peach 84, plums 25, cherry 42, grapes 10, apricots 2, quince 8, strawberry plants 230, raspberry plants 74, blackberry plants, 267, clematis 10, roses 21, snowballs 2, other plants 14, gooseberry 9, currants 10, making a total of 707 trees, and cannas 39, gladioli 34, geraniums 7, coleus 7, sweet peas 10, nasturtium 10 pkts, mignonette 6 pkts, Japan hops 11 pkts. Representing a cash value from all sources of \$67.55.

In conclusion, I wish to thank the members of the Society for the interest they have taken to further the interests of the Society. Everything goes off harmoniously, and I desire to thank the string band and quartette, for their efficient services during the past year and a half; for I think, without music, our meetings would have lost their cheer. I also desire to thank those ladies who have contributed to our enjoyment by visitations; also to thank the Municipal Council for their kindness in giving us the use of this hall to hold our meetings, free of charge.

I consider the Society in a very prosperous condition at present. Its membership is composed of the very best in town and country, and we need fear nothing as long as we have such members; the Society is bound to succeed.

All of which is respectfully submitted,

W. J. CARPENTER, *Sec. Treas.*

October 17th, 1898.



The Canadian Horticulturist

SUBSCRIPTION PRICE. \$1.00 per year, entitling the subscriber to membership of the Fruit Growers' Association of Ontario and all its privileges, including a copy of its valuable Annual Report, and a share in its annual distribution of plants and trees.

REMITTANCES by Registered Letter or Post-Office Order are at our risk. Receipts will be acknowledged upon the Address Label.

ADVERTISING RATES quoted on application. Circulation, 5,000 copies per month.

LOCAL NEWS.—Correspondents will greatly oblige by sending to the Editor early intelligence of local events or doings of Horticultural Societies likely to be of interest to our readers, or of any matters which it is desirable to bring under the notice of Horticulturists.

ILLUSTRATIONS.—The Editor will thankfully receive and select photographs or drawings, suitable for reproduction in these pages, of gardens, or of remarkable plants, flowers, trees, etc.; but he cannot be responsible for loss or injury.

NEWSPAPERS.—Correspondents sending newspapers should be careful to mark the paragraphs they wish the Editor to see.

DISCONTINUANCES.—Remember that the publisher must be notified by letter or post-card when a subscriber wishes his paper stopped. All arrearages must be paid. Returning your paper will not enable us to discontinue it, as we cannot find your name on our books unless your Post Office address is given. Societies should send in their revised lists in January, if possible, otherwise we take it for granted that all will continue members.

✦ Notes and Comments. ✧

A TERRIBLE CYCLONE visited the Niagara District in September, breaking down and uprooting strong trees, unroofing factories, carrying away houses and churches, and of course destroying the fruit crop along its whole course, from Port Dalhousie to Merritton and onward. How fortunate that its course was limited in width to about 100 yards.

THE NOVA SCOTIA PROVINCIAL EXHIBITION at Halifax had a fine fruit show of about 2,000 plates of apples, pears, plums and grapes, the last week of September. The Horticultural Hall was under the care of Mr. J. W. Bigelow, Supt. of the Nova Scotia Horticultural Society. Prof. Sears, of the Horticultural School at Wolfville was on hand with microscopes to show objects of interest to fruit growers.

THE MINNESOTA HORTICULTURAL SOCIETY at their December meeting recommended the following three varieties of Russian apples as alone really worthy of cultivation, viz., Duchess, Hibernial and Charlemoff.

SPRAY FOR CABBAGES AND CAULIFLOWER.—The growing of these vegetables of late years has been most discouraging, owing to the cabbage worm (*Pieris rapae*), and the cabbage looper (*Phesia brassicae*). Bulletin 144, Geneva Experiment Station, treats of the successful treatment of these enemies by the use of the Resin lime mixture, the preparation of which is therein described. By the use of it the yield can be increased 60 per cent. to 100 per cent.

DEFINITE RESULTS were obtained in

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an experiment in thinning Kieffer pears at Maplehurst this season. Two trees on which the fruit had set very heavily were selected, and the smaller one (bearing approximately about six-sevenths of the crop on its companion tree) was thinned on the 26th May, very shortly after the blossom had fallen. Eleven-twelfths of the fruit was removed. As early as the 4th July a visitor to the farm being asked if he noticed any difference between the two trees, remarked on the superior size of the pears on the thinned tree. Both trees were picked on the 22nd of Sept. The thinned tree gave three and a third baskets, and the tree not thinned only two and a third, and the pears on the thinned tree were about twice the size of those on its companion tree. In view of the fact that Kieffer pears usually load very heavily, and also are much improved in quality if removed from the tree at a much longer time before maturity than other pears, these results would seem worthy of further test. In the case of pears in general, an early thinning soon after the blossoms fall, would seem to lessen the natural drop from the tree, a greater number of fruits coming to maturity on the thinned trees than on those not thinned. Late thinning of pears would seem to be useless and unprofitable. In the case of early thinning it is yet doubtful whether the increase in the harvest will compensate for the expense of thinning.

CANADIAN FRUIT AT OMAHA.—We are pleased to receive word from Mr. H. C. Knowlton, Commissioner in charge at Omaha, that the shipments of sample fruit sent him are arriving in good condition, and are creating a favorable impression upon the people there, who have entertained the common erroneous impression that Canada is a land of snow

and ice. Shipments have gone forward from the Central Experimental Farm, Ottawa; from the Experimental Farm at Agassiz, B. C.; from Essex and Lincoln Counties in Ontario, and from Wolfville, N. S.

THIS IS A BUSY MONTH with the fruit grower. His orchard needs ploughing; rubbish must be cleared up and burned; the vineyard may be pruned; the raspberry plantation cleared of old canes; currant bushes may be transplanted; ladders and implements should be cleaned, the woodwork painted and all put away in a dry sheltered place.

THE AMERICAN APPLE BARREL.—The U. S. National Apple Shipper's Association passed the following resolution, August 6, 1897:—"That this Association recognizes as the standard barrel for apples, a barrel which is of the capacity of a flour barrel, which is $17\frac{1}{8}$ in. in diameter of head, and $28\frac{1}{2}$ in. in length of stave, and bulge not less than 64 inches, outside measurement."

GRADES FOR APPLES.—We notice the grades adopted by the U. S. National Apple Shipper's are about the same as those adopted by us in our export trade to Great Britain, which we call A No. 1, and No. 1. The following is the resolution of that Society:—"That the grade No. 1 shall be divided into two classes, A and B. That the standard for size for class A shall not be less than $2\frac{1}{2}$ inches in diameter and shall include such varieties as the Ben Davis, Willow Twig, Baldwin, Greening, and other varieties kindred in size. That the standard for class B shall not be less than $2\frac{1}{4}$ inches in diameter, and shall include such varieties as the Romanite, Russet, Winesup, Jonathan, Missouri Pippin, and other

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varieties kindred in size. And further, that No. 1 apples shall be at the time of packing practically free from the action of worms or defacement of surface, or breaking of skin, shall be hand-picked from the tree, and of bright and normal color and shapely form."

THE WHITESMITH GOOSEBERRY—The finest samples of Whitesmith gooseberry we have seen this season were sent us by Mr. Thos. Beall, of Lindsay. Good samples came from Mount Forest, and still better from Brampton, but none equalled his; so we wrote, asking conditions under which Mr. Beall had attained his success. In reply he writes:

I know of nothing peculiar in either the climate or the soil in this locality which especially tends to the production of finer fruit than is elsewhere produced. The soil is, generally, a heavy clay, with a large admixture of limestone pebbles about the size of potatoes. The requirements for the production of superior fruit—gooseberries—seems to be:—that the soil be kept well cultivated to a great depth; stable manure liberally and judiciously applied; the bushes to be annually pruned, so as to prevent the growth of too much wood, both in number of shoots and in their length, and in such a way as to allow the freest possible circulation of air through the bushes, and at the same time to permit of a sufficient growth of fresh wood to exclude the sun's rays from the fruit during July, when the thermometer may range from 85° to 95°: and also, that from the time when the leaf-buds begin to enlarge in the spring until the leaves are about to drop in the autumn, the bushes be continuously sprayed with copper sulphate, Bordeaux mixture, or potassium sulphide. Each of these applications may be advantageously given at proper times.

THE BURLINGTON HORTICULTURAL SOCIETY will receive some notice in the next number. We have photographs of some of the orchards and of some of the fruit growers of that locality, and invite further contributions.

We shall welcome photographs of gardens, flowers, prominent fruit growers, with notes about same, from any of

our Societies, or individual members who will favor us in this regard.

CANADIAN CHESTNUTS are quoted in Montreal at 8 to 10 cents a pound; and shelled walnuts at 22 cents a pound.

CANADIAN GRAPES are advancing in price in Ottawa and Montreal markets, the supply being far short of the demand. The crop is really much below the average in quantity. Mildew has also been troublesome in many cases, where not sprayed.

THE PRINCE EDWARD ISLAND HORTICULTURAL SOCIETY has been formed under very favorable auspices, thanks to the exertions of the Rev. A. E. Burke, P.P., of Alberton. We have just received from the Secretary, Peter McCourt, twenty names of members of this Society, who wish to become also members with us and receive our literature.

THE lovely lawns and flower-beds round the Parliament buildings were looking very beautiful this fall; when the plants were in full bloom, the artistically arranged scheme of coloring was well worth going to see. Some southern ladies who have been staying in town were admiring these grounds greatly the other day, as, indeed, all the strangers have done who have gone to see the Legislative buildings this season. Mr. Houston, the head gardener, deserves great praise for the success of his labors and of those which are carried out under his direction.

POINTS ON GRADING.—The Fruit Trade Journal gives the following hints: Fruits and vegetables need to be graded the same every year. Smaller potatoes

NOTES AND COMMENTS.

may be sold more readily in August and September than later in the fall. Northern cities depend on the stock south of them in early fall, and usually that is not so fine as the late northern stock. If one ships before time for storing, the market takes smaller tubers than it will for winter use. When there is only half a crop of any kind of vegetables or fruit one can safely ship a product that would be not wanted at all in a year of abundance. The rule is, however, that a city pays good prices for a choice article, while a local market is the safest for a poor article. Ship only such crops as are or can be made choice in quality, and accept whatever may be gotten at home for the second class stuff.

THE ANNUAL MEETING of the Ontario Fruit Grower's Association will be

held in the City Hall, St. Catharines, on Thursday and Friday, December 1st and 2nd; sessions to begin each morning at 9.30; each afternoon at 2 p.m.; and each evening at 7.30. An interesting list of topics will be brought up for discussion, and every meeting is open to the public without any charge.

Among the persons expected to be present and aid us at these meetings are Dr. Wm. Saunders, Ottawa; Mr. C. C. James, Toronto; Dr. Mills, O. A. C., Guelph; Mr. C. C. James, Deputy Minister of Agriculture; Prof. J. W. Robertson, Ottawa; Prof. McCoun, Ottawa; Prof. Hutt, of the O. A. C. Guelph; Mr. W. M. Orr, Superintendent of Spraying for Ontario, and many others. Suggestions of topics will be gladly received. Write for full programme, to the Secretary, Grimsby, Ontario.

LATE TOMATOES.

PICK your tomatoes when there is danger of frost; handle them very carefully, so as not to bruise them, for a bruised tomato is sure to rot. Place them in a moderately well lighted room where they will not freeze. If convenient, keep them in crates, baskets or boxes, or in piles around the wall, in order that they may be convenient for handling over, which should be done every few days, picking out the ripe and those getting ripe and all damaged ones. Tomatoes handled in this way will nearly all get ripe and be as good as if just picked from the vines, and will extend the tomato sea-

son from 2 to 3 months.

Pick your tomatoes when dry if you can; if compelled to pick when wet, spread them out so they can dry and then pile them up again, as they ripen fresher in a pile. If in danger of a frost coming unexpectedly in the night, pull the vines, putting them in piles, covering them up if convenient, if not, only those on the outside will freeze. Frosted tomatoes will not keep when ripening. All tomatoes too small for other use may be pickled in salt, the same as cucumbers, and soaked out and used for pickles, or any other use, the same as fresh ones.

⇒ Question Drawer. ⇐

Sarah Raspberry.

1034. SIR,—Kindly let me know whether you consider the Sarah raspberry a suitable variety to plant for market. How would it compare with Loudon, Shaffer or Columbia for hardiness and productiveness.

J. PARKINSON, *Portage la Prairie.*

For hardiness we think it speaks well for Sarah that it succeeds so well at the Central Experimental Farm, Ottawa.

Mr. McCoun, the Horticulturist, says of it:—"The Sarah raspberry continues to give good satisfaction here, being productive and making very strong canes. We have not yet compared it with Loudon as regards yield, but I think it will compare well with that variety and other such sorts. It also seems quite hardy."

This raspberry was produced in London, Ontario, by Dr. Saunders from seed of Shaffer. The plant is a moderate grower, and suckers freely. The fruit is large and round, color deep garnet and very juicy, and very rich; in season it succeeds the Cuthbert.

Ginseng.

1035. SIR,—Can you tell me where I can get Ginseng seed? I would like to try a bed of it, but do not know where to get the seed.

ALFRED LAKE, *Newcastle, Ont.*

Ginseng seeds and roots are offered for sale by George Stanton, Summit Station, Onondaga County, New York; or by H. P. Kelsey, 1123 Tremont St., Boston, Massachusetts. The seeds are

sold for \$1.50 per ounce, and the roots at from \$3.00 to \$6.00 per hundred.

Very truly yours,

LYSTER H. DEWEY,
Assist. Botanist, U. S. Dep. Agr.

* Mr. A. Mickle, Grimsby, Ont., also had a few seeds for sale.

Pears for Export.

1036. SIR,—I am about to plant a pear orchard for export, as I think when the Cold Storage is brought down to business shape, there ought to be something in pear culture. My idea is to have two fall and one or two winter varieties. Will you kindly advise me as to whether the Duchess, Kieffer, Lawrence and Anjou would be the right kinds, and if not, what others would do better.

W. B. STEPHENS, *Owen Sound.*

It is yet too soon for us to say what varieties of pears will take best in the English market, but one thing seems certain that small pears are not wanted; and very often this is the fault of the otherwise excellent Lawrence. We had fine prices for Bartletts, Boussock, Clairgeau, Bosc, Duchess, Anjou and Kieffer, especially the Clairgeau and Anjou. We doubt not that the future planter will select among these when he plants an orchard for export. The Anjou succeeds best on the quince, while the Clairgeau does well either as a dwarf or as a standard.


At Thornbury we noticed a very fine standard Clairgeau, bearing heavy crops of magnificent fruit, but unfortunately the owner thought it was Louise, and had shown it at various fairs for that variety, and had actually been awarded the 1st prize!!

Wash tea roses frequently with clean water. Give liquid manure once a week, but have the soil moist when applied.

"Oh, Bridget! I told you to notice when the apples boiled over." "Sure I did, mum. It was quarter past eleven when they boiled over."—Brooklin Life.

* Our Markets. *

THE APPLE MARKETS.

 NTARIO fruit growers who have been digging out their apple orchards by the roots, and beginning over with planting pears or plums, and waiting some years without a crop for the young trees to grow, will feel chagrined this season at the high prices for this king of fruits.

We can easily see the sense in top-grafting an orchard with those varieties most wanted in the great markets of the world; but we cannot sympathise with those who get discouraged with the business on account of one or two seasons of low prices.

That apples will prove a bonanza this season where quality, size and color is right, is evident from reports from all the markets. Even the Trade Bulletin of Montreal, which is always so guarded in its statements in the interests of the buyers and shippers rather than of growers says in its issue of October 7th:

"There will unquestionably be a good demand for Canadian apples in Great Britain during the coming season, as the English crop is very poor, some going as far as to characterize it the worst within the past ten years, and cable reports state that it is nearly all marketed. The Continent, it seems, is nearly as badly off as England, and will have to import considerable, and Germany has already been buying in Belgium. We notice that the large importations of fall fruit into Liverpool, as we anticipated, is having its effect, as Monday's market there showed a considerable decline. On the other hand, Glasgow, which was not ever-supplied, made some good sales of Canadian fruit, which should be satisfactory to shippers. Sales were made in Liverpool last week which netted shippers in the West \$1.85 to \$2, and \$2.10 per barrel. Monday's sales, however, will not turn out such good nets. Every one seems to have a good opinion of winter fruit, and those who hold them say they are confident of a profitable market on the other side.

Of course we write in the interests

of growers, being ourselves one of the most extensive apple growers in Canada, and perhaps we may at times be too sanguine, but when buyers are paying as high as \$2 a barrel for the fruit it is evident that good prices are well assured. Here for example is another extract from the Trade Bulletin of the same date.

"As stated in these columns last week, a large proportion of the winter apples has passed into second hands, and it has since been reported to us on pretty reliable authority that it is known that 150,000 to 200,000 bbls. have been contracted by six or seven different firms. As high as \$2 has been paid for the fruit, which would bring up the price to \$2.50 and \$2.55 per barrel on board cars, which is considered quite high enough. The general range, however, has been from \$1.80 to \$2.05 free on cars. The exports of apples from this port last week were 30,502 barrels against 23,435 barrels for the week previous, and from all ports 42,017 barrels, against 23,435 barrels for the week previous, and 22,786 barrels for the corresponding week last year."

W. N. White & Co., London, England, write in September Trade Journal, the following report on apple crops in Europe and America, which goes to confirm what we have said:

"We say, England has a much worse crop than last year; taken generally, the worst for ten years, and in a fortnight there will be no English fruit left, except a few apples. The pear crop is almost a complete failure. Late plums, owing to the extreme dry weather, are very small, and will be finished next week.

Belgium, the greatest continental exporting country to England, had scarcely any apples at the commencement of the season, and the few now there will be wanted for home consumption. In the districts bordering on Holland, which is their principal early apple country, the bulk of the fruit has gone to Germany.

Holland has the worst crop known for many years.

France, in the south, has some apples, but in the north, owing to dry weather, her crop is almost a total failure, all she has to export,

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will be done in a month. Last year in the north-east she had a very heavy crop, indeed, and in one district the Bellefleurs were reckoned by the thousands of tons. This year there are none.

Germany has a few apples, but not enough for her requirements. She will be an importer this year.

The outlook of England and the Continent is much worse than it was two years ago. At the time it was calculated you could send 3,000,000 barrels, and we made the statement that if the fruit was shipped in proper order we could take them in England and the continent. It is true that owing to a lot of fall fruit arriving in bad condition prices were very low before Christmas, but afterwards higher prices prevailed, and the season finished up well. That season you shipped 2,919,846 barrels. Last year the total only amounted to 913,996 barrels, particularly those arriving here after Christmas. Looking at the various figures we find that 360,000 of these were shipped from New York, the bulk from Western States, which we are told this year are very bad, and they will be buyers for home consumption instead of export. Boston sent 176,000 odd, Montreal and Portland about 300,000 and Nova Scotia about 83,000.

According to my information we think the crops this year can be put as follows :

Nova Scotia, if all reports are true, her exports will reach in the neighborhood of 200,000 barrels.

Montreal and the remaining Canadian ports should have about 450,000 barrels.

Boston and New York may be near 450,000.

If these figures are at all correct, you will have for export this year about 200,000 barrels more than last year ; and we say prices here will rule quite as good as last year as the conditions this side are much worse than last.

PHILADELPHIA.—Messrs. E. B. Redfield & Co., 405 New Market St, write under date 11th October : "Choice solid crab apples scarce and wanted \$4 to \$5 per barrel. Fancy Maiden Blush, Snows, Gravensteins firm at \$3 50 to \$4. Other choice fall red apples sell well also."

Northwestern Fruit Market.

While Canadian fruit-growers have been assiduously cultivating the British market, they seem to have, to some extent lost sight of the possibilities of trade afforded by the Northwest Territories, where tender fruits cannot be grown. Latterly, however, the fruit-growers of the Niagara district have given some attention to the Northwest market, and they hope by the adoption of the proper methods of selection and shipment to avail themselves of the large and constantly increasing demand of that portion of the country, which has been met almost entirely by the importation of California fruits. Prof. Rob-

ertson, though busily occupied in promoting Canada's export trade in natural products, has not been unmindful of the necessities of the west or of the opportunities in this direction of Ontario fruit-growers. He says that there are three essentials to a profitable trade in fruit between Ontario and the Northwest. One is the sorting and selection of fruit, so that the consumer will receive good quality throughout in condition, size, and, as far as practicable, in shape. There is a great risk in handling the more tender varieties of Canadian fruits, because if their liability to spoil quickly after they are received. The natural life of these fruits can be doubled and even trebled if they are cooled before they are put on the railway cars. This treatment retards ripening and thus prevents decay. If they are put in a hot railway car immediately after being picked and after transportation placed in cold storage their life will have by that time almost terminated, with the result that there is pecuniary loss to the dealer and dissatisfaction with the householder. The actual loss of fruit from decay is tremendous. It is not a matter of so much importance to the fruitgrower, as is the loss occasioned by the diminution in the consumptive demand from the dissatisfaction of those who have purchased fruit and found it partly spoiled, which is followed by the breaking down and the keeping-down of prices through the feeling of retail merchants and consumers that the risk is too great to handle and to purchase fruit in large quantities. Careful selecting and proper cooling at the point of shipment would obviate these difficulties. The department, with the view of encouraging the Northwest fruit trade, has been urging fruit-growers to use for all fruits intended for distant markets in Canada ventilated packages, as far as practicable, to cool fruit before it is packed, and to use only refrigerator cars for its carriage. The fruit growers about St. Catharines have put up a large icehouse for cooling their fruit before it is dispatched from the station, and they are now going into the Northwest trade. Hitherto their returns have been unsatisfactory from this source, because of the neglect of the precautions which Prof. Robertson says it is necessary for them to take. Winnipeg dealers have entertained rather a poor opinion of Ontario fruits, and have preferred the California article, because the California growers have adopted these precautionary measures. Another consideration is that while California fruit is inferior in flavor and in quality of the flesh, it is of coarser fibre and does not spoil so readily. The possibilities of the the Northwest fruit market are very great, and with a constantly growing population the consumptive demand is bound to increase.—Toronto Globe.

Liverpool Market.

Messrs. Woodall & Co., Liverpool, write under date October 1st, as follows : "Since the commencement of the season 49,580 bar-

OUR MARKETS.

rels have arrived, against 26,085 barrels to same period last year. Most of the arrivals have consisted of the usual early varieties, and landed in very variable but mostly bad condition, which is almost always the case with this description of fruit, and has been especially so this season, in consequence of the intense heat at time of shipment, as also similar weather on arrival here. The quality generally was disappointing, and even if sound, were not such that would realize satisfactory prices, however scarce the supply. There were some few exceptions, which were eagerly competed for, and showed that the market was ready to give extreme rates for suitable sound fruit. During the present week, 24,287 barrels have arrived, and among them were Baldwins and other winter varieties, mostly immature and unattractive, and although it is perhaps early to form an opinion, they have given the impression that the crop is not of fine quality. Notwithstanding this, there has been a very active demand throughout, and has demonstrated that the English markets are now ready to take larger quantities of American and Canadian Apples, and that the prospects are most promising for a satisfactory season. The market closed strong at yesterday's sales at the following quotations:—

NEW YORK—

Baldwins ..	15/ to 19/6 ..	10/ to 14/
Kings ..	20/ " 26/6 ..	15/ " 19/

BOSTON—

Baldwins ..	12/ " 14/6 ..	9/ " 11/
Hubbardston ..	12/ " 15/ ..	9/ " 11/

CANADIAN—

Gravenstein ..	20/ " 26/6 ..	14/ " 17/
Colvert ..	13/ " 16/6 ..	10/ " 12/
Maiden Blush ..	15/ " 18/ ..	12/ " 14/
Jennetting ..	11/ " 13/ ..	7/6 " 10/

Wasty sell 2/ to 3/ under quotations for slack.

Germany.

A German correspondent of the Trade Journal writes:—The apple crop in our next districts (which are the most important for apples) is fully a failure, our inland has a half crop, but consisting only of ordinary cooking summer apples which will be finished when the American winter fruit arrives. In my opinion we have never had such a splendid prospect for American and Canadian apples as this year, and there is no doubt that sound colored apples will not only command high prices around Christmas, but also during the whole winter.

Our Fruit in England.

The Financial News (London, England), says:—Fruit-growing has developed so extensively in Canada that native fruits, including grapes, are sold in top lots. Among the fruits

which arrangements are being made to ship to England in larger quantities are pears. Our supplies in the past have been home-grown pears, large quantities imported from France, and considerable amounts from California. "None of these except those grown under glass in Great Britain," says Prof. Robertson, "compare in flesh or flavor with the finest Bartlett pears from Canada. Now that cold storage," he proceeds, "has been provided, it has been demonstrated by trial shipments last year, that pears can be landed in Great Britain in first-class condition. The smaller packages which were recommended by the Department of Agriculture last year are being entirely used this season, with every prospect of complete success. Trial shipments of peaches will also be sent forward. The information gained last year will permit these also to be landed in good condition. Hitherto peaches in Great Britain have been a dainty fruit for the very rich only. At the prices at which they can be laid down there from Canada it is expected that they will be used more and more by large numbers of people. Tomatoes have been landed in good condition in past, and further trial shipments of small quantities will be sent this year. The report is that the British and French tomato crops will ripen about a fortnight later this year than usual, owing to the comparatively cool weather of the summer in those countries. The result of this will be that the largest supply of tomatoes will be in the British markets at the time when the Canadian tomatoes would be fit for sending; consequently, only sufficient quantities this year will be sent to obtain information as to the best method of packing and transportation. Small trial shipments of grapes will also be sent forward. These were landed last year in good condition, but the British public has not yet acquired a taste for the Canadian grapes. Last year a demand was created in some quarters, and the wholesale men say they can handle a limited quantity, but that if a large quantity were sent they would be slaughtered. The policy of the department is to send forward limited quantities of the most likely varieties, with the hope that the trade will gradually and naturally grow.

Foreign City Markets.

City markets in the large cities of the temperate zones at this season of the year are at their best in display of orchard and garden products. Then these distributing centres, the perishable produce of the farm, orchard and garden are very largely sent to the consumers. The origin of the central city market dates back to early antiquity, where we find the "market place" set aside for the disposal of marketable products of all kinds; gradually the crude systems and methods practiced in that early period became changed to suit the conditions of supply and demand of different countries.

A visit to the city markets of foreign coun.

tries furnishes a most interesting theme for study and investigation of methods and systems in comparison with those practised in America. London, the great distributing centre of England, and into whose markets the produce of the world finds its way, has two central markets, "Covent Garden" and "Spitalfields Market." The former, being older and larger, and situated in the heart of London, supplies a large portion of the inhabitants, including the *elite*. The latter is situated in the east part of the city and supplies the poorer classes of the great metropolis; and in times of glut or congestion of any product in the market is by far the better of the two. Both markets practice the same methods of buying and selling. Each is protected by a shed, covering several blocks, the space of which is divided into stalls, auction stands and temporary storerooms, every available foot of space being utilized. The curbing surrounding the market is lined with wagons from which produce is sold. The rent for wagon space averages about £1 per month, while in the interior, stall space rents as high as £5 per foot, the proceeds of which go into the city funds.

The markets open for the receiving of produce at 4 a.m.; and for the next two hours everything is astir getting things in readiness for the morning sales. Hundreds of wagons empty here their tons of produce. By six o'clock sales begin. The first visitors are the retail grocers from all parts of the city, who hurriedly purchase what their customers demand and rush back to business. Following these come the hotel stewards and boarding house agents. Between ten o'clock and noon the wealthier classes make their purchases. Succeeding them come the commission men, who deal largely with the outside trade.

The English market lacks the variety and taste of display characteristic of the typical American market. This is due to the conservative tastes and habits of the English people, and makes it one of the easiest markets to be supplied by the commission man or the producers. Fruits sent by cold storage and rapid transit from all parts of the Occident and Orient, packed and arranged in many ways, find their way into this market at seasons of the year when the home supply is exhausted, practically producing a continuous market the year round. The commission men are made up chiefly of Jews, who are thorough business men and excellent salesmen. Their busiest time is during the apple and potato season. Apples are disposed of in hundred and thousand barrel lots by auction sales. Sample barrels only are exhibited at the auction block. To the outside trade in the smaller cities and towns out of London sample baskets of fruit in stock are sent, by means of which the trade is enabled to purchase. Those seeking sales in the English market find that to receive the highest prices, uniformity of package, packed to suit the consumer, is the secret of success. The English buyer appreciates the attempt of the seller to establish a reputation by the shipping of first-class, graded goods, and never forgets either in price or patronage.

The city markets of continental Europe vary greatly. In some of the countries high types of markets may be found; but generally the opposite is the rule, and in many instances the methods employed seem indeed antiquated. In Holland the market gardens of the cities are on the docks bordering the canals passing through the streets. Produce is sold from these docks and from the boats. Market hours are from 4 a.m. to 10 a.m. All sales are made in a quiet way and with a lack of interest. While the fruit and vegetables are spotlessly clean, they are crudely exhibited, usually in second-hand baskets, barrels or crates, occasionally in piles in the bottoms of the boats. All flowers are most artistically arranged and find ready sales, as the Holland people are great lovers of flowers.

In the Austrian cities the markets are conducted in open squares set aside by the government. The produce is sheltered by small tents, awnings and huge umbrellas during the market season in spring, summer and fall. Warehouses and retail dealers consume the products in the winter. In Vienna tolls or fees are collected on all produce sold within the city limits. As the bulk of the fruit and vegetables is sold from wagons and temporary stands, order and display are practised but little. The hucksters' business is tremendous. It is estimated that at least one-third of the city's population is supplied with food by them. The apple shipments to the cities of Austria from the surrounding country are made chiefly in boxes, each specimen being wrapped in tissue paper. Only first-class fruit is shipped in this manner, from seven to eight hundred apples being placed in the box. Second-class stock is shipped in barrels, carefully graded and labeled.

The city markets of Italy are very unsystematically arranged; vegetables, fruits, wines, macaroni and cheese are exhibited in the same booth, giving an intermingling of odors. Yet in spite of this irregularity of arrangement, the Italian is noted for his wonderful methods of display in showing his products. Peaches, piums, prunes and grapes may be seen exhibited on fresh leaves and in baskets lined with cut tissue paper of different colors; onions braided into strands of corn husks, pyramids of "palmagean" and "switzer cheese"—all efforts being made to exhibit in as attractive a style as possible. This is a feature observed among the "Dagoes" in our own country who make our best hucksters and street vendors. From early morning until late in the evening, the Italian market is a continual babble. The produce found there is chiefly made up of home products, a large amount of which is shipped abroad.

The German markets are patterned quite extensively after the plans and methods of the English and French markets. They are very clean and systematically conducted.—Large quantities of foreign fruits of various kinds may be found at all times of the year in these markets, for Germany does not begin to produce fruit in sufficient quantities to supply the home demand.