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JULY, 1895.



HORTICULTURIST.

A JOURNAL DEVOTED TO FRUIT GROWERS AND FORESTRY
 EDITED BY L. WOOLVERTON, M.A.
 PUBLISHED BY

* THE FRUIT GROWERS ASSOCIATION OF ONTARIO *

Published at Toronto. † Office Address: Grimsby, Ont.

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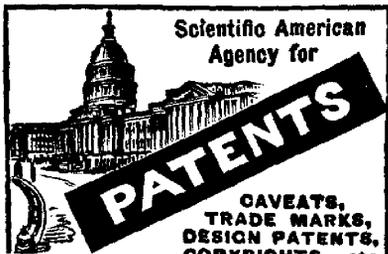
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Feb. 12



MARECHAL NIEL.

THE
Canadian Horticulturist

VOL. XVIII.

1895.

No. 7.



MARECHAL NIEL ROSE.



Of all the yellow roses, the Marechal Niel, which is shown in our frontispiece, is the most beautiful. Globular in form, very large and very full, it is blessed with numerous charms, of which not the least is its rich fragrance. This latter charm it owes no doubt to its musk blood, crossed with the fragrant Teas.

The Noisette class to which it belongs is otherwise known as *Rosa Moschata hybrida*, or Hybrid Musk rose, because grown from seed of the White Musk fertilized by the Blush China, a Bengal rose, by a florist in South Carolina. Philippe Noisette, another florist, raised a seedling of this class and sent it to his brother in France, and called the class after his own name. There, later on, in the year 1864, the Marechal Niel was produced by Paradel, and thus it was given a French name.

We cannot recommend this beautiful climbing rose to amateurs because it is delicate, and can only be grown under glass, and that with careful treatment. The inexperienced will do better with *Solfaterre*; or, if a climber is not needed, with *Perle des Jardins*, which is easily grown and a free bloomer.

The Eldorado blackberry, according to the Ohio Experiment Station, has withstood 12° below zero, is equally productive as the Snyder or Ancient Briton, and the berries superior to those varieties. The quality is good.

GOOSEBERRIES FOR PROFIT.



ANY of your readers at all acquainted with our local fruit markets will not deny that the supply of gooseberries is by no means equal to the demand; and that for those who can command a suitable soil and location, a sure and liberal profit can be realized, at a very moderate outlay of money, time and labor, by their cultivation.

The soil best suited to gooseberry growing has been found to be thoroughly drained, rich, and deeply worked clay loam. These qualities of soil are imperative, as the plant is very impatient, either of excessive dryness or heat. This is the only cause why success with it is at all uncertain. Therefore, with a moderate protection from dryness and heat, the success of gooseberry culture may be looked upon as assured.

To secure these conditions, location must be skillfully used. The plants should be two years old, strong and well rooted, and, if carefully planted, their after growth will be rapid. The ground should be well prepared and marked off in lines four feet apart each way. Thus planting at the intersection of each line makes 2,275 plants to the acre, and will give satisfaction to the workers and pickers, and form a fine plantation after the first year's growth. The ground must be stirred by means of a one horse cultivator, between the rows both ways, and not a weed allowed to be seen. Thus treated, the young bushes make extraordinary growth of wood and the set of fruit buds will be astonishing, repaying all the care bestowed on them. Of course in gooseberry growing, as in every other kind of fruit culture, if one would wish to reap the highest results, increasing vigilance and constant application must be certainly and freely given.

The annual pruning consists of shortening the summer's growth to a moderate extent, and thinning out the crowded shoots. This operation is best done (though very often neglected) in the early summer, as the growth of wood and fruit buds, on that which is left, will be so much better and more encouraging to the grower. After the wood has borne fruit for three or four years, and becomes somewhat old and feeble, cut it entirely out, and encourage young growth in its place. This renewing is very important to all pruning for fruitfulness. I have known a gooseberry plantation to remain profitable for twenty years and over, by proper attention to pruning and cultivation, but at the same time I am no advocate for this kind of thing; as I believe the best results come from young and vigorous plants, as in other fruits, and would advise changing the plantation after ten years' service, as young plants are produced so cheaply that there is no economy in running a plantation after its prime is passed.

The ordinary enemies of the gooseberry are insects, mildews and blights.

The most common insects are the caterpillar of the gooseberry saw-fly (*Nematus velutinosus*) and what is commonly known as the gooseberry worm (*Tempelia grossularia*). The first of these insects is hatched early in May, and so numerous do they become that they will completely defoliate an entire plantation, unless given an application of white hellebore, which will effectually stop their ravages and save the crop. This insect is not nearly so abundant or destructive as formerly. The gooseberry worm mentioned was also a threatening scourge, but its numbers are less and it may disappear from our gooseberry bushes. This insect settles on the gooseberry and devours its contents, then immediately joins itself to another berry, enters and devours it also, and so continues. No remedy is known for this insect aside from hand picking.

Occasionally plantations are attacked with a form of mildew, destroying the fruit and rendering the bushes worthless. In my opinion, the cause of these diseases is atmospheric, and the remedy is, to forbear planting varieties that are subject to such parasitic growths. Happily several varieties have been introduced within the past few years that are seldom, if ever, attacked by this mildew.

In conclusion, I may state that our standard varieties of gooseberries are limited to three or four, as a variety must be at once hardy to stand our climate, free from mildew, a good grower, and an abundant bearer, with fruit of first-class quality; these points are fully developed in Industry, Smith's Improved, Downing and Houghton's Seedling.—Ohio Farmer.

Shelling or Rattling—Disease of Grapes.—The dropping of grapes from the bunches before they are ripe is becoming a serious trouble. The apparently possible causes for this shelling of the grapes include injuries caused by parasites, as insects, fungi and leaf blight; or such an improper condition of the vine as is shown by the shriveling of the stems before the grapes are ripe, by premature ripening of the fruit and the wood, by overbearing and overgrowth of wood and leaves; or by such soil conditions as too rich land, wrong kind of soil, too much cultivation, excessive drouth, especially when followed by excessive rains, a weak root system, lack of phosphoric acid and potash and other elements, and the need of barnyard manure; or by such atmospheric conditions as excessive heat or unfavorable winds. The disease has been studied by E. G. Lodeman, of Cornell University, who finds that neither insects nor fungi are the cause of the trouble, but that potash seems to be the food required by the grapevine in the majority of cases where the berries shell, and that this element may be needed in all cases. The continuous cropping to which most of the shelling land was submitted before the vineyards were planted is considered the principal reason for the lack of potash. Many of the possible causes mentioned will aggravate the trouble.—American Agriculturist.

PRUNING GOOSEBERRIES AND CURRANTS.

Gooseberries.



CONFINE pruning chiefly to thinning out main branches and cutting out weak and exhausted parts, regulating the current year's young wood as evenly as possible over the trees at such distances apart that the hand may be passed down among them without being scratched. Allow no shoots to remain to grow inwards or in reversed positions whereby they tend to crowd the centres, which ought to remain moderately open. Keep the shoots clear of the ground by cutting away the lowest growths. The pendulous-growing varieties require special attention in this respect, and when pruned ought to be cut to upward pointing buds. Prune erect growers to outward buds, and those of spreading growth to inside buds, which will modify to some extent their natural habit, producing more shapely and serviceable bushes. In thinning out, either cut the shoots dispensed with entirely out close to the old wood, or leave them to the extent of an inch, when they will form spurs at the base. A dusting of lime when the bushes are damp is good for the trees, destructive of insects, and a preventive of birds taking the buds. If manure is needed draw the earth from below the branches till the roots are visible, then spread a layer of decayed manure on them, covering with a sprinkling of fresh soil. The remainder of the soil outside the radius of the roots may be manured and forked over, or the latter alone will do where the ground is rich and the trees productive.

Red and White Currants.—As the disposal of a proper number of branches—usually five to seven in ordinary sized bushes—is effected early in the existence of the bushes the pruning is a very simple matter. It consists in pruning back to within an inch of the main stems all the side growths produced during the summer, shortening the extension growths in the same way with full-sized bushes, but in those required to extend, leave a length of not more than nine inches. With weakly trees six inches is enough. The object of shortening the branches to these distances is to cause proper breaks or side shoots, and to strengthen the stems so that they can bear the large crops of fruit which are annually produced from the clusters of basal buds congregated on the spurs. Give the trees a good dressing of manure over the roots, and sprinkle the branches with fine lime, which serves to cleanse them of moss, and otherwise benefits them, as well as preserving the buds from birds, which, however, are not so destructive with currants as gooseberries.

Black Currants.—These bear differently, and, in pruning, abundance of young wood must be left, confining the pruning to thinning out the oldest branches, and a large proportion of the latest bearing shoots. Strong sucker-like growths from the base may be freely encouraged, or vigorous growths from

any part, but preferably originating in the lower parts of the bushes, can be utilized, avoiding crowding. All the wood removed should be cut out cleanly, none being left to form spurs, as in red and white currants, though short stubby spurs which form naturally and have received light and air freely, must be retained. Shortening the leading shoots need only be adopted to regulate the size and symmetry of the bushes, but this is best effected by cutting out the longest branches from time to time.—Tonic.

NOTES ON THE LATE FROSTS.



WHEN you ask me to write you a few notes on roses and their behavior this season, it is clear to me that you have no proper conception of what we have passed through in this up-country since the winter left us. I might say that roses with us have had no chance to behave this season. They are like the youngster at school who said every time he tried to do his best, he got his head snubbed off. On the tenth of May my roses were trying to do their best, and I never had such a promise for a magnificent blooming season. One week after there was not a leaf of living foliage on them, and so great was the shock to them from the repeated frosts that many of my finest plants have not recovered, and never will. Out of over a dozen strong Gen. Jacques bushes I have but four sending out new shoots. Many other sorts still more tender are totally dead.

This may appear strange to you, but, when you remember that the County of Perth occupies a very high altitude midway between the great lakes, and that just here we are in a dip or slight depression on that high level, the first stretches of the Thames valley, you can understand how every cold wave settles down upon us with all its chilling destructiveness. On account of these topographical conditions which I have referred to, we are, I believe, more subject to those low treacherous temperatures than any other section of Western Ontario. I have not in any other section noticed the raspberry bushes so completely destroyed as they are just about here. The Marlboro shot out again from the canes, but the Golden Queen and Cuthbert canes are as dead as the wood of last year. On fourteen plum trees and a like number of pear trees that I had heavily loaded with blossom, I will not have fourteen specimens of fruit, and I notice some branches of my Pond's Seedling plum trees have died away since the foliage was destroyed. Among the gooseberries the Crown Bob seems to have survived the best. The Whitesmith, Pearl, Industry, Ocean Wave, and even the Conn, were quite destroyed. Of currants I had a promise of forty or fifty pailsful before the frost, now I do not look for one. In short, I may write of fruit and roses with me this year as the traditional Irish litterateur did when asked to write a treatise on the snakes of Ireland. He summed up the whole subject with the sentence, "there are no snakes in Ireland." Such, I am sorry to say is the case with me, there is no fruit and no roses on my premises this year.

Mitchell.

T. H. RACE.

THE CULTURE OF BLACK CURRANTS.



NOTHING is easier of culture than the black currant, as it grows and bears well in any tolerable garden soil. To propagate them it is only necessary to plant in autumn or early spring, cuttings a foot long, in the open field or garden, and cultivate them; they will root readily. The black currant should never be allowed to produce suckers, and in order to prevent this, the superfluous buds should be knocked off when the plants are transplanted. This will keep them always in the shape of trees, with single stems and heads branching out at from 12 to 20 inches from the ground.

Thin out the useless wood every winter, and if extra large fruit is desired, pinch off all the ends of the strong-growing shoots about the middle of June, when the fruit is about half grown, thus keeping the plant from spending all its energy in producing too much wood. I prefer, for large plantations, Black Naples, Champion, and Collins' Prolific. I prefer to plant in check rows, $5\frac{1}{2}$ feet each way. Perhaps there is no place in the world where better black currants are grown than Great Britain and Holland. They are called currant trees, often having clean stems on them three and four feet high. Keeping a clean stem from 12 to 20 inches, enables one not only to till them easier, but to use a picker, which I will endeavor to describe: It is in the shape of an inverted umbrella cover—see Fig. 780. Put a canvas cover on the inside of the ribs of a large bamboo-ribbed umbrella; take out the braces and handle. To keep its shape opened out, two steel No. 9 wires are fastened on the inside by being wired to each rib, one near the outside, and the other near the bottom. These give enough spring to clasp it around a stem, as it has to be opened only about one inch to let the stem through the slot on the side to the centre of the picker. The whole is mounted on three portable legs made of umbrella braces. Near

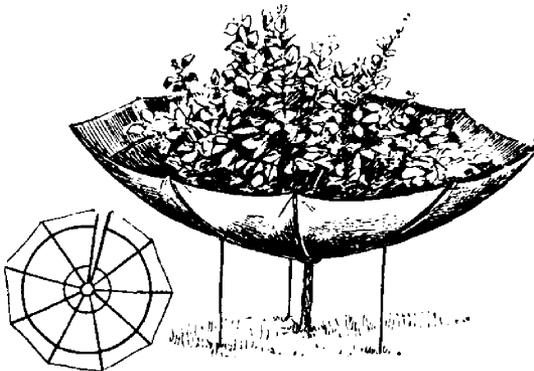


FIG. 780—A PICKER FOR BLACK CURRANTS.

the trunk where the stem socket is, a piece of cloth is sewed to make a pliable and close fit round the stem when the picker is clasped together.

When the currants are ripe, adjust the picker as high as possible on the stem under the top. Around the lower part of the stem, immediately under the picker, clasp or wind a piece of thick felt; hold it with the left hand, and in the right use a wooden mallet with felt tacked on each end. Gently tap the stem all around, and watch the currants fall. If ripe, scarcely one will be found on the bush. Unclasp the picker, let down the legs and empty the contents into a bag or basket. That's picking currants by an improved method, and one that will do away with all hand-picking. If people will let them get ripe, they sell better, are larger, and bring the same price as earlier, as black currants seldom vary in price.

As the fruit comes from the picker, a large amount of dead leaves, stems, etc., will drop also, which necessitates hand-cleaning to make it salable. This is all easily overcome if one has an old fanning mill. Take out all the sieves but the screen; one inch above it tack a canvas, or, better, make a canvas screen. If the currants are large, use the bean sieve; put this as near the hopper bottom as possible. Under the mill where the cleaned fruit comes out, spread a sheet or canvas to catch currants, and pick them up for basketing. Fill the hopper the same as with grain, turn gently, and watch results. This is another labor-saving job accomplished. Why pay pickers 20 cents a basket for picking and cleaning a 10-quart basket, when you can save that much, do ten times as much as one man, and grade your currants, too, if you choose?—R. N. Yorker.

Pruning Fruit Trees.—In pruning fruit trees, attention has to be given to the manner in which the particular kind bears its fruit. The cherry and the pear both bear their fruit on short spurs, and in trimming, therefore, the effort should be to produce a large quantity of healthy fruit spurs. Summer pruning does this admirably. The branches that we want to remain as leading shoots should not be touched; but the weaker ones may be pinched back, about mid-summer, one foot or two-thirds of their growth. This will induce the swelling of a number of buds that will produce flowers instead of branches, and in this way fruit spurs can be obtained on comparatively young trees; but with such kinds as the grape vine, the fruit is borne on the branches of last year's growth, so that the effort should be to throw all the vigor possible into those growing branches that we want to bear fruit the next season. To do this, we pinch back the shoots that we do not want to extend; or even pull the weak shoots out altogether. A little pruning is then necessary, in the winter, to shorten back these strong, bearing canes, or to prune out altogether the weaker ones that we check by pinching back during the growing season.—Meehans' Monthly.

NOTES ON VARIETIES OF STRAWBERRIES.



YOU will find enclosed some short notes on a few varieties with outline of berry taken from actual specimens. I have a number of others, but cannot lay my hand on them. In making those outlines typical berries were used, not monstrosities but berries that would give a good idea of the general shape of the variety. I might have got larger specimens of all the varieties, but they would not have been types of the variety. I have made preparations to make outlines of all the best varieties the coming season, will then furnish you with others.

I.—Haverland (P). A variety originating in Ohio. This is one to grow enthusiastic over. It is one of the best, if not the best of all; when one sees the ground covered entirely with fruit, from the first of the season to the very end of it. The originator may well be proud of it. It is magnificent in its foliage; most numerous in number of runners, enormous in quantity of fruit. The fruit is large to very large. Its only fault is, it is somewhat soft; of fair quality. It is certainly a berry for the home grower, and near market. Perhaps not suited for long distance shipment. Color rather light. As a producer of fine large berries nothing else with us equals it. It gives large fruit to the end of the season, and is one of the first ripe.

II.—Bubach (P). Originating in Illinois. Here is another grand standby. The foliage is all any one could wish for, both in thrift and color and health; not a trace of rust; it makes runners fast

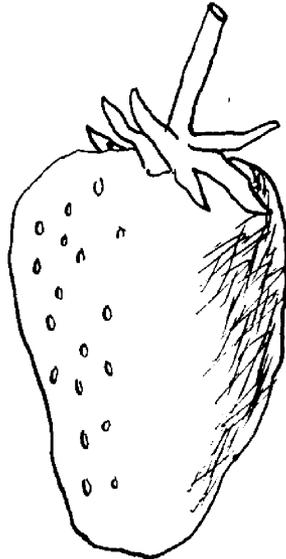


FIG. 781.—HAVERLAND.

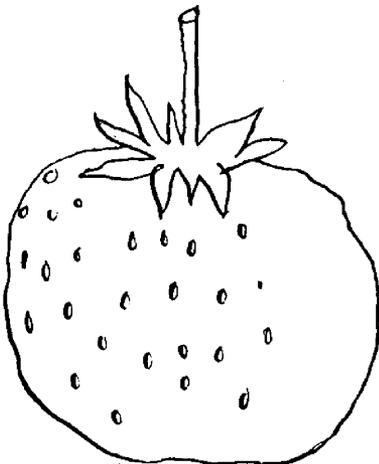


FIG. 782.—BUBACH 5.

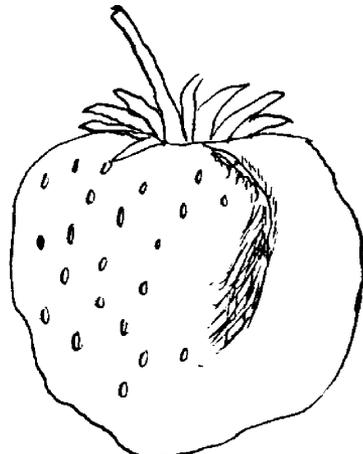


FIG. 783.—BUBACH 5.

enough for a grand row to fruit. The fruit is remarkable for its size and fine color. We place it among the productive ones. Fruit enormously large and very showy; good quality; sweet. It is perhaps the very best for the home grower, and near market, always selling and bringing good prices when the market is glutted with Crescent and other trash.

III. — Warfield No. 2 (P). Originating in Illinois. This is a wonderfully strong grower and great producer of plants, it resembles the Michel's Early in this respect, making almost too many runners. It is very productive, we place it along with the Haverland in productiveness. Fruit medium to large in size, is one of the firmest in the berry—equal to the old Wilson in this respect. Quality good and of a fine rich dark color. The berries are all perfect in shape, regular, no ill-shaped ones. It is one of the best, if not *the* best for long shipment—carrying in good condition the longest distances to market.

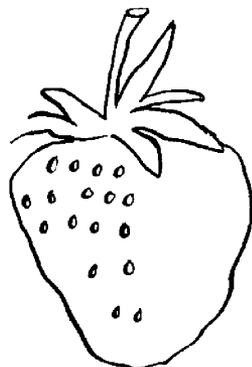


FIG. 784.—WARFIELD.

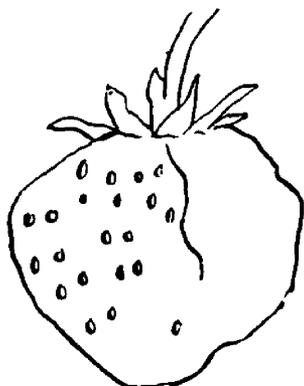


FIG. 785.—ANNA FORREST.

IV. — Anna Forrest. Foliage large and healthy. The fruit is large, somewhat irregular; sweet and pleasant. It is a free runner; only moderately productive. The fruit colors up something like Sharpless. Altogether, with us, it is not a promising variety; we have decided to discard it. So many better ones.

V.—Dayton (S). Originating in Ohio. This is a strong healthy grower, making many runners; plant very healthy. The fruit is large, light in color, not very firm, and only moderately productive. We have planted it two seasons, in doubt about it, but have about decided to discard it; there are so many better that we have *no* doubt about.

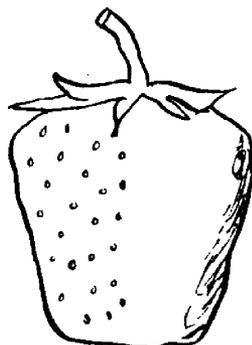


FIG. 786.—DAYTON.

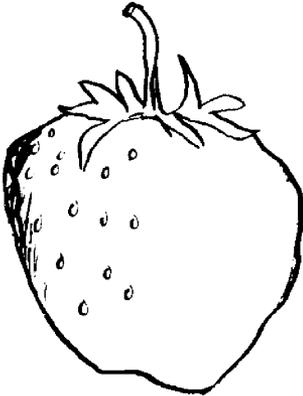


FIG. 787.—PRINCESS.

VI.—Princess (P). Originating in Minnesota. This is a good strong grower; plant very healthy and making plenty of runners. The fruit is large in size, good shape, fine to look at, rather soft, not very productive. We are giving it a further trial. There are some parts where it seems to produce large crops of the finest berries.

VII.—Greenville (P). Originating in Ohio. Here we have another grand berry, about which there is no doubt at all in anyone's mind, but all pronounce it at once one of the first class. We place it up alongside Bubach, if not in front. It very much resembles Bubach in color of plant, but it is a freer grower, making many more plants; it is more productive. The fruit is not quite so large; about the same in firmness. It certainly is one of the best for the home grower, or near market. No one can go wrong in planting largely of the Greenville.

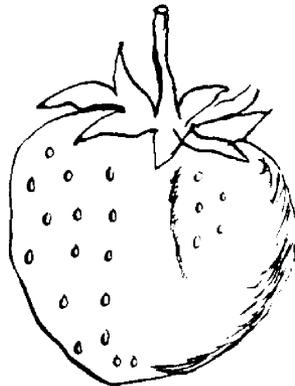


FIG. 788.—GREENVILLE.

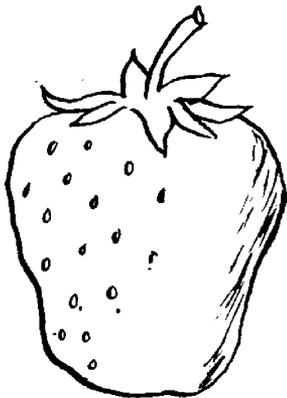


FIG. 789.—MARSHALL.

VIII.—Marshall (S). Originating in Massachusetts. The plant of the Marshall is very large, stools somewhat before sending out runners; rusts somewhat, plant though is vigorous. The fruit is large, dark-red, good shape and fine quality, productive. One of the best to grow for show berries. Have fruited it only one season. Will be better able to decide its merits after further trial.

IX.—Maple Rank (P). Originating in Ontario. A strong healthy grower, good runner, making wide matted row. The fruit is large, rich dark crimson and very firm. The shape is good, it is one of the finest, and thus should be a good shipper. If it grows to be as good in other places as with us, it will take a first place. It is being tested at several places North, South, East and West, before being offered to the public.

E. B. STEVENSON.

*Experimenter in Strawberries,
Lowville, Ont.*

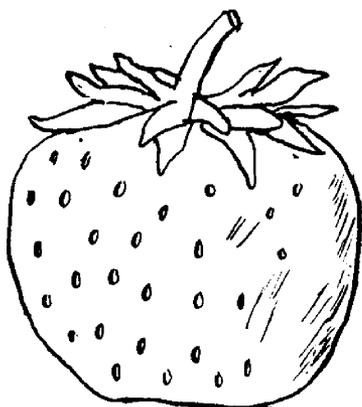


FIG. 790.—MAPLE BANK.

FRUIT ROT.



THE rotting of the ripening fruit of cherries, plums, peaches and other fruits, frequently causes serious loss to the fruit grower. A fungus of the genus *Monilia* attacks the fruit and causes it to rot. The rotted fruit afterwards becomes covered with a gray powdery mould and frequently hangs to the tree till the next summer, in a dried or mummied form. The gray powder consists of the germs of the disease, which may be washed by rains, blown by winds, or carried by insects to other parts of the tree, thus spreading the disease. The mummy fruits carry the disease over from one season to the next, and therefore the collecting and burning of these fruits appears to be a good sanitary measure. The fungus begins its attacks early in the spring, often destroying many of the blossoms. These decaying blossoms are blown about by the wind, thus spreading the infection. It also attacks the leaves and young twigs, but it is on the fruit that it commonly does the most damage. It attacks the fruit at any stage of its development, but spreads most rapidly when the cherries are nearly ready to pick. With warm, moist weather at this time, the disease spreads very rapidly, often nearly destroying a crop in a few days. Many of the cherries rot and fall to the ground while others dry, and hang to the branches over winter, as stated above.

Remedy.—As in the case of the leaf blight described below, we are only prepared to offer suggestions as to the orchard treatment against the fruit rot, as follows :—

1. Just before the blossoms open apply Bordeaux mixture.
2. Just after the blossoms fall apply Bordeaux mixture as before, with the addition of one ounce of Paris green for eighteen gallons of the mixture. The Paris green is used against the curculio which causes wormy cherries.
3. Make a third application from ten to fourteen days after the second using Bordeaux mixture and Paris green as before.—New York Exp. Station.

STRAWBERRIES AT MAPLEHURST.



HE first fruit of the season, how eagerly sought after, and how much enjoyed by all. Many think only of it as a luxury, after all, and on that ground refuse to furnish their tables with fruit more than for an occasional feast. This is all a mistake, for the strawberry is a nutritious article of diet. About ten per cent. of its substance is dry matter; one-half of which is nitrogenous, or flesh-producing.

True, about ninety per cent of the strawberry is water, but eighty-five per cent. of milk is water, and who denies that milk is nourishing food?

Unfortunately, this season is not favorable for a good crop of this most delicious fruit. The extreme drouth throughout Southern Ontario has almost ruined the crop, and even the advanced prices do not pay the grower. A grower near Grimsby Park has been irrigating his patch, elevating the water with wind-mill power. His crop, as a result, is almost phenomenal.

Two varieties among the late comers we have tested for two seasons, and are quite prepared to discard, viz., Michel and Bubach 24. These varieties are both very early, ripening about the 1st of June, but both are too unproductive to be profitable. The foliage, also, is very weak, and the whole plant is very sensitive to drouth. These varieties much resemble each other, and are good dessert varieties, but not worth planting in the commercial plantation.

Mr. T. T. Lyon, of the South Haven (Mich.) fruit-testing station, agrees with us in this estimate of those varieties. Under date 12th June, he writes: "The drouth and extreme heat are sadly pinching our strawberries. Michel is now almost past season with us (it ripens the crop almost at once), but yours are, no doubt, genuine. It is not profitable here. Bubach 24 is not quite productive enough here. The fine specimens of this are also gone with us. I doubt if it is at all disseminated. The same of Bubach 132 and 137. I have dropped all except 5 in my recent planting."

Saunders is a fine variety, of large size, and quite productive. It is about the same season as Williams, beginning to ripen the 10th of June this year; quite as productive, as vigorous, about equal in size, and a better berry.

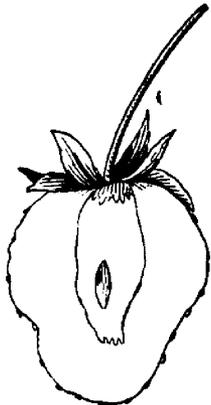


FIG. 791.
SAUNDERS IN '95.

It has also something of that agreeably brisk flavor, so characteristic of the old Wilson. This season, however, it is much inferior to last year, owing to the drouth.

Laxton's Noble was so highly commended in the Garden (London) that we expected great things of it; but, like other foreigners, it is ill adapted to Canadian soil and dry seasons. The foliage is somewhat subject to rust; the berries, instead of being immense in size as they are in England, are quite ordinary in size, and the

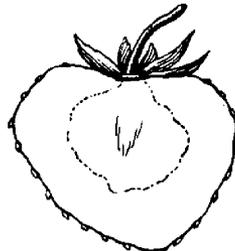


FIG. 792.
LAXTON'S NOBLE IN '95.

plants are not very productive, at least, that is our experience for 1895. The quality is very good, the flavor mild and agreeable, for dessert purposes. The season is late, the first ripe berries coming on June 15th.

The Woolverton strawberry has done well at Maplehurst this year. The vine appears to root deeply, and, therefore, is less susceptible to drouth than most varieties. Standing at one side of the patch, it is very easy to distinguish the rows of this variety by the dark green color of the foliage, and vigor of growth. The fruit is also large, the finest samples taking a somewhat flattened shape, as shown in Fig. 793, and the others more evenly conical. They color dark red, and the flesh is fairly firm and agreeable in flavor, with very little acid. They seem to yield well, also, as is shown by the accompanying photogravure (Fig. 794).

This berry is a seedling grown by Mr. John Little, of Granton, and named after the editor, for which reason we hope it may prove a success.

The Enhance, too, disappoints us this season at Maplehurst. The vines are laden with fruit, but apparently so sensitive to drouth that they will be very small in size. We will not report definitely concerning them until next season.

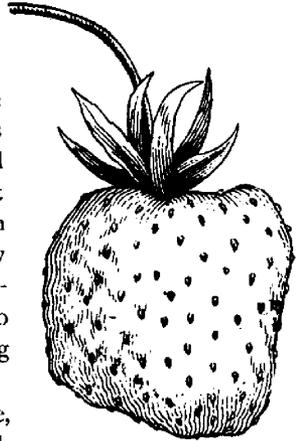


FIG. 793.
WOOLVERTON IN '95.



FIG. 794.—A BUNCH OF WOOLVERTON STRAWBERRIES.

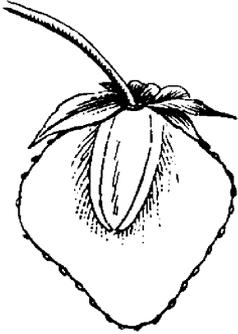


FIG. 795.—CAUGHILL.

Caughell's Seedling. This berry was sent us from Mr. G. H. Caughell, Aylmer, the originator. The vine is fairly healthy, fairly vigorous, and fairly productive. The berry is above medium size, conical, necked, with moderately firm flesh, of good quality. Ripened its first berry July 11th. Needs further trial.

The Spraying Outfit at Maplehurst is fairly well shown in the accompanying engraving, drawn from a photograph. Sometimes two horses and three even are used, but for ordinary use the one-horse outfit is the most economical.

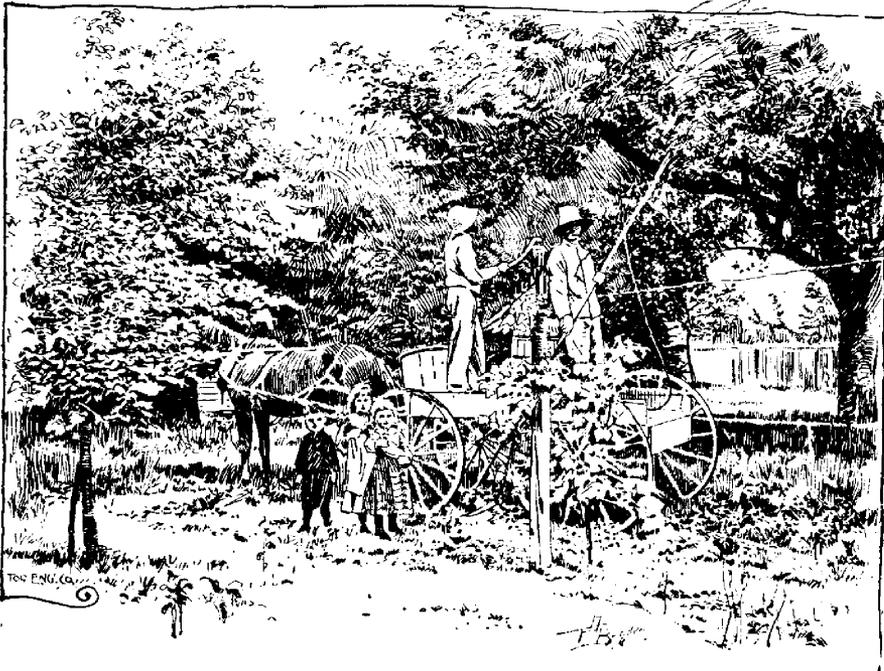


FIG. 796.—THE SPRAYING OUTFIT AT MAPLEHURST.

MIDSUMMER AMONG THE SMALL FRUITS.



TO a large extent the success of future years with the raspberry, strawberry, and similar fruits, will depend upon the care they receive during the summer. At this time they are making new growths, and if proper care is given them, they will make strong plants that will be able to form large and plump fruit buds for the next year's crop. It often happens that a severe drouth during the summer checks the growth of the plants, and, if a warm wet autumn follows, which causes the plant to make a second growth, they will most likely be injured by the winter. The judicious cultivator attempts to give such care as will tend to prevent this late and tender growth.

Raspberries.—After the raspberry crop has been gathered, it is well to cut out the old canes and thin out the new ones, thus throwing all the vigor of the plants into those that remain. The number of canes the plant should carry will depend a good deal upon the variety, and the condition of the soil, but about five strong canes will generally be found preferable to more. If the plants are grown in matted rows, they should be evenly distributed, and rather more can be left than when they are kept in hills. Formerly it was the custom to head back the plants during the summer, but, as generally performed, it was an injury rather than a benefit, as the canes were allowed to reach their full height and were then cut back. In this way much of the strength of the plant was wasted, and the remaining buds, if they started at all during the season, sent out weak shoots that were often injured by the winter. As a rule a cane allowed to grow naturally forms large buds near the top, and from these the best fruit will be obtained. If they are to be cut back at all it should be done early in the season, when the young canes have reached a height of about two feet, and then the terminal bud only should be pinched off: As a rule, however, it will not be best for the commercial planter to head back red raspberries at all at that time, although with some sorts it may be desirable. In the case of the Cap varieties it will be best to head the new canes back as recommended above, but if they have been neglected until they have reached a considerable height, so that cutting them back would sacrifice a considerable amount of wood, it will be best to allow them to branch naturally. During the month of August the plants should be watched, and if any of the canes are badly diseased with rust, it will be well to cut them out and burn them. To hold this disease in check the plantation should have been sprayed during the early part of the season with Bordeaux mixture. One spraying before growth starts, if supplemented with

one or two others after the young shoots appear, will, to a large extent, prevent the spread of the disease. In order to secure a proper growth of the plants, regular cultivation should be kept up during the season up to the middle of August. After each rain the soil should be stirred, and in this way the moisture will be conserved, and the proper ripening of the fruit and a strong new growth will be secured to carry the plant through the winter.

Strawberries.—If a strawberry bed is to be kept for one or more years, it should be worked over as soon as possible after the crop is gathered, in order that the new plants may find a soil in suitable condition for starting into growth. If the field contains much grass and tall weeds, it is often a good thing to cut them with a mower, and if there is so heavy a mulch that it will hinder working the land, it can often be burned off. The fire will also destroy many insects, and, as the old strawberry leaves will also be burned, most of the spores of the leaf blight will be destroyed, and the injury the following year lessened. The bed may be broken up in various ways, among the best being to turn furrows away from either side of the row, leaving only a narrow strip with plants upon it. The furrows can then be worked down with a cultivator, and the rows of plants thinned out and freed from weeds with a hoe. In this way the ground will be broken up and prepared for the new plants that will be formed. Especially if the summer is a dry one, the cultivator should be kept going throughout the month of August, so that a crust can form. The new plantation also should receive similar care, so far as the cultivation and the hoeing are concerned. One of the principal reasons for the running out of varieties is that they become subject to and weakened by the so-called rust or leaf blight. In the case of some varieties, much of the foliage is entirely destroyed, and the spots are so numerous upon the flower stems that they are girdled, and as a result they shrivel and the fruit dries up. From this cause half the crop is often lost. It has been found that this disease can be kept in check, if the plants are properly sprayed with Bordeaux mixture. This should be put on in July or early in August, in order that the plants may make a healthy growth during the fall. This should be repeated in the spring before the growth starts, and again as soon as the blossoms are off. By the last application the flower stalks will be covered with fungicide, and the chance of the drying up of the berries will be greatly reduced.

Currants and Gooseberries.—In addition to the thorough cultivation and hoeing which should be given to currants and gooseberries, in common with all other small fruits, they will also require one or more applications of fungicides in order that they may retain their foliage, and make a proper growth. The various spot diseases to which the currant is subject, and the mildew, of the European gooseberries in particular, by which these fruits are so frequently defoliated, can all be controlled, but to be entirely effective the remedies should be applied somewhat earlier in the season. From the above it will be seen that

the care required by the small fruits during the summer months is about the same for all, consisting of regular cultivation and hoeing, and at least one application of some approved fungicide after the crop is gathered. While almost any of the copper compounds used for this purpose would answer, Bordeaux mixture is generally preferred, as it is cheaper, and is not only more effective, but it sticks more firmly to the plants, and in consequence the results are much more lasting.—PROF. TAFT, in *American Agriculturist*.

THE LOMBARD PLUM.



SUPPOSE it is unnecessary to extol the virtues of this well known variety, but I so often see others planting orchards with other varieties that it must be many do not yet understand what they want. An orchard of good Lombard trees will yield results satisfactory to any one. I do not mean to advise that no other varieties should be planted. This is a mistake in any fruit orchard. But the Lombard should be in the majority. It stands, in my estimation, at the high water mark. Three varieties of plum trees should at least be planted in every plum orchard, and for general market use none better can be found than the Lombard, Niagara and Damson.

The Bradshaw is a plum of a very fine quality, and has the advantage of producing a crop early in the season, but these qualities are offset by its shyness in bearing. Its crops are not large or very regular. If it could be made prolific it would be an excellent variety. Almost the same can be said about the Yellow Egg and the Washington. They are excellent plums, very large and delicious, but they are not profitable for market use. A few trees for home consumption would be appreciated on any farm. The Purple Egg is also a fine large plum, but the tree rots so badly that it nearly discourages one in raising it. If the trees could be hardened in some way so that the rot would not attack them, this variety would be exceedingly desirable. Genii is a large purple plum that has this same fault of being attacked by disease. The black-knot is sure to kill the trees early in life. The Green Gage and Imperial Gage are splendid plums for canning and should be raised largely for this purpose.

The Shropshire Damson is a splendid market plum. It is a small purple plum, and rather coarse to suit the writer's taste, but it sells well and is a very prolific bearer. A garden of these trees will pay any one. The Lombards are the most desirable market plums going, and with a little proper care the trees can be kept free from disease. Both of these varieties are good bearers, the trees are moderately hardy, and comparatively free from all diseases. As the black-knot is the great trouble with most growers of plums, the trees that are very susceptible to this disease should not be selected. There are others that are quite proof against it and most other parasites.—*Germantown Telegraph*.

SOUR CHERRIES.

Canned Cherries.



THE perfection of canned cherries can only be obtained by allowing the pits to remain in, and by cooking them in the jars. Many people, however, object to serving them with the pits in, and to obviate this, and yet obtain the flavor, tie 20 or more pits in a small piece of thin muslin or lace, and place them in the centre of each jar of fruit before it is cooked. Allow 8 ozs. of granulated sugar to each pound of cherries. Dissolve the sugar in hot water and turn it over the fruit (which has been placed in the jar as fast as pitted) until it reaches the neck of the jar. Put on the cover but not the rubber, place the jars in a vessel of warm water, with two or three nails under each jar to prevent its coming in direct contact with the bottom of the vessel; cover closely, and after it comes to the boiling point cook ten minutes. Remove from the kettle; stand the jars on a folded wet towel, take off the cover and fill full of hot syrup or water; wipe off the outside of the top; adjust the rubber and cover and screw down as tight as possible. Invert the jars, and if a drop of syrup oozes out it must be re-heated, and either the rubber or cover, or both, must be changed. Let them stand 24 hours, tightening the tops occasionally, then draw a paper sack over each one, label plainly, and put in a dry, cool place.

CHERRY PRESERVES.—Pit the cherries, weigh, and allow a pound of sugar to each pound of fruit. Dissolve the sugar in the least quantity of water possible, and when it boils add the fruit and boil slowly 15 minutes. Then skim out the fruit and put in glass jars (those which are not air-tight answer nicely for this purpose) filling them about two-thirds full. Boil down the syrup and pour it over the cherries. If the covers do not fit, dip a paper in brandy and lay it on the top as for jelly.

CHERRY SYRUP.—This is a very pleasant beverage when added to a glass of cold water. Pit the cherries, mash them, and allow them to stand in an earthen bowl, in a cool place, 24 hours. Then drain through a coarse linen bag, and allow 1 lb. and 12 ozs. of granulated sugar to each pint of juice. Put the latter in a porcelain-lined kettle, bring it to the boiling point, and skim before adding the sugar. Let them boil together slowly for ten minutes, and when cool bottle. Two or three tablespoonfuls are sufficient for a glass of water.

CHERRY PUDDING, NO. 1.—Sift together twice one coffeecupful of flour, a pinch of salt and three teaspoonfuls of baking powder. To two well-beaten eggs add one teacupful of sugar and one of milk, and stir in the flour. Add as many pitted cherries as you prefer, and beat all together thoroughly. Turn it

into a buttered pudding mould, leaving one third of the room for it to expand. Tie on the cover and stand it in two-thirds its depth of boiling water, cover closely and boil two hours. Serve hot, with whatever sauce preferred.

CHERRY PUDDING, No. 2.—Make a rich dough, as for baking-powder biscuits. Roll rather thin, and cut out with a quart bowl; put two or three tablespoonfuls of cherries on one half of a biscuit, wet the edges, fold at the centre, bringing the two edges together, and pinch thoroughly with the thumb and finger. Melt a tablespoonful of butter and one of sugar in half a teacupful of hot water and pour it over the rolls after they are in the tin. Sift powdered sugar over the top and bake fifteen minutes. Serve hot, with either hard or liquid sauce, as preferred.

HARD SAUCE.—Stir a teacupful of powdered sugar and a quarter of a cupful of warm (not melted) butter to a cream; flavor as preferred with lemon, vanilla or nutmeg, and set in a cool place until required.

FRUIT SAUCE.—For cherries, add one teacupful of sugar to three of mashed fruit, and thoroughly beat in four tablespoonfuls of soft butter. When light and foamy, add the well-beaten white of one egg.

FOAMY SAUCE.—Beat the whites of two eggs light but not stiff, and add one teacupful of powdered sugar and a teaspoonful of vanilla. Turn over this, stirring constantly, one teacupful of boiling milk. Lemon juice can be substituted for the vanilla if preferred.

CHERRY PIE.—Cherry pie should not have an under crust, but an inch-wide strip of paste should be placed around the side of the pie plate. Put in a layer of cherries, then a tablespoonful of fine bread or cracker crumbs and two tablespoonfuls of sugar. Continue until the plate is full, then cover with a rich crust, sift one tablespoonful of powdered sugar over the top, and bake.—KATHERINE B. JOHNSON, in *Country Gentleman*.

Hints in Pear Growing.—The American Cultivator of Boston, gives the following suggestions regarding pear orchards:

“The pear tree grows best and yields the most fruit when planted upon land moderately moist, and yet not cold. To insure this condition there is nothing better than a side hill location, though one more level may do well if under-drained, and then it is better for receiving a wash of sand from the uplands above it, which helps to warm it up. Two conditions are fatal to this fruit, and they are a lack of moisture in the soil and a lack of dryness in the soil. They may live through either for a little while each season, but too long a drought will kill the tree, and too long a wet and cold season will destroy the fruit even after it has formed. Manure too rich in ammonia will cause excessive growth of the fruit buds, and overbearing while the tree is young shortens the life of the tree, and also is apt to lessen the crop in the succeeding year.”

PICKING FRUIT.



VERY person, child or adult, when plucking fruit of any sort, should be taught how to separate the stems from the twigs or spurs without damaging the buds that contain the embryos of a future crop. When plucking apples or pears, instead of hauling off the fruit with spurs, buds and leaves, take hold of the apple or pear and at the same time thrust the thumb nail against the base of the stem and pull on the fruit, and thus sever the stem from the fruit spur at the seam prepared in the growth of the stem and spur for the separation of fruit and spur. When plucking cherries, take hold of the long stems and separate them with the thumb nail, handling the fruit by the stems rather than by taking hold of the fruit. If the hand clasps a cluster of cherries, and the fruit is hauled off carelessly, the fruit-spur will be broken off together with all the half mature fruit. Then, if the cherries are fully ripe, and they are clawed off without taking hold of the stems, the fruit and stems will be separated, to the great damage of the ripe fruit. When cherries are to be used immediately they may be pulled off the stems. But when the fruit is to be sent to market, the stems should not be separated, as the rupture of the fruit incident to the separation of the stems will hasten decay and damage appearance, because as soon as the stems of cherries are removed from the fruit the juice will flow out.

Almost every variety of cherries fail to ripen with desirable uniformity. For this reason the persons who pluck the fruit should be instructed to glean only the ripe fruit without hauling off immature specimens. But whoever is allowed to pluck cherries should have this brief precept—"be careful of the fruit spurs"—reiterated, until he or she will understand that the fruit buds, the fruit-spurs, the little branches that are loaded with fruit, must not be crushed by the feet or pulled off by careless hands. Make every dullard understand that every twig and fruit-spur broken off represents a cluster of cherries of next year's crop, and the fruit for many future years actually lost by inexcusable heedlessness. There should be many placards posted up where pickers can read the important words: "Do not break off the fruit-spurs."—SERENO E. TODD, in *Country Gentleman*.

New Raspberries.—*Heebner* is a new red raspberry, which Mr. W. W. Hillborn, of Leamington, Ont., is growing from the seeds of the wild raspberry. The quality is good and the bushes very productive, but too soft for a distant market. Mr. Craig, in his *Raspberry Bulletin*, estimates that it would yield more than four times the *Cuthbert* at Ottawa. *Columbia*, according to the same authority, is a purple berry, seedling of *Cuthbert*; it much resembles *Shaffer*, but is firmer and less acid. *Royal Church*.—Mr. Craig says he finds this not as vigorous or as hardy as the *Cuthbert*. *Superlative* also, he says, is deficient in vigor and hardiness.

CANADIAN SMALL FRUITS.



THE Agriculture Committee spent a busy and profitable couple of hours on June 6th. The subjects before them were "The Branding of Cheese," and an address on "Fruits," by John Craig Horticulturist at Experimental Farm.

Mr. Craig, in his address, spoke of the development of the fruit industry in the various provinces of the Dominion, and detailed the result of his experiments with regard to keeping fruits in cold storage. When asked by Mr. Carpenter to state his opinion of the feasibility of putting Canadian small fruits on the English markets, the Horticulturist said: "That is a question which is not only a profitable one to discuss, but certainly a feasible one. I do not see why grapes, plums and peaches, and early pears could not be put into direct cold storage warehouses and then sent in refrigerator cars and put on board steamers provided with cold storage compartments, and put in the English market in good condition, in view of the fact that the cold storage system is to be introduced in connection with butter. Whether they would reach the English market at a season when good prices prevail is a matter to be investigated."

In answer to Mr. McNeill, Mr. Craig said he did not know of any place in this country where Newton Pippins were successfully grown, and he was not prepared to say, he was not aware of any place where that could be done. In the Grimsby district last year, where spraying was practiced, he saw some very good Newton pippins. Mr. Craig thought the fruit growers would make more money if they would give a little more attention to the kind of package they used, and exercised a little more care in grading their fruit. He pointed out how carefully California fruit was put up, and it competed successfully with our home-grown fruits. It showed, he said, that our growers could afford to spend a little more money in making their fruit packages attractive.

On motion of Major Carpenter, seconded by Dr. Roome, a motion was adopted to the effect that "in view of the rapidly growing importance of the fruit industry to the people of a large section of the Dominion, and of the importance of and difficulty in establishing a good reputation in the English market, this committee is of opinion that the Government would be justified in adopting some method of assisting our fruit growers in placing their fruits on the English market, believing, as we do, that if some shipments of fruit can be made by the government it would give us a standing it cannot secure when sent by individual shippers."—Hamilton Spectator.

The Columbia raspberry, according to the Ohio Experiment Station Report, is a stronger grower than the Shaffer, and the berries a little brighter; but the varieties are very similar.

THE PEACH LEAF CURL.



THIS peculiar disease is widespread both in this country and in Europe, occurring wherever the peach is grown. It often severely injures nursery stock; young, thrifty-growing trees are more subject to its attacks than those more mature. The curl is limited to the period when the young shoots and leaves are most tender; after the tissues of these parts are fully formed or matured they are no longer affected. The disease shows itself as soon as the leaves are expanded. By the first or middle of June the only signs of the malady are the withered leaves on the ground and the shriveled shoots on the tree; new leaves have already developed on the lateral twigs. The illustration, Fig. 797, shows the characteristic appearance of a peach leaf affected with the curl, and the same engraving illustrates a twig diseased from the same cause. Frequently the entire leaf is involved, the diseased part being somewhat thicker and of a more fleshy texture than that in health. The under surface is usually smooth, but the upper has a more or less mealy appearance. When the leaf stock is affected it swells to several times its normal thickness and seldom attains its full length. These portions have a pale green color, the surface is swollen and uneven, and turns black and dies. The cause of peach-leaf curl is a minute fungus called *Taphrina deformans*. It is closely related to the fungus which causes "plum pockets." The mycelium or spore-producing part of this fungus forms a network of threads resembling a string of beads in the tissues of the peach leaf. This is illustrated in Fig. 798. From these threads the spores or seeds are produced by which the disease is spread from tree to tree. These falling on young tender shoots penetrate their substance and cause them to curl up and finally die. So little is really known of the life history of the curl that little can be said regarding preventive measures. Removing and destroying all the leaves and young shoots



FIG. 797.—LEAF CURL, AFFECTED LEAF AND TWIG.

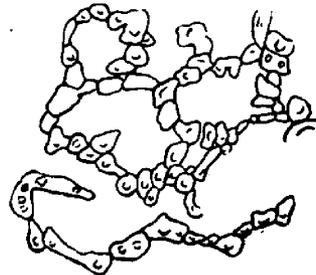


FIG. 798.—LEAF CURL FILAMENTS MAGNIFIED.

as soon as they show signs of the malady, and at the proper season, cutting well back the branches where the disease existed, is the best course, and ought to mitigate the evil. As an experiment it is suggested that the trees be sprayed before the buds begin to swell, with a 30 or 40 per cent. solution of sulphate of iron.—Orange Judd Farmer.

GROWING MELONS.



THE best soil for the watermelon is a light, warm, sandy loam, yet I find some soils, that will not produce fine melons with all other essentials given. Whatever tends to compact the soil, whether rainy weather or a deficiency of vegetable matter, is detrimental to the crop. I take the best soil I can arrange to plant, and in the fall scatter tobacco stems liberally over the ground. I find, contrary to many, that the richer the soil, provided it be warm and light, the surer the success. I break the ground very deep before the stems are put on, and then before planting break a little deeper, then work it mellow to the bottom. If one is not careful they will get the soil mellow on top to perhaps half the depth, and the other half full of large clods. This should not be. I prefer marking both ways, as the plants can be worked better. At each crossing I put two shovelfuls of good manure. The best I have used was well-rotted, forest leaf mould and stable manure put in alternate layers of equal proportion. This well-rotted and turned over until well mixed. This manure may not rush the plant while young so much as all stable manure, but it will bring more and larger fruit. Bones dissolved in ashes and a handful of the mixture put in the hill adds greatly to the crop.

I make large hills (not high up, but around) and drop at least a dozen seeds in a hill. I shall this spring make a line across the hill and plant on one side; then in about ten days plant the other side. Planting so many seeds in the hill has two important reasons. So many plants aid each other in raising soil (which is apt to become crusted on top), and they will come up better. Some seeds give stronger plants than others, and will bear better fruit. Planting so many in the hill we are more apt to get strong plants. These can be selected after the plants are some size. I leave only two plants in the hill. As soon as the plants are up well, the soil should be made loose around them, being careful not to disturb the young plant. I like deep cultivation; at least for the first three cultivations, then shallow until done. I plow the ground thoroughly between the hills at each plowing, and I like to cultivate them every few days. In cultivating the vines the least they are molested the better, as moving them injures them after they begin to run much. I may give a few more hints on melon culture before selling time.—THOS. D. BAIRD, in American Farmer.

MAKING A RESERVOIR FOR WINDMILL IRRIGATION.



WIND-PUMP irrigation will be depended upon more and more wherever the rainfall is apt to be deficient. The accompanying illustration taken from a photograph, represents a section of one of the many reservoirs in Meade County in south-west Kansas which have been used satisfactorily for some time. The pump is larger than the average in this locality, having a 12-inch cylinder, a 12-inch discharge pipe and a 10-inch stroke; it lifts the water 14 feet at the rate of 175 gallons per minute.

The preparation of the reservoir is most important, and in order to assist any who contemplate such an addition to their farm improvements, I will tell how I made mine. Select a site higher than the ground to be watered. Lay out the reservoir corresponding in capacity to the power of the pump. The pump must be capable of filling it in two or three days. Remove all sod, placing it beyond the limits of the walls. Do not use it in forming the embankment.

Then plow and scrape, dumping where the wall of the reservoir is wanted. Continue until the work is completed, driving over the wall. Leave the inside sloping so the waves will not injure it. When the excavation is of the desired size plow the bottom and pulverize thoroughly. Hitch a team to a block, road scraper or other suitable object, turn in the water and begin to puddle by driving along one edge and continuing until the whole surface is puddled. This will cause a precipitation of sediment which will fill the pores of the soil and enable it to hold water quite well. The bottom will then be 12 to 18 inches lower than the surface of the ground outside, but that much water must always be left



FIG. 799.—IRRIGATION BY WIND POWER.

in the reservoir to preserve the puddling, for if it gets dry or freezes the work must be done over again. If the reservoir is small, say 30x50 x3 feet, some dirt for the wall must be obtained from the outside. An outlet can be made of four 2-inch planks long enough to reach through the wall. Saw the inner end sloping and provide it with a valve made of 2-inch board, and on the same principle as the valve in an ordinary pump.—American Agriculturist.

A FRUIT HOUSE.



IN some localities it is rather difficult to secure a good cellar without considerable work. Often draining by digging a trench is necessary; and when this is the case it will often pay to build a fruit house above the ground, rather than to run the risk of water flooding in and damaging the fruit and vegetables. A fruit house, if well built, so as to be frost-proof, is much more convenient than a cellar in many ways, but good care must be taken in doing the work if good results are to be secured.

Two by six inch studding will be the best; that is, not less than this should be used. They can be placed two feet apart, and it is usually best to brace the corners. Eight feet is plenty high, and, in most cases, six will be sufficient. It should be built close to the ground, so that it can be banked up readily on all sides. On the outside rough boards can be nailed on first, and over this a layer of tarred paper or heavy straw paper, and then the whole should be carefully weatherboarded.

When it can be done, it will be best to fill the space between the studding with sawdust, taking care to fill in tightly. Rough boards can be nailed on the inside, and over this tarred paper should again be tacked.

Overhead a tight layer of boards should be put and on them a good layer of sawdust. A chimney, or place for ventilation, should be provided. Care should be taken to make tight; the door and ventilator should be all the openings. Good, close-fitting doors, one to open outside and one inside, will help. Boxes or bins should be built inside and about four inches away from the wall. This will give air space between the wall and the fruit. To make doubly sure, an old stove set in the room in which a little fire may be made in the severest weather, will be found a benefit, as a very little fire will lessen very materially the danger of damage. A house of this kind, in a winter like the last one, will keep fruit and vegetables without freezing, but in winters such as we sometimes have a little fire will be necessary.—Fruit Growers' Journal.

Pruning Grapes in Summer.—After the bunches of grapes have formed on the new vine profitable work can be done by going along pinching off the vines just above the fourth leaf, or one leaf above the last bunch of grapes. This will turn much of the sap into the new vine which is to come out, either at the ground or near to it, to make wood for next year when the old vine is cut away. After this year's vines have been pinched off, a new branch will shoot out at the base of each leaf. If these are also pinched off when but a few inches long, no more vines will start out from them and all the sap for this season will go into the fruit and into the new vine which shot out from the ground.—Orange Judd Farmer.

TOMATO CULTURE.

CHAPTER XII.

HOW TO MAKE PICKING AND SHIPPING BOXES.

For ends, take good dressed pine lumber, $\frac{1}{2}$ inch thick and 8 inches wide. Cut them so that the upper edge will be $9\frac{3}{4}$ inches long and the lower edge $7\frac{5}{8}$ inches long. For sides, use lumber 8 inches wide and $\frac{1}{4}$ inch thick. Cut them so the upper edge will be 19 inches long and the bottom edge 17 inches long. Cut bottom of same stuff slack 17 inches long. Nail together with wire nails, medium fine, $1\frac{3}{4}$ inches long. Nail on outside of box in centre a strong basket handle, using $\frac{3}{4}$ inch wire nails. These boxes will weigh three pounds each and will hold half a bushel without heaping. They will last as long as five of the common baskets and they cost but little more. They are better than baskets, for shipping. If they are wanted for shipping make covers 8 inches wide and $\frac{1}{8}$ inch thick, cut them off square $18\frac{7}{8}$ inches long. Now take a strip $\frac{1}{2}$ inch square, cut off two pieces $7\frac{3}{4}$ inches long, bevel them a little so they will fit exactly just inside of the box, close to the ends. They should fit in so the top surface will be flush with the sides and ends. The cover is to be nailed on to these pieces with $\frac{3}{4}$ inch wire nails driven through and clenched, so that when the cover is put on, it will show the fruit $\frac{7}{8}$ of an inch on each side. This space will also give all the ventilation required. The cover will be one $\frac{5}{8}$ of an inch shorter than the box at each end, so it will not catch in handling. If desirable to show the fruit more or have more ventilation, use four slats $\frac{1}{4}$ inch thick and 1 inch wide instead of the close cover; nail them on so as to leave all the spaces the same width. I have taken pains to enquire of all my customers to whom I have shipped tomatoes in these boxes, as to their value compared with baskets for shipping. All of them, without exception, declared that the boxes were much better than baskets; the fruit was not bruised, and it came out in better condition. The reason why they carry better is that they never spring in and out like baskets do when they are handled roughly (as they are sure to be in transit). Again, the boxes are strong enough to be piled ten high without any injury to the bottom ones. To fasten the cover down bore a $\frac{1}{4}$ inch hole through the cover inside the cleat, and another hole $\frac{3}{4}$ of an inch below the edge of the end, and wire the cover down with fine annealed wire.

CHAPTER XIII.

HOW TO MAKE MARKET BOXES.

These are used for carrying tomatoes to market on a wagon. Dimensions and description: End pieces 6 inches wide, $\frac{1}{2}$ inch thick and $16\frac{1}{2}$ inches long, two side pieces 6 inches wide, $\frac{3}{8}$ inch thick and $17\frac{1}{2}$ inches long. Nail those

together. Then cut two bottom pieces $8\frac{1}{4}$ inches wide, $\frac{5}{8}$ of an inch thick and $17\frac{1}{4}$ inches long. Nail them on with edges flush with the sides. There will be $\frac{3}{4}$ of an inch space open in the centre; this space is to let the hand board of another box enter. Hand or centre pieces should be 6 inches wide, $\frac{1}{2}$ inch thick and $16\frac{1}{2}$ inches long. In the centre of this board and one inch in the clear below the upper edge cut a neat, well-finished hand hole. One inch each side of the hole drive a three inch wire nail and counter sink them $\frac{1}{4}$ of an inch. These nails are to keep the centre piece from splitting. Nail this hand board in the centre of the box, directly over the open space in the bottom, and let its edge set up above the ends $\frac{5}{8}$ of an inch. The edge enters the bottom of next box when set upon it. If the boxes are bound at the corners with strips of zinc 4 inches long and $\frac{3}{8}$ of an inch wide they will last much longer. They should be made all of the same material and all of the same thickness, so that when finished they will all be the same weight. Give them two coats of paint and stencil name on them.

These boxes if well made, will last at least twenty years. I have some of them that have been in use every season for twenty-five years and are in fair condition yet. They hold half bushel each, a peck on each side; and when evened over at the top they sit over each other without bruising.

Their advantages are as follows:

1st. They are my own invention and not patented, so that all may have the benefit of them.

2nd. They are light and have a hand hole in the centre so they are almost as easy to handle as baskets.

3rd. A double row of them fits into the ordinary wagon box, and makes a compact load without wasting room.

4th. They can be loaded over each other seven or eight boxes high, and they will ride safely, so that a full load of fifty bushels can easily be put on a market wagon.

5th. The fruit is divided into peck lots, making it very convenient to handle at the market, either in small or large quantities; there is almost no pressure or weight to bruise or injure the fruit. Those boxes will be found very useful for nearly all kinds of fruit and vegetables.

(To be continued.)

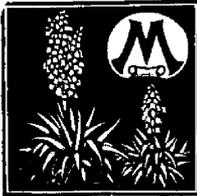
St. Mary's, Ont.

S. H. MITCHELL.

The North Star Currant is noted as a free, healthy grower. At Maplehurst this currant is just now bearing its first fruit, and we consider it too small to be of any value. The market wants a large-sized berry, and small ones bring a low price. Its vigor of growth is the one merit of this variety.

STRAY NOTES.

Covering Strawberries—Keeping Pigs—Overproduce, etc.



ANY start out with great zeal to cultivate strawberries, but fail to count the cost, *i.e.*, the patience, attention, and exercise of judgment needed, as well as the art of "knowing how," and in two or three years give it up as a bad job. It certainly requires the above-named qualities to insure success, and the winter protection is an item that cannot be slighted without loss. I have tried all sorts of material for covering, and at different times, and have settled down to the practice of using clear oat straw when I can get it, and covering *early*, before any hard frosts, putting on just enough to prevent the thawing and freezing weather to affect the ground and cause heaving. Before this spring I was in the habit of uncovering before Jack Frost had taken his final departure, but I left it on three weeks later this spring, and now at picking time, reap the reward. The foliage and berries are ranker and finer growth, having met with no chilling check from the frost. Care should be taken before the snow comes, to cover any spots where the snow has blown off, as the neglect will become apparent when the foliage begins to grow. Oat straw is a light, buoyant covering, not likely to pack and lie too heavy on the plants.

Does it pay for gardeners to keep pigs? A neighbor, John Smedly, living in Nepean, three and a half miles from Ottawa, says, from his experience, that it *does* pay. Last season he kept ten in a yard of about an eighth of an acre, all summer and fall, into which he had deposited over a hundred loads of manure. The pigs kept it well mixed by rooting and added to its value their own droppings, making it worth double what it would have been had it lain dormant all the season. After counting the cost of keeping, and what he paid for the pigs, he realized a fair margin, besides the improvement of his manure. The experiment is worthy of imitation by any who fancy keeping pigs.

Are we likely to have an overproduction of fruit this year, as to seriously affect the profits of fruit growing, is a question one is inclined to ask just now. Everybody is taking a hand at fruit growing; many are starting out in the work of tilling the soil that have got tired of other occupations, many are driven to the country by the hard times in the cities and towns, thus increasing the number of producers and lessening that of consumers, and that to the extent as to throw things somewhat out of balance to insure a healthy state of things. In a time of general depression, as at present, all lines of industry suffer more or less, and it would be a wonder if fruit growing and gardening in general did not feel the stagnant stream of the times, and prove less lucrative than in ordinary seasons of prosperity. No doubt many who have gone into gardening with little or

no experience will change into other occupations as soon as possible, leaving the field to those who are more accustomed to it, and who are in circumstances to persevere until the present stringency in the money market is past. About every twenty years there is a tightening up time, when everybody gets very poor all at once, and those who have money are careful to keep it until a general relaxation comes, when general confidence is restored and matter flows on in their usual course. A careful practice of economy and general management will enable gardeners and fruit growers to tide over the present year or two and go on again as usual.

Nepean.

L. FOOTE.

SMALL VS. LARGE FRUIT FARMS.



ANY Canadian farmers are land poor. They have only a small capital, their income is small from all sources, and they cannot afford to hire many hands, nor to invest much in convenient fertilizers. Therefore they spread over a hundred acres of land the amount of labor and capital that should be devoted to one-tenth that extent—and in consequence brings no return—it is spread too thin.

The time is passed when it is only necessary to tickle the soil to reap golden harvests, even in grain farming; but, in fruit growing, high cultivation is still more essential to success. Ten to twenty-five acres of fruit is enough for most men, who have a very limited capital. Given such a place, well tilled, and planted with judgment, to such fruits and such variety of fruits as will certainly pay well, and there is no question concerning the results. There will be success.

Many buyers of farms think it is a great advantage to secure a farm already well planted, but oftentimes even an orchard of bearing trees are more an encumbrance than an advantage, for, of late years, they occupy the ground and give no crop of fruit. Especially is this the case with certain varieties, and, therefore, unless one knows what varieties are in an orchard, he may find his purchase a great disappointment.

We would advise our young friends of the O. A. C. and elsewhere, not to buy too large a farm, unless they have plenty of capital, and plenty of knowledge how to use it.

The Dyehouse Cherry, according to a writer in the *Rural*, is the earliest cherry, being ten days in advance of *Early Richmond*; the tree is hardier and very productive. Compared with the latter variety, it is better flavor, being less acid.

The Red Jacket gooseberry is also counted as "the best grower of all—the foliage being perfectly healthy."

❖ The Garden and Lawn. ❖

FLOWER BORDERS.

I WISH that instead of saying flower-bed we might say flower-border. Any good place should have its centre open. The sides may be more or less confined by planting of shrubs and trees and many kinds of plants. This border-planting sets bounds to the place, makes it one's own ; it is homelike. The person lives inside his place, not on it. He is not cramped up and jostled by things scattered all over the place, with no purpose or meaning. Along the borders, against groups, often by the corners of the residence or in front of porches,—these are places for flowers. When planting, do not aim at designs or effects ; just

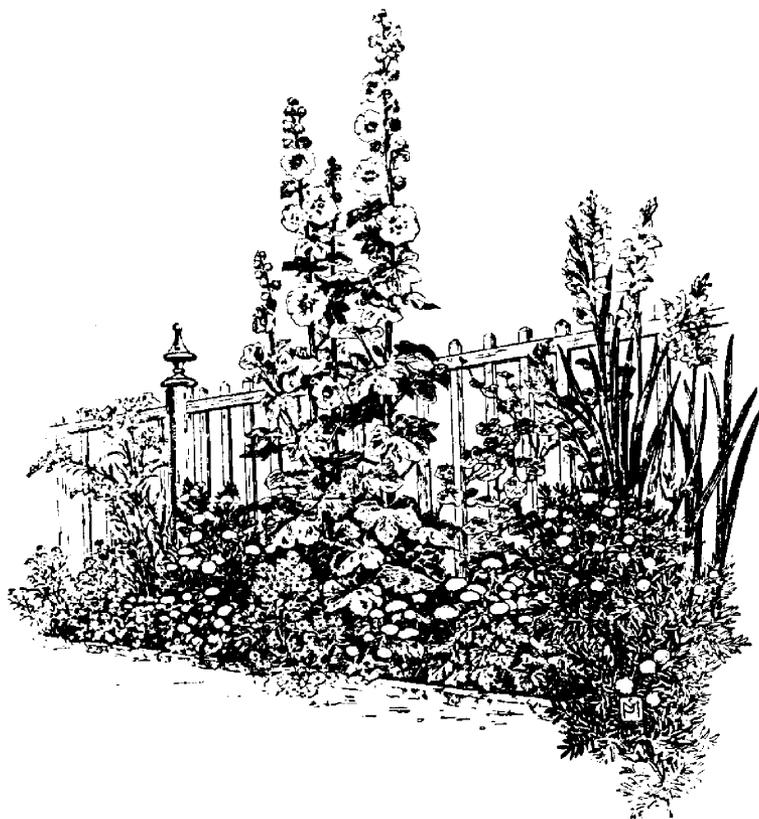


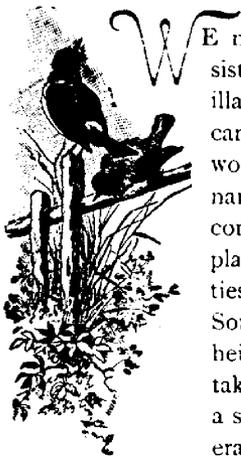
FIG. 800.—AN ARTIST'S FLOWER BORDER.

have lots of flowers, a variety of them growing luxuriantly, as if they could not help it.

I have asked a professional artist, Mr. Matthews, to draw me the kind of a flower-bed that he likes. It is shown in Fig. 800, at the beginning of this bulletin. It is a border,—a strip of land two or three feet wide along a fence. This is the place where pig-weeds usually grow. Here he has planted marigolds, gladiolus, goldenrod, wild asters, China asters, and—best of all—hollyhocks. Any one would like that flower garden. It has some of that local and indefinable charm which always attaches to an “old-fashioned garden,” with its exuberant tangle of form and color. Every yard has some such strip of land along a rear walk or fence or against a building. It is the easiest thing to plant it,—ever so much easier than digging the hideous geranium bed into the centre of an inoffensive lawn.

There is no prescribed rule as to what you should put into these flower-borders. Put in them the plants you like. Perhaps the greater part of them should be perennials, which come up of themselves every spring, and which are hardy and reliable. Wild flowers are particularly effective. Everyone knows that many of the native herbs of woods and glades are more attractive than some of the most prized garden flowers. The greater part of these native flowers grow readily in cultivation, some even in places which, in soil and exposure, are much unlike their native haunts. Many of them make thickened roots, and they may be safely transplanted at any time after the flowers have passed. To most persons, the wild flowers are less known than many exotics which have smaller merit, and the extension of cultivation is constantly tending to annihilate them. Here, then, in the informal flower-border, is an opportunity to rescue them. Then one may sow in freely of easy-growing annuals, as marigolds, China asters, petunias and phloxes, and the like. One of the advantages of these borders is that they are always ready to receive more plants, unless they are full. That is their symmetry is not marred if some plants are pulled out and others are put in. And if the weeds now and then get a start, very little harm is done. Such a border half full of weeds is handsomer than the average well-kept geranium bed, because the weeds enjoy growing and the geraniums do not. I have such a border, three feet wide and ninety feet long beside a rear walk. I am putting plants into it every month in the year when the frost is out of the ground. Plants are dug in the woods or fields, whenever I find one which I fancy, even if in July. The tops are cut off, the roots kept moist, and even though the soil is a most unkindly one, most of these much-abused plants grow. Such a border has something new and interesting every month of the growing season; and even in the winter the tall clumps of grasses and aster-stems wave their plumes above the snow, and are a source of delight to every frolicksome bevy of snowbirds.—
BAILEY, in Cornell Bulletin, No. 90.

CACTUS NOTES.



Next come to the Globular, or "Hedgehog" cacti, consisting of Echinocacti, Echinocereus, Echinopsis and Mammillaria. The other classes, Melocactus and Pelecypora cannot be successfully grown by amateurs, and are not worth considering in these notes. But the four classes named above are the gems of the Cacti fancier, as they comprise many of the quaintest and most handsome of plants. The Echinocacti are a large class, over 200 varieties being cultivated, and new ones are frequently found. Some grow up very large; a specimen of *Visnaga*, 9 feet in height, $9\frac{1}{2}$ feet in circumference, and weighing a ton, was taken to Kew Gardens, England, while others never attain a size of over an inch or two in diameter. They are generally ribbed, spines in clusters on the ribs, which are usually prominent. A few are separated into tubercles like the *Mammillaria*; flowers near the top or centre; and large in comparison to the size of the plant. many of them remain open for days. Their cultivation is simple; they do not require as strong a soil as *Phyllocactus*; made porous with sand, sufficient water when growing, little, if any, in winter, sunlight at all times—they will not bloom unless placed in the sun. We can only mention a few of the most desirable and best known. *Grusoni* or The Golden Cactus (named after Gruson, a manufacturer in Madgeburg, Germany, who is said to have the finest collection of cacti in Europe), is generally perfectly globular in shape, its golden-colored, almost transparent spines, closely resembling a ball of gold. This is a plant that is always admired by every one; a specimen 18 inches in diameter was the centre of attraction, and the gem of the collection in the Mexican exhibit, at the World's Fair, in Chicago; small plants are equally handsome, and excellent growers and never troubled with insects. *Cornigerus* or Horn-bearing, another very handsome plant; ridges, prominent spines in clusters, the centre one flat and tongue like, curved at the end, the broadest spine of any cactus; purple in color and as strong as iron, other spines round and strong, a good grower and excellent bloomer; flowers purple and not very large. *Capricornis*, one of the most peculiar looking, with eight thin prominent

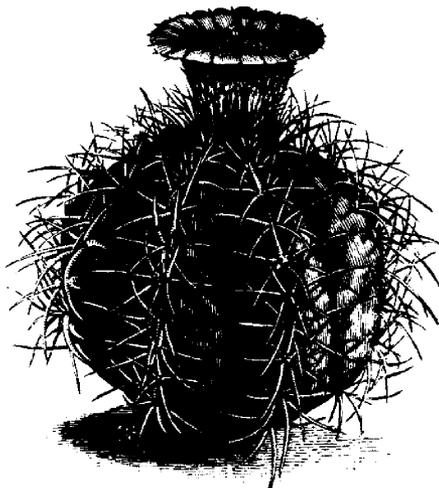


FIG. 891.—ECHINOCACTUS.

ridges, spineless, except for a few long flexible ones near the top, thickly covered with small white spots, a good grower and bloomer; flowers yellow and large, a very satisfactory plant. *Cylindraceus* has spines two to three inches long, interlacing and completely covering the plant; blood red in color especially when wet; flowers yellow in color and easily produced. *Horizontalonius*, with nine to ten thick prominent ridges, spines in clusters in centre of ridges look like spiders; an excellent bloomer; flowers purple, very handsome. *Longehamatus*, with spines from three to six inches long, a rapid grower and good bloomer; flowers yellow. *Multicostatus*, one of the most singular, with from ninety to one hundred and twenty ribs twisted in every direction, few spines; flowers white with a purple stripe in centre. *Setispinus*, the best bloomer of all; flowers large yellow with a red circle inside; ribs numerous, spines hooked. *Texensis*, The Devil's Pin-cushion, round and flat, slightly depressed in the centre; flowers large, yellowish-rose and fringed.

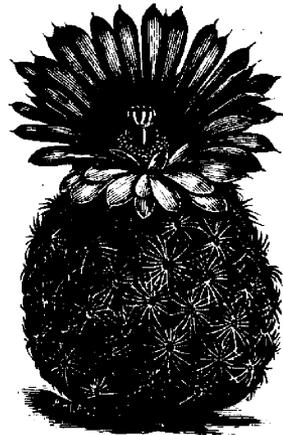


FIG. 802.—MAMILLARIA.

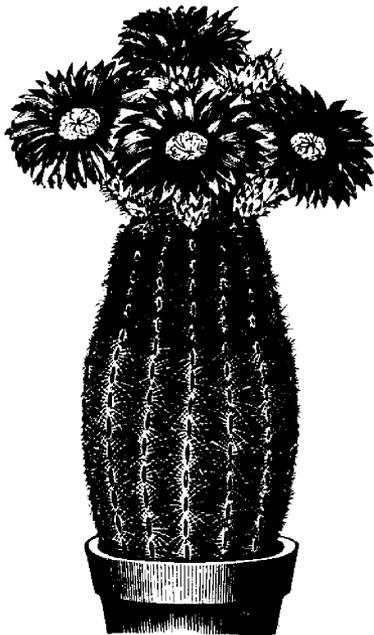


FIG. 803.—ECHINOCEREUS.

These are a few of the best known of this rich and varied class selected from the writer's own plants, but many of the others are equally desirable. The *Echinocereus* are botanically different from the last described class, but an amateur might have difficulty in deciding between them as in all principal points they are similar, globose, ridged and spiny, though the spines are generally smaller and finer; they require similar cultivation, soil, watering, etc.

The varieties are not so numerous, but are all good bloomers, *E. C. Candicans* is probably the best known, and few handsomer plants can be found, covered with a network of spines so close that they can be handled without trouble, and varying in color from cream to red, forming rings of color round the plant from which it derives its name of Rainbow Cactus, a free bloomer; flowers magenta, shading to white, are unsurpassed. *E. C. Pectinatus* is one of the best bloomers; flowers three to four inches across, spines white, com-

pletely covering the plant. There are many more of this class, all desirable. The Echinopsis are different from either of the other two classes, and more common, but are all good growers and bloomers, generally pear-shaped; spines, fewer, shorter and softer, flowers lower on the plant than the others, with a long

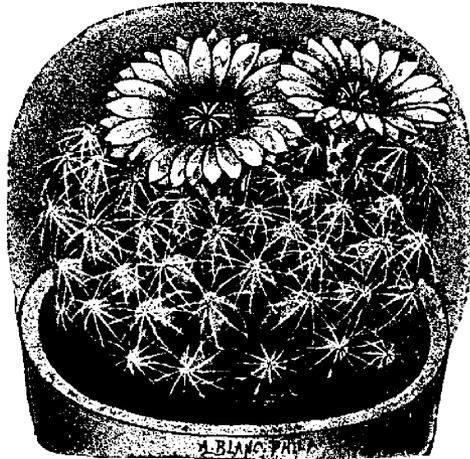


FIG. 804.—MAMILLARIA.

stem. Erysis, a splendid night bloomer; flowers four inches across, richly fragrant; a double flowered variety of this is even more desirable. Mulleri, a new and splendid plant, flowers open every day for a week, fragrant. All strong growers, making good roots and producing offsets freely; are readily propagated but if you want flowers keep the offsets rubbed off. With their shiny green coat, not hidden by spines, they are always handsome and satisfactory plants.

CACTUS CRANK.

Cyclamens.—When the corms are laid up dry for any time they sustain a loss of vitality which prevents them making more than a spasmodic effort to grow, throwing out a few leaves, and then remaining stationary. The right way to treat old bulbs is to water only when dry after flowering until the foliage dies away; then bed them out during the summer, or else shake all the old soil away, and re-pot in free soil with plenty of white sand in it. Give good drainage, and stand the pots where they can be shaded from hot sun, allowing the soil to dry out between each watering. This will cause them to break regularly and strongly, and as they advance in growth they may be watered more freely. By late autumn the soil in the pots will be full of roots, and the buds will be abundantly formed over the plants.—Pop. Gardening.



The Canadian Horticulturist

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↻ Notes and Comments. ↻

GRADING SPECIMEN FRUIT.—Sometime ago a scale for sizing specimens of apples for descriptive purposes was given in this Journal. This scale is useless for any fruit beside the apple, and something more general is needed. In our own Ontario Fruit Experiment Stations it has been proposed to give the extreme length and the extreme breadth of all fruit in inches.

In a letter of the 3rd prox., from T. T. Lyon, South Haven, Mich., President of the Michigan Horticultural Society, he writes on the subject as follows :

“ In the matter of grading specimen fruits—I sometime since proposed to Pomologist S. B. Heiges, to take the medium between the vertical and transverse diameters of a specimen ($\frac{V+T}{2}$) as the measure of size. He did a little experimental measuring upon that plan ; and reports that in some cases, giving the *same diameter* when determined as above, there was a real difference of bulk of full 50% as measured by the displacement of water. Therefore I surrendered at once.

I admit that the displacement of water would be an accurate measure of size. But I claim that the *value* of a specimen, for any *useful purpose*, is more exactly expressed by its *weight*. For this reason, and for the reason also that few persons would be likely to provide themselves with the needful graduated vessel for measuring size by the displacement of water, I propose to drop *size* from the list, and to substitute *weight in ounces*, in the description of specimens, since *scales* are readily accessible to every one.

True, this would be a rather wide departure from a universal practice ; and yet *weight* will always supply a ready means of approximately determining size when needful. It is intended to describe by weight in our next bulletin.

NETTING FOR PROTECTION OF FRUIT FROM BIRDS.—In reply to our inquiry Mr. Henry R. Boardley, of Lowestoft, England, writes as follows regarding garden netting: "I have on hand a very large stock of the sizes given below, as per sample piece enclosed. It is a second-hand article, but strong and thoroughly repaired; the prices are free on board cars here for cash:

100 yards long	1 yard wide,	£1, 6s. 3d.	per 1000 yards,	2s. 7½d.
100	" 2	" £2	12s. 6d.	" 5s. 3d.
100	" 3	" £3	18s. 9d.	" 7s. 4½d.
50	" 6	" £7	7s. 7d.	" 7s. 4½d.
50	" 4	" £5	5s. 0d.	" 5s. 3d.

Or any lengths or widths you may require at proportionate prices. 2½% for cash for orders amounting to £50 worth and upwards.

Persons who are badly troubled with birds could use this netting to excellent advantage, covering the tree or bush completely.

EXTRAORDINARY SALE OF APPLES.—Messrs. Hart and Tuckwell state that on May 22 they made a most extraordinary sale of apples. Two barrels were sold at the almost fabulous price of \$25.00 per barrel. The variety was named Longevity, and these were the first two barrels of this kind ever sold in Canada. The apples were exceedingly fine samples, somewhat resembling Cooper's Market. They were grown by Dr. Young, of Adolphustown, Ont.

GERANIUMS FOR WINTER BLOOMING.—Prepare the plant in July or August, by nipping off the tops to make the growth strong. Take up about September, pot and replace in the bed, thus retaining the appearance in the beds. Take up when in danger of freezing, and they will bloom about Christmas. So says Prof. Fletcher, of the Central Experiment Station, Ottawa.

THE HORTICULTURISTS' RULE BOOK.—A compendium of useful information for fruit growers, truck gardeners, florists and others, by L. H. Bailey. Third edition, revised and extended. Published by MacMillan & Co., New York, 1895. Price 75 cents.

This is a book which we can confidently commend to every gardener. It contains the very information which he always wants, and never knows just where to find. Insecticides, fungicides, injurious insects, plant diseases, seed tables, plant tables, computation tables, rules, etc., are fully treated in a book of over 300 pages. Our subscribers will note that we are offering it to subscribers in place of a plant during the summer months, for 25 cents additional to subscription.

THE RUSSIAN BALDWIN.—Dr. Hoskins, of Newport, Vt., writes concerning this apple: "It is proving to be a promising orchard apple with me, and I think well worth extensive production in the northern New England States and

Canada, if not elsewhere." The Rural New Yorker has said of it: "Equal to the Baldwin at its best." Mr. R. W. Shepherd thinks very highly of it. The single original tree is yet quite small, nine years planted, but it has borne large crops for its size for the past four years, and at the same time made good growth. As yet it is in its experimental stage. Of course, it may under other conditions fail to justify its present promise. A great disappointment has been felt all over the cold north that so few of the Russian apples have shown keeping qualities adequate to the demands of trade. Here seems to be an exception.

MR. E. B. STEVENSON, of Lowville, our special experimenter in strawberries, writes: "The frost caught us badly. Some of my extra early varieties, such as VanDeman, Beder Wood and Cyclone, began to bloom on May 6th and 7th, and some were set quite a size when the frost came May 13th, and killed everything in sight, even the leaves of many of them and the fruit stalks. A good many have sent up a second lot of fruit stalks, which may ripen late. The second bloom was from May 22nd to June 3rd, and some as late as June 6th and 7th. We have nothing nearly ripe yet, June 12th. I have made a number of important crosses again this spring. I have used Woolverton and Clyde with which to fertilize. I have some fine young plants of Timbrell crossed with Marshall, also with Brandywine. I feel sure that my varieties are true to name, as in almost every case I get my plants from the originator or introducers. I have some fifty new ones this spring. As soon as possible I will send outlines and notes concerning new varieties for this journal.

THE FRUIT PROSPECTS.

There is much to encourage the fruit grower this season, notwithstanding the thinning of the crops by frost and drouth. The dry weather of May and June has prevented the various fungi from germinating, and, in consequence, the Province of Ontario is favored with the finest fruit of every kind ever produced. The Red Astracan, Early Harvest, Greening and Cranberry Pippin, among apples, are producing abundantly; the same may be said of the Flemish Beauty pear, while the Duchess and the Bartlett have very little fruit. The following reports from our Directors will serve to give our readers a very correct idea of the fruit prospects.

MR. W. E. WELLINGTON, Toronto, representing York, Ontario and Peel, writes: "In South Ontario, prospects at this date (June 20th) are good for apples. The crop will be a good average; the fruit has set well and the foliage looks healthy. Pears and cherries look well and will be a good crop. Plums were seriously damaged by the last frost, and will not be much of a crop. Blackberries and raspberries promise very well, providing there is rain. Grapes were cut by the frost. The first blossoms of strawberries were destroyed, but there would be a good average crop were it not for the drought. Everything depends on rain for these small fruits.

"In York, prospects for apples are very fair. Small fruits were damaged by frost, and there will be only a fair crop of pears, plums and cherries. At present the outlook for apples is a little above the average.

"In Peel, there will be no early apples; winter apples will be average. Cherries, half crop; pears and plums—none. Gooseberries and red currants, half crop; no black currants. Raspberries nearly all destroyed by frost. Early strawberries, none; medium and late, fair, but rain needed very badly."

MR. THOS. BEALL, of Lindsay, representing the Counties of Durham, Northumberland, Peterboro' and Victoria, writes: "Judging from the reports I have received from all sides respecting the fruit crop, I think we may now safely say from present indications that the crop of autumn apples will be a good average. Winter varieties about half a crop. Pears, of all varieties grown here—excepting Flemish Beauty—is nearly a total failure, but the Flemish Beauty, which is grown to a considerable extent in this district, promises to be an unusually large crop where the trees have been carefully sprayed. Where not sprayed, the "scab" in many places will destroy the crop. Plums are nearly a total failure. Cherries are but little grown here. Strawberries are a failure to a great extent for lack of rain. Gooseberries and currants promise an average crop if we have rain soon."

MR. J. G. WHYTE, of Ottawa, representing Lanark, Renfrew, Russell and Carleton, writes: "Since my last report on our fruit prospects, we can better estimate the amount of damage by frost, which is much greater than it appeared to be then. Apples still promise a good crop. Plums almost a total failure, except our native red, which promises about half the average. Grapes in most localities will be a great failure, particularly in low grounds and where trained near the earth. In my garden nearly all the young shoots up to three feet above the ground were destroyed, while those above that escaped. Gooseberries have been more injured than expected last month. Downing will not be more than one-fifth of a crop; Houghton not much better. Smith's Improved a total failure. Some of the English varieties promise a fair crop. Red and white currants have suffered more severely than was apparent a month ago; they have dropped from the bunch so badly as to reduce the crop 25 per cent. Raspberries were somewhat severely winter killed, but promise a fine crop, particularly Black-caps and Sheffer. Strawberries are coming in well; those in blossom at time of frost were a good deal injured, but the later berries are doing well, and are a good crop."

MR. A. M. SMITH, of St. Catharines, representing the Niagara Peninsula, writes:—I don't think there is much change to make in last report. Lake Shore peaches fair, back a mile or two light. Plums, pears, cherries and apples about half crop. Grapes two-thirds on lake, on mountain gone. Dry weather with frost has cut strawberries short. Raspberries will be short without rain soon. Blackberries full.

MR. GEORGE NICOL, of Kingston, representing Leeds, Grenville, and Frontenac, writes:—Apples and pears, from present appearances, promise a fair crop, fully equal to last season. Small fruits have suffered most from the late frosts, and are suffering now from drought. Strawberries not more than half crop.

MR. L. CHAPIN, of Brantford, representing Elgin, Brant, Oxford and Norfolk, writes:—The frost of May has done more damage than was at first realized. Reports from different parts of this section come, saying plums, pears, cherries and grapes all gone. Apples very scarce indeed, but what few remain at the present time promise to be a good sample. Grapes are sending out fruit the second time, but may be destroyed by early frost.

MR. W. M. ORR, of Fruitland, representing Wellington, Waterloo and Halton, reports apples about Burlington slightly below the average; pears light, plums below average; grapes half an average, owing to the frost. About Guelph, apples, pears and plums very scarce, few blossoms escaping the frost; sour cherries a quarter of a crop; grapes a complete failure, vines even killed by the May frost in many cases. Small fruits badly damaged, and few left. About Ancaster, apples look well, and sample good; pears half a crop. About Fruitland, apples better than for years, pears below average, peaches scarce, plums average, raspberries never looked better. All trees and vines unusually healthy.

MR. STANLEY SPILLETT, our gooseberry specialist in Simcoe County, writes:—The hard frost in May—so hard that ice formed half an inch thick—did scarcely any damage to large fruits, except cherries, which will be 50% of a crop. Small fruits were nearly as fortunate; strawberries 99% of a full crop. We have picked 230 baskets from 12, say, rods, without any perceptible decrease in numbers on the vines. Want of rain just now is going to cut the last pickings down considerably. Bubach and Stamen No. 2 stand the drought well, so does Williams; Haverland suffers most. The first two have done admirably. Proximity to the lake, probably, affects us favorably here in cases of frost. Cur-

rants falling badly at present ; raspberries promise great things, but if drought continues much longer, will suffer ; but where cultivation has been attended to, they will stand a pretty hard racket of drought. Strawberries in hills permit closer cultivation and stand drought better than matted rows. Gooseberries suffered most from May frost ; they came out in spring without the loss of a twig and bloomed most profusely ; even the nursery rows taken from the mounds this spring were a mass of bloom, but only 30 % of a full crop survived the frost, and this fruit is altogether in the centre of the bushes. Neglect to prune had a reward for once. Many of the one-year bushes received for "Experimental Advt.," were poorly rooted. The severe drought of last summer was not favorable for layering, and quite a few have died in spite of all the petting I could give, even to watering. Two-year old plants are growing rapidly. So far, Red Jacket seems to have the lead, it is immensely vigorous ; Chautauqua and Queen good second. No sign of mildew to this date ; both fungicides seem to be equally efficacious. In mounding up my gooseberries last summer, I used nitrate of soda in the hills, with the result that many of the mounds had to be undermined and jarred with the end of a blunt stake to get them apart.

MR. T. H. RACE, representing Perth and Middlesex, writes :—Reports received justify the conclusion that there is practically no fruit in this district, except late apples. Strawberries are no crop, raspberries will amount to nothing, currants not a quarter crop, gooseberries all gone except some of the smaller varieties, cherries only here and there a few on some sheltered tree, and plums and pears nothing. All the summer apples, including the Duchess, have dropped off ; Colverts are showing a few, Talman Sweets a good half crop, and Baldwins, Ribston Pippins, Russets and several other winter varieties are showing very well. The Grimes Golden is a better crop than last year, so is the King ; but about here it is an off-year with the Northern Spy. On the whole, there will be a good half crop of late fall and winter apples.

MR. WM. MICHAEL, representing York and Ontario, writes :—From what I can learn of the fruit crop in this section, would say winter apples a fair crop, earlier varieties about half a crop, strawberries about half a crop, raspberries a good crop if the dry weather does not continue too long ; plums, pears and cherries light crop ; grapes were all cut down by the frost in May, but have come out again and are fairly well loaded with fruit ; the foliage on fruit trees looks well and healthy.

MR. W. S. TURNER, representing Stormont, Dundas, Glengary and Prescott, writes :—I should have written you sooner, but could not get replies in time. The fruit prospects are as follows, which you will see does not vary much from my former report :—Apples, varied reports ; in some parts the damage by the heavy frosts were very serious, in fact, almost disastrous ; in other districts, where the trees were apparently spared, the fruit has dropped. In some other parts, the frosts seemed to pass by the orchards, notably, that of Mr. Blacklock's, where the spraying experimental tests are being carried on and conducted by our own Mr. Pettit and his staff. Plums a failure, almost total loss ; grapes half a crop, other small fruits with the exception of strawberries one-third of a crop. Strawberries were not far enough advanced to be seriously injured by the frosts, but the dry weather is seriously injuring the crop.

✦ Question Drawer. ✦

Dandelions.

717. SIR,—How can I get dandelions out of my lawn ?

A. B. C., *Iroquois.*

We know no better plan, than cutting them out an inch or two below the surface of the ground, a laborious task, it is true. Constant mowings with the lawn mower will keep them under control.

* Open Letters. *

Letter from Portage la Prairie.

SIR,—I am anxious to try some of the hardiest of apple and plum seeds in this section. Already I have some seedling apples which are doing well. My gooseberries were growing too much to wood, so this spring I scraped the rich black prairie soil away from the bushes and put sand in its place, cutting around the roots, and now they are loaded with fruit, both English and American varieties. My currants are splendid, both black, white and red. I have over two thousand currant bushes. Raspberries and wild plums are a failure here. I have been here fourteen years and have quite a large garden. I am planting one pound of onion seed, one pound carrot seed, one pound beets, besides peas, beans, corn and other stuff. I have already about fourteen acres of turnips. I have two thousand cabbage and five thousand celery plants yet to plant. I think that people who do not grow a large quantity of small fruits, make a great mistake.

JOHN PARKINSON, *Portage la Prairie, Man*

Our Report Appreciated.

SIR,—The Governor-General desires me to thank you for kindly sending him the interesting and valuable Reports of the Fruit Growers' Association of Ontario, which His Excellency will peruse with care and attention, and which cannot fail to be of great practical use. I remain, yours faithfully,

W. T. G. HEWETT, *Priv. Sec.*

Government House, Ottawa, May 25, 1895.

↔ Our Book Table. ↔

BULLETIN 22, Central Experimental Farm, is devoted to raspberries, and contains much interesting information for planters, concerning varieties.

BULLETIN 23, Central Experimental Farm, is devoted to Spraying, Injurious Insects, etc. Both these bulletins are prepared by Mr. John Craig.

INSECT FOES AND HOW TO DESTROY THEM is the title of a remarkably convenient book for fruit growers and farmers, published by the author, Prof. J. Hoyes Panton, of the Ontario Agricultural College, Guelph. The book contains 85 pages, giving a brief description of the insects affecting the apple, the pear, the plum, peach, small fruits and vegetables, with a remedy for each. No book that we know of covers so much ground for so little money as this one; and the name of its author, Prof. Panton, should give all our readers confidence in its merits. Price 30 cents. It may be ordered through this office.

M. J. HENRY'S Catalogue of Fruit and Ornamental trees, Vancouver, B. C.

WHOLESALE CATALOGUE DUTCH BULBS, Hulsebosch Bros., Overveen, Holland, and Englewood, N. J.

PRIZE LIST of Canada's Great Fair and Industrial Exhibition, Toronto, Sept. 2 to 14, 1895.

INSECTS AND INSECTICIDES. A practical manual concerning noxious insects and the methods of preventing their injuries. By Clarence M. Weed, D.C.S., Professor of Zoology and Entomology, New Hampshire College of Agriculture. Well illustrated. Price \$1.50. This is the second revised edition and a very useful book for the fruit grower. It has been prepared purposely for the farmer, the fruit grower, floriculturist and housekeeper, and has drawn upon all previously published works on insects, in order to meet the purpose for which it is written. It forms an admirable handbook, and any farmer or fruit grower who buys this book will find that his money has been well invested. The practical directions in this work are brief and to the point, and the descriptions of insects are the same, which is an advantage to the busy farmer.

To Unpaid Subscribers.

Knowing that it is not always convenient for our members to renew in time for our Annual Plant Distribution, and that some may prefer a book, we offer the following inducements for renewals:

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- (b) A bound copy of the Annual Report, containing also the First Annual Report of the Fruit Experiment Stations, and the Report of the Entomological Society of Ontario, and either
- (c) One plant, "Golden Bell" Abutilon, or
- (d) A copy of Terry's A B C of Strawberry Culture.

2. Subscribers paying \$2 for two years' membership are entitled to receive (a) and (b) and

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Please send samples of seedling fruits and of
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