

# The Canadian Horticulturist

APRIL, 1908

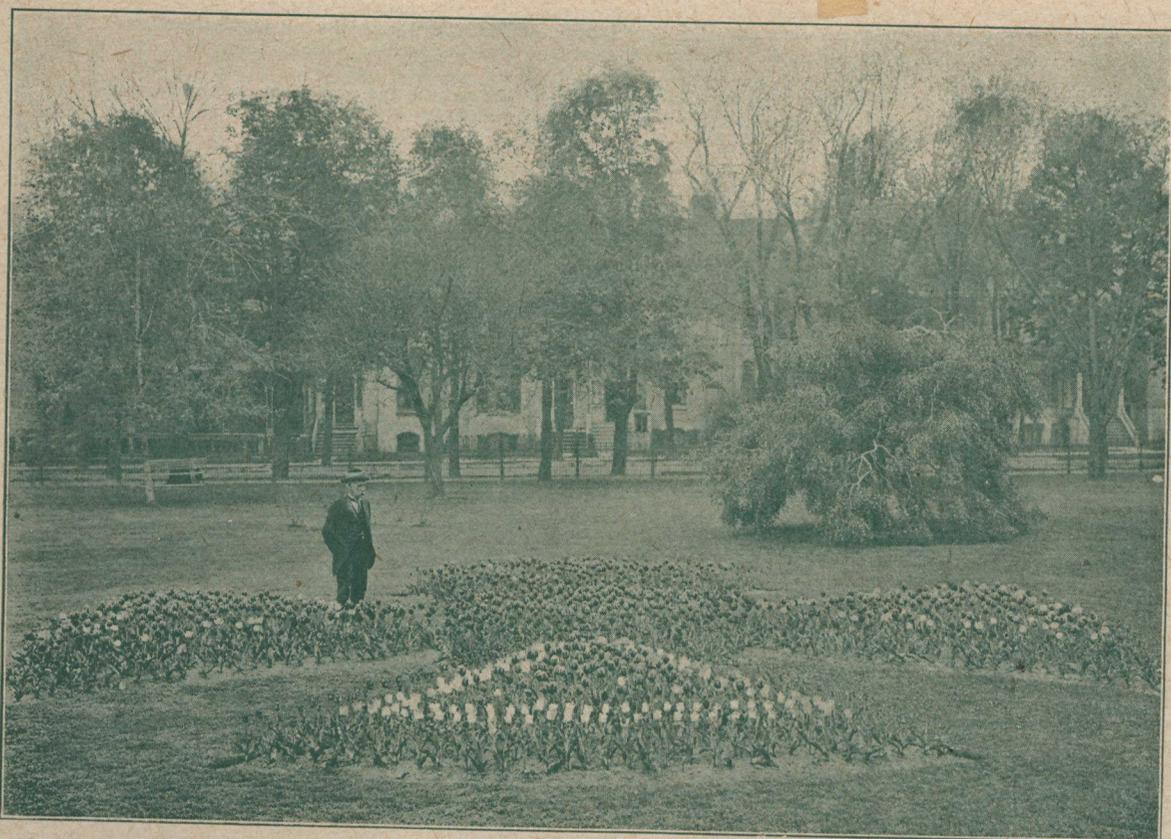
Volume 31, No. 4

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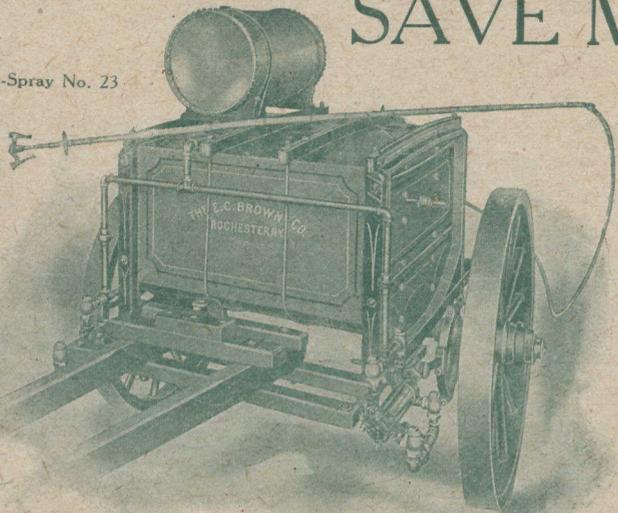
Views in Normal School Grounds, Toronto, last spring. The gentleman is the late Mr. Geo. Vair who had charge of these grounds for many years and who was an enthusiastic horticulturist.

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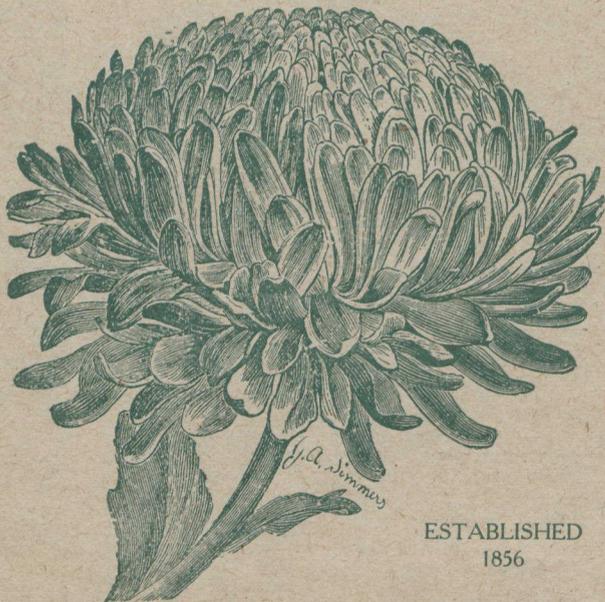
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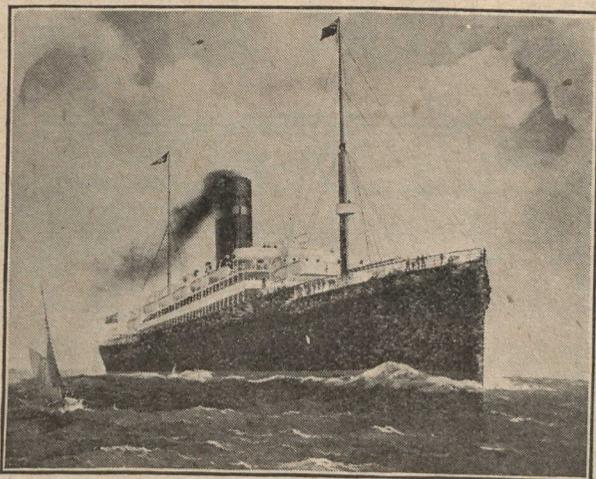
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**CERES**—White, with purplish spots on lower petals. 3 cents.

**EUGENE SCRIBE**—Flowers very large and wide, perfect delicate rose flecked carmine. 5 cents.

**JOHN BULL**—White, slightly tinted sulphur. 6 cents.

**MADAM MONERET**—Delicate rose; late bloomer and very popular. 5 cents.

**MARIE LEMOINE**—Large spike of fine, well-expanded flowers; upper divisions of a pale creamy color, flushed salmon-lilac, the lower divisions spotted violet and yellow, 4 cents.

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"1900"—Fine red, with white spots in lower petals, 3 cents.

**WM. FALCONER**—Spikes of great length and flowers of enormous size, beautiful, clear light pink. 10 cents.

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**DUKE HENRY**—Color, rosy cerise.

**GERMANIA**—Brilliant strawberry red, fluffy artistic flowers produced in endless profusion.

**QUEEN EMMA**—A magnificent rose colored variety that appears almost artificial.

**QUEEN WILHELMINA**—Immense fluffy flowers of pure white, with yellow centre.

## New Century Single Dahlias

These magnificent single varieties all originated from the celebrated Twentieth Century offered in this set. They are all of free branching habit, flowering early, profusely and continuously throughout the season, flowers from 4½ to 6 inches across on stems 3 feet long, and when cut keep in good condition for many days.

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**PINK CENTURY**—Delicate soft pink, flower very large.

**SCARLET CENTURY**—Brilliant scarlet with golden disc.

**LAVENDER CENTURY**—Delicate lilac with light shadings, very pretty.

**TWENTIETH CENTURY**—Early in the season, intense rosy crimson, shading gradually to almost white on the edges and a light halo around the disc. As the season advances the flowers become lighter, changing to almost pure white, suffused with soft pink; not variegated but blended in the most beautiful manner.

## Superb New Cactus Dahlias for 1908

**ANTELOPE**—A perfect formed flower, beautifully incurved, yellow suffused with bronzy rose, a beautiful blending of shades, remarkably free flowering.

**ALEXANDER**—A wonderfully rich and intense crimson maroon, a most profuse bloomer, fine for cut flowers with long stems.

**DAINTY**—Ground color, lemon yellow, shading to a soft golden rose with tip of yellow; truly dainty (1906).

**EFFECTIVE**—Chamois rose with yellow shadings, deeper in the centre, a large perfectly formed, intensely double globular flower with finely pointed petals.

**IVANHOE**—Bright straw color, very long narrow petals; fine form and large size; a good exhibition variety and free bloomer.

**MISS DOROTHY OLIVER**—Primrose yellow at base, fading gradually to white at tip of the long narrow petals; a lovely flower.

**WHITE SWAN**—Flowers pure white in color, erectly borne on foot stalks of great length and rigidity; showy either in garden or as a cut flower.

**WM. MARSHALL**—(See Giants).

**ROSY MORN**—A large flower of excellent form; in color a peach blossom, lighter in tint at the base of petals.

**HARBOUR LIGHT**—The grandest formed cactus to date; flowers of immense size, 7 inches across; long, slender, twisted, incurved; color, orange red; overlaid with flame, sometimes the flowers coming paler, when they are beautiful golden orange.

## Decorative Dahlias

**CATHARINE DUER**—Newports fashionable flower, very large, strong growing; color bright, iridescent crimson scarlet; extremely effective under artificial light.

**FRANK L. BASSETT**—Color bright royal purple, shading to blue, an extremely early and profuse bloomer of dwarf branching habit.

**SYLVIA**—A giant symphæa; stronger, larger, and deeper colored flowers, 4 to 6 inches in diameter; of fine form and full to the centre, which is white, shaded to soft pink on the outer petals.

**PINK "CACTUS" DAHLIA KRIEMHILDE**—The color is an exquisite shade of delicate shell pink. The broad centre petals are white, forming a beautiful rosette of that color above the pink. Price 15 cents.

**WHITE "CACTUS" DAHLIA WINSOME**—The finest pure white cactus to date. The flowers are large, of beautiful cactus form, with twisted incurved petals giving great depth to the flower. Price, 15 cents.

## Giant Dahlias

**GLOIRE DE LYONS**—A magnificent double show; enormous blooms of purest white; a most useful variety for all kinds of decoration.

**MOUNT BLANC**—About eight inches in diameter; pearly white, free flowering dwarf habit.

**SOUVENIR DE GUSTAVE DOAZON**—The most sensational Dahlia of the season; a decorative variety of mammoth proportions, which, under ordinary cultivation, will produce flowers 6 inches across, and can be grown to measure full 9 inches. It is of free growth, remarkably profuse-flowering, and pure scarlet in color.

**WM. MARSHALL**—A new cactus. The color is rich orange with bright yellow center. It produces flowers larger than perhaps any other variety.

## New Fancy Striped Cactus Dahlias

**ALPHA**—New and distinct, creamy white, spotted and flushed pink and crimson.

**COMET**—A beautiful addition to the bi-colored cactus dahlias, color, silvery rose, lightly speckled and splashed crimson.

**HEREWARD**—A pure white, spotted with crimson; flowers good size; petals narrow and slightly incurved on upright stems well above the foliage.

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**DAHLIAS** supplied mostly in very small pot roots, some divided field roots. Price 30 cents each, except Century and Decorative, which are 25 cents free by mail.

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## The Canadian Horticulturist

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 Photograph by Pringle and Booth, Toronto

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# Results Count

## Scab and Codling Moth Controlled in Norfolk County

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**90% Freedom from Worms and 98% from Scab in 1907**

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Mr. Johnson uses nothing but the ordinary materials—Lime, Copper Sulphate, Paris Green and White Arsenic.

**His Methods Bring the Results!**

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These Pamphlets are being printed and circulated for Free Distribution by the Fruit Growers' Association for the purpose of encouraging successful spraying in Ontario in 1908.

Write SECRETARY

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—Of Ontario—

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Our Sweet Peas are unsurpassed having been selected from the finest strains of American and English growers.

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 702—Blanche Ferry. Extra early; 8 days earlier than the old variety.  
 703—Boreatton. A rich velvety maroon, self color; good substance  
 704—Blanche Burpee. A large pure white.  
 705—Black Knight. Almost black, large size and open form.  
 706—Captivation. Light magenta or claret color, fine form.  
 707—Countess Spencer. Color of a silvery white, combined with a soft rose pink. Per oz. 15c.; ¼ lb. 50c.  
 708—Countess Cadogan. Very large flowers, light bluish purple in standard and clear blue in wings.  
 709—Countess of Radnor. A beautiful shade of lavender, with faint purplish tinge.  
 710—Duke of Clarence. Deep rich, rosy claret, bordering on purple maroon. One of the most desirable dark sorts.  
 711—Dorothy Eckford. A grand large flowering pure white.  
 712—Dorothy Tennant. Very large, round, shell formed flowers of a deep, rosy mauve.  
 713—Duke of Westminster. Grand large flowers; self-colored in a beautiful shade of rosy claret.  
 714—Earliest of all. The same color as Extra Early Blanche Ferry, but flowering earlier than it by 10 days.  
 715—Emily Henderson. A clear white of heavy substance; the most popular white variety.  
 716—Firefly. Glowing scarlet, large flower, profuse bloomer.  
 717—Gladys Unwin. Claimed to be the finest pink Sweet Pea. Per oz. 15c., ¼ lb. 35c.  
 718—Gorgeous. Flowers of good size, deep salmon orange heavily veined with a still deeper shade.  
 719—Helen Lewis. Large size, open form, color orange with pink edges. Very large flowering variety of Countess Spencer type. Oz. 15c., ¼ lb. 50c.  
 720—Her Majesty. Beautiful rose pink.  
 721—Helen Pierce. Color bright blue, mottled with pure white. Oz. 15c., ¼ lb. 35c.  
 722—John Ingram. Color is a rosy crimson, very large and free flowering. Oz. 15c., ¼ lb. 50c.  
 723—Katherine Tracev. Soft rosy pink, turning lighter at edges.  
 724—King Edward VII. A true giant flowering variety with long stems and heavy growth. The best dark and red Sweet Pea in existence. Oz. 15c., ¼ lb. 35c.  
 725—Lady Nina Balfour. Delicate light lavender or lilac, entirely free from red.  
 726—Lady Mary Currie. Bright orange pink.  
 727—Lady Grisel Hamilton. The best of the lavenders; very large.  
 728—Lovely. A pleasing shade of pink; wings delicate pink, attractive.

729—Mars. A beautiful bright scarlet, deepening with age, very fine.

730—Mrs Eckford. Flowers charming primrose yellow, profuse bloomer.

731—Mount Blanc. The earliest of the all whites, large and free bloomer.

732—Navy Blue. New deep violet blue.

733—Oriental. Wings orange salmon, of a rather lighter shade than in the standards, carmine rose in the centre.

734—Prima Donna. A beautiful shade of bluish pink.

735—Prince Edward of York. Extra large; standard bright glowing scarlet bordering on salmon, wings soft deep rose.

736—Queen Victoria. Standard erect, slightly pointed with edges finely recurved; color a soft primrose yellow.

737—Royal Rose. Rosy pink of immense size and fine form.

738—Sadie Burpee. Flowers of the very largest size, purest white.

739—Salopian. Distinctly one of the "finest scarlet Sweet Peas."

740—Scarlet Gem. A very large flowering variety of brilliant scarlet color.

741—Shahzada. Flowers of large size; color dark maroon, purple in standard and inner portion of wings.

742—Shasta. Very large open form with wavy edges, usually bears four blossoms to the stem, which is long and stout. A splendid variety for Florists. ¼ lb., 30c.

743—Triumph. Creamy white, suffused with salmon pink, wings shaded with rosy carmine, deepening to rich rose at the centre.

744—Venus. Rosy buff pink. Wings a shade lighter.

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750—Eckford's Superb Mixture. 1 lb. 40c., ¼ lb. 15c., oz., 10c.  
 751—Good Mixed. 1 lb. 35c., ¼ lb. 15c., oz. 10c.

## New Aster "Enchantress"

574—Very early. Color—soft shell pink. The ideal pink for the florist. It is just what we have been looking for. A good, extra early, long stemmed pink of sterling merit. Enchantress is a flower that will command the highest price on the market, owing to its earliness to flower and size of bloom. The originator has held the Toronto market for the last few years with this variety. It is remarkable for its size and earliness to bloom. The plants branch freely and produce many well formed flowers, coming into bloom the same time as the Queen of the Market, which variety it much resembles. It will consequently fill a much felt want, as a good extra pink will always command a big price. Price, per pkt., 10c.

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# The Canadian Horticulturist

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## Nut Culture in the Pacific Northwest\*

Henry Dosch, Hillside, Oregon.

**I**N nut culture of all kinds, but more especially walnuts, three things are most essential, and it is difficult to say which is most important; they are soil, generation and variety. Nut trees of all kinds do well on most soils, even rocky ground, except heavy, stiff, clay soils, but do best in fairly rich soil as they are gross feeders but there must be no "hardpan." The sub-soil must be loose and open so that the tap-root can grow down as far as it desires, for so soon as it strikes hardpan the tree stops growing and, of course, lessens the nut crop, as nut trees make few lateral roots. This applies particularly to the walnut.

### GENERATION

Walnut trees should be "second generation," either grafted or grown from first generation nuts. First generation nuts are produced on original trees, or on trees grafted from the original trees. These nuts when planted produce "second generation" trees and the nuts from these second generation trees are a little larger than the original or first generation, which is due to the peculiar soil and climatic conditions of the Pacific northwest, so well adapted to nut culture. Trees grown from second generation nuts retrograde very rapidly, producing nuts not half so large as even first generation and finally run out all together. Hence we must plant nuts from the original trees if we desire the best results and nothing but the best should or can be satisfactory.

### VARIETIES

Varieties which I have found best adapted for the Pacific northwest by extensive experiments are Franquette and Mayette, as best adapted to our soils, climate and market, with a few Chaberte for confectioners use, giving preference in order named, as I think the Franquette is somewhat hardier, a more regular bloomer and a little more prolific, while the Mayette or Grenoble, under which this nut is known to the trade,

is finer in quality, not quite so hardy nor so prolific, but the nuts generally bring a little higher price which, in a measure, makes up the difference.

### TREES OR NUTS FOR PLANTING.

For a number of years past, there has been considerable controversy about trees grown from seed of first generation bearing smaller nuts than grafted trees. I have not found it so, for I have just as large and fine nuts on my trees grown from first generation nuts as those from grafted trees, but also found that both kinds have some extra large nuts and some smaller. The difference in size is due to perfect pol-

### Reads with Interest

I always read THE CANADIAN HORTICULTURIST with a great deal of interest. It should be in the hands of every Canadian who is interested in fruit growing.—M. Cumming, Principal, Agricultural College, Truro, N. S.

lination of the larger nuts and imperfect pollination of the smaller nuts. I fear, that this controversy was started by interested parties to discourage the planting of nuts and encourage the planting of grafted trees, which generally sell at \$1.50 a tree. Of course, one must be careful to secure the proper variety and generation of nuts, which heretofore has been very difficult to obtain; even the nuts I imported from France proved very unsatisfactory as to size and quality. However, there are many honorable dealers from whom first generation nuts as well as trees grown from first generation nuts, can be procured.

### HOW TO SPROUT NUTS.

There are many planters who prefer to plant the nuts where the tree is to grow rather than the expensive grafted trees. For their special benefit, I repeat the *modus operandi*. The nuts for this purpose must be secured in the fall, and must be of first generation, either from the original trees or grafted trees, and known to be true as to that

point, else you will be disappointed when the trees come into bearing. Fill a box six inches with light soil and sand mixed, then put in the nuts, point end up, about one inch apart, cover three or four inches deep, and place boxes out of reach of rats, squirrels, or gophers, keeping the soil moist.

On examination in the early part of April, you will find all sound nuts have sprouted or ready to sprout, that is, they throw up two sprouts from the pointed end of the nut. One of these sprouts turns down over the nut and forms the cap root and the other continues upwards and forms the tree. Remove the nuts carefully, as these sprouts are very brittle and easily broken, which would make the plant worthless. Plant them where you wish the trees to grow, fifty feet apart (by far the best way), or in nursery rows about five inches deep and transplant the following spring. The young tree should be allowed to grow straight up, cutting away in the fall all side branches until the tree has reached a height of six feet when it should be allowed to branch out, but under no circumstance should the main stem be cut off at any time.

Walnut trees usually grow into bearing in five or six years; at twelve years, are in full bearing. It is not a slow grower as is commonly supposed. Three to four feet is not an uncommon growth in a season in good soil; besides it is a healthy tree, having, comparatively speaking, few pests to molest it, and once established lives to a good old age and proves profitable to generation with ordinary good care. The ground between the trees, until they come in full bearing can be utilized for berries, potatoes and vegetables, but no grain or grass should be grown.

### HARVESTING

At harvest time the nuts fall to the ground as soon as the hull bursts, which it does when the nuts are ripe, and can be picked up easily and must be promptly, as squirrels are very fond of them; the few remaining ones may be beaten down with a pole or fishing rod. They

\*A portion of a paper that was read at the last convention of the Northwest Fruit Growers' Association held in Vancouver.

should then be cured, either in the sun or subjected to a gentle heat in an evaporator to prevent mildew or becoming rancid. Sulphuring is practiced to some extent to supply the demand for bleached nuts, a most pernicious method. This treatment, while improving the color, proves decidedly injurious to the flavor of the nuts and lessens the keeping qualities. At the California experiment station, experiments with bleaching solutions have been carried on and it is recorded that very satisfactory results have been obtained with a mixture of soda, chloride of lime and water. However, it must be borne in mind that the bleaching of nuts is entirely unnecessary

of the affected cane, there are two rows of punctures, half an inch apart, running completely round the canes and so girdling them that the supply of sap is stopped. The tops soon wither and break off. These two girdles being completed, it makes a small hole a little way above the lower girdle and deposits in it a small yellow egg. From this egg, there hatches, in a few days, a small yellow grub which proceeds to burrow downwards, eating the pith of the cane and eventually causing its destruction.

The presence of these enemies is easily detected by the sudden drooping and withering of the tips of the canes. They begin to operate late in June and con-

## Canadian Cherries

W. T. Macoun, Ottawa

Few good cherries of Canadian origin have been recorded. The only one which deserves mention is the Windsor, a cherry of the Bigarreau class, which owing to its superior hardiness has proved a valuable acquisition. The following description is from "Fruits of Ontario":

### WINDSOR

Windsor is a valuable late cherry for either home use or market, its firm flesh making it a better shipper than most dark-colored cherries; indeed, from the middle to the end of July, when this cherry is at its best, there is no other to compete with it, the Elkhorn being just over. The tree is not an early bearer, and the fruit is very subject to rot in some locations, and needs thorough spraying with Bordeaux to prevent this fungus. Origin, by Jas. Dougall, Windsor, Ont.; tree, a vigorous, upright, symmetrical grower, healthy, very hardy and productive; fruit, large, fifteen



Eight-Year-Old English Walnut Tree that Produced Over One Bushel of Nuts in One Season.

and adds absolutely nothing to its food value; this process is simply carried on, to improve the appearance of the nut and will probably be carried on so long as people buy by the eye. Don't do it, unless the customer to whom you sell the nuts demands it and prefers spoiled to clean, healthy, wholesome and toothsome nuts.

### Raspberry Cane Borer

Tennyson D. Jarvis, O. A. C., Guelph

The raspberry cane-borer (*Olberia bimaculata*) attacks wild and cultivated red and black raspberries. The insect is about an inch in length, with black body and yellow thorax. At the base

of the affected cane, there are two rows of punctures, half an inch apart, running completely round the canes and so girdling them that the supply of sap is stopped. The tops soon wither and break off. These two girdles being completed, it makes a small hole a little way above the lower girdle and deposits in it a small yellow egg. From this egg, there hatches, in a few days, a small yellow grub which proceeds to burrow downwards, eating the pith of the cane and eventually causing its destruction.

In very old trees, restorative measures often fail to produce any lasting improvement.

Plant small fruits in rows so that the greater part of the cultivation can be done with the horse and cultivator. A sufficient number of varieties should be grown to keep up a succession.

sixteenths of an inch long by one inch wide, round, obtuse, heart-shaped; color, dark red, turning darker as it hangs; stems, one and a half inches long, set in a moderately deep cavity, in twos and threes; suture, obscure; flesh, yellowish with reddish tint; texture, firm, moderately juicy; flavor, rich and sweet; quality, dessert very good, cooking poor; value, first class; season, late July; adaptation, farther north than most Bigarreau cherries.

Each species of tree needs its own kind of pruning.

Feeble growing and unhealthy trees are, as a rule, the results of starvation, poor attention or unfavorable climate.

# New Strawberries on Trial Last Season

E. B. Stevenson, Maple Bank, Guelph, Ontario

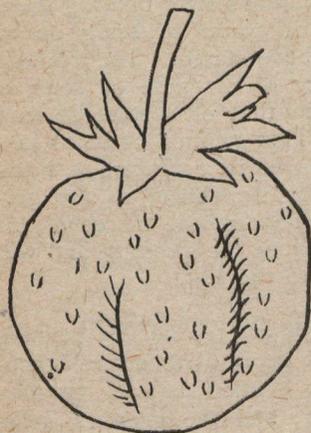
IT would appear that there are more new varieties of strawberries that promised great things, just now than have appeared before in a long time. The future of strawberries never appeared brighter. The standard of excellence is now higher than ever before. Hence the great effort that is being put forth in the direction of new varieties that will not only leave the ordinary sorts behind, but surpass in excellence the well tried

standards, as well. Among the most promising of the new varieties are Arnouts, Abundance, Hummer, Hundred Dollar, Virginia, King Edward, Beidler, Jaconia, McNeil, Evening Star, Chesapeake, Ekey, Helen Gould, and others.

## ARNOUTS

Arnouts (perfect) was originated by Mr. J. L. Arnout, of Pennsylvania, in 1905. The plant is a healthy, strong grower, good runner and productive. The berry is large, conical, bright scarlet with yellow seeds; flesh, white and pink, medium in firmness; mid-season to late; a good one. Mr. Arnout is so enthusiastic over

his new berry that he offers "\$100 for one dozen plants of any variety that will excell the Arnout in size, productivity, flavor, color, quality, uniform size, healthfulness and vigor of plant."



Arnouts

## HUMMER

Hummer (perfect) seems to have come from Michigan. It has proved a good one. The plant is strong, healthy, a good grower and productive. The berry is large, bright scarlet; flesh, pink, yellow seeds of good quality, firm; worth a trial by all growers.

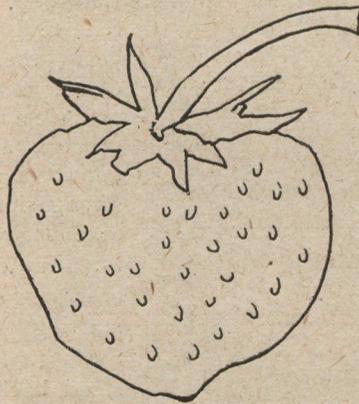
## KING EDWARD

King Edward (perfect) was sent me by the originator, Mr. D. J. Miller, of

Ohio, in fall of 1906. What I have to say will be from a trial of fall set plants. The plant is about perfect, being about the largest and strongest plant that I ever saw. It is very healthy, no sign of rust on it. The runners take root easily and quickly. The plant makes runners freely and is quick productive. The berry is large, roundish, solid, bright scarlet and red seeds. The flesh is white and of best quality. It is very promising.

## ABUNDANCE

Abundance (perfect) was sent to me by Messrs. Wodruff & Sons of New York. The plant is a strong, healthy grower, quite healthy and productive. The berry is medium to large, of a fine scarlet color with yellow seeds; medium firm; fair quality; medium to late season; worth trying.



Abundance

## HUNDRED DOLLAR

Hundred Dollar (perfect) was sent to me by the originator, Mr. W. Hathaway, of Ohio. The plant is one of the largest and strongest; resembles King Edward, healthy and productive. The berry is of largest size, scarlet, red seeds, conical with blunt end; flesh, white and pink, mild in flavor, like Woolverton, solid; a good one and well worth a trial.

## CHESAPEAKE

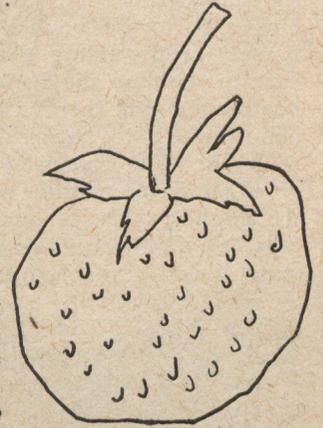
Chesapeake (perfect) was originated 1903 on Chesapeake Bay by Mr. J. W. Parks of Wicomico Co., Maryland, and introduced in 1906. The plant is very large, with thick leathery leaves, healthy, fair runner, medium in productivity. The berry is large, round with a nose, bright glossy scarlet, resembles Bismarck, with yellow seeds, solid; flesh, white and pink, firm; late in season, as late and as productive as Gandy; fine flavor; a good one, only not as productive as I would like but you cannot always judge from one season's fruiting. It is worth a trial.

## MCNEIL

McNeil (perfect) was sent to me from

Arkansas and is promising as judged from one fruiting. The plant is a dark green, strong, healthy, good plant maker and quite productive. The berry is large, oblong-roundish; flesh, red, medium in firmness, fine quality; worth a trial.

The above are the best of the new ones. I had twenty other new ones, none of which showed any points superior or even equal to the old standards. They may do so on further trial.



King Edward

I received some thirty new ones last spring to fruit the coming season. Among the best of them judging by the growth are: Irena, Bower, Golden Gate, Great Scott, Chipman, Saratoga, Colossus, Mill's Seeding, Howard's No. 1, Gill, Goldsborough and Miss Baston. I shall have more to say about them after next season's fruiting.

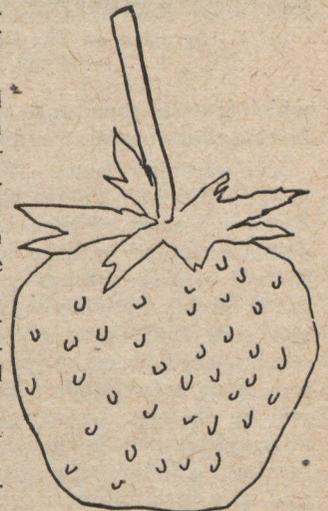
## The Currant Worm

Wm. Fleming, Owen Sound, Ont.

When the leaves of the red and white currant are half size in the spring, spray with a solution made of three-quarters of a pound Paris green to forty or forty-five gallons of water.

Spray when leaves are half opened. If left till later the currant worm will get the start. Apply on a sunny day. If rain falls inside of twenty-four hours, repeat the operation and repeat again in about ten or fourteen days.

You need not fear the effects of the currant worm if these directions are followed. Do not forget to spray first when leaves are "half open." The black currant needs no spraying.



Hundred Dollar

## Applying Lime-Sulphur Wash

R. M. Winslow, Guelph

The lime-sulphur wash for spraying was discussed at the short course in fruit growing held early in February at the Ontario Agricultural College, Guelph, by Mr. Robt. Thompson of St. Catharines and others. Mr. Thompson spoke of his use of the lime-sulphur wash, in which he thoroughly believes. As to its caustic effect, he stated that they no longer go to the trouble of covering the horses, or protecting the operators, except to vaseline the hands. Experience has proved that there is little in the talk about injury to harness, clothing, and so forth. The man who boils the wash is rather liable to take colds because of the sulphur. Mr. Thompson and several other St. Catharines' growers have their wash boiled at one plant, a method by

parts may have to be replaced every few days. Even where there is no San-Jose scale, lime-sulphur will pay for its application, by destroying peach leaf curl on peaches, oyster-shell bark-louse and almost all other scale insects on other trees, and it removes moss and fungus.

## Pruning Bush Fruits

H. S. Peart, Jordan Harbor, Ont.

The pruning of bush fruits is very often neglected, whereas a little time and labor at this season may be made to give large returns. The fruiting habit of the red currant and gooseberry are so nearly alike, that the same methods of pruning may be practiced on each. The finest and largest fruits are produced around the base of short spurs coming out from the two and three year old wood. This

gives us a clue to the methods of pruning. A good rule and one easily carried out is to remove each year the two oldest canes at, or near the ground, and to allow two new strong shoots to take their places. Cut out all other new shoots starting from the ground. Head back these two new shoots fully one half to induce formation and growth of new lateral shoots near the

new canes should be headed back severely but never make the mistake of heading-in the lateral shoots if a large yield is desired.

## Arsenate of Lead

R. M. Winslow, Guelph

At the short course in fruit growing held at the Ontario Agricultural College, Guelph, Prof. R. Harcourt spoke chiefly of the two great classes of insecticides, the food poisons, of which arsenous oxide (white arsenic) is usually the active principle, as in Paris green, London purple, lead arsenate, calcium arsenate, "Bug Death," and so forth, and the contact poisons, of which lime-sulphur and kerosene emulsion are the most used. With regard to the food poisons, Prof. Harcourt said that some classes of insects were becoming harder to kill with arsenic, and that possibly in the future we will have to find some other food poison. At any rate, it seems necessary to use somewhat more Paris green than was formerly used, especially the best ones we have now.

Arsenate of lead is replacing Paris green, because it is slightly cheaper, it "stays up" in the spray tank longer, it needs no lime, as it contains no free arsenous acid, it sticks to the tree much better, and there is absolutely no danger of injuring the plant. Any man can make his own more cheaply than he can buy it, by procuring the following materials and mixing them according to the directions. arsenate of soda, 10 ounces; acetate of lead, 24 ounces; water, 150-200 gallons.

Dissolve the arsenate of soda in about a gallon of cold water, in a wooden vessel; dissolve the acetate of lead similarly and mix the solutions after diluting them still more. Add water to bring up to the quantity above stated. The average wholesale price of arsenate of soda is nine cents, and that of acetate of lead seven cents. This solution contains just as much arsenic as in a mixture of Paris green containing 10 ounces to 100 gallons. It can be applied, moreover, at three or four times the strength and will not do injury to the leaf.

Most orchards are too heavily pruned, in fact a great many of them are butchered. Every section has a "professional" pruner, and the growers listen to his talk and follow his example. The result is many trees are practically ruined.—D. Johnston, Forest, Ont.

THE CANADIAN HORTICULTURIST would like to hear oftener from readers who grow raspberries, blackberries, currants, or gooseberries. Send for publication a description of your patch and tell how you plant, cultivate, prune, pick and market.



Spraying on The Coldstream Estate, British Columbia.

Photograph by B. T. Boies.

which it costs them only eighty cents per forty-gallon barrel, ready to spray.

The sulphur used must be finely ground in order to get the best results. Twenty pounds of lime and eighteen of sulphur to forty gallons of water, boiled forty-five to sixty minutes very vigorously, is highly satisfactory. Mr. Thompson said that some growers intend to use a long tank set on bricks for the boiling, with a fire under it. This method will be cheaper for most circumstances, although it occasions a slightly greater loss of sulphur through volatilization, and so a little more in proportion should be used. Mr. Thompson had his best result from Port Colbourne lime which is by analysis, the finest in Ontario.

A fine nozzle, a well strained wash, good pressure of ninety to one hundred pounds, and a fair amount of wind, are essential to spraying lime-sulphur. As nozzles wear rapidly, the wearing

ground. All the new growths from the remaining old canes should be headed back if the variety is a strong grower and is likely to produce an excessive amount of wood at the expense of fruit.

Many people who make the mistake of treating the black currants the same as red currants, wonder why they get such small yields of fruit. It will be observed that while the reds bear their fruit around the base of the new shoots, the blacks produce their fruit towards the tips of the new growths. By removing a portion of the new growth, which arises from the two and three year old wood, half or more of the crop may be removed at the same time.

As blacks are usually very vigorous, three new canes may be allowed to grow each year and three old ones cut out, leaving a bush of eight or ten canes, instead of five to seven as recommended with red currants and gooseberries. The

## Suggestions for Using Bedding Plants\*

**S**TARTING with the beginning of the season, the various Dutch bulbs are the first to attract our attention. They are easily cultivated and, therefore, most appropriate for the amateur. Exquisite effects and color schemes can be carried out; although their duration of bloom barely reaches more than four weeks, I think they make the most striking display of the season. Only the purest and clearest colors should be selected. Off colors and the peculiar magenta shades are hard to match with pure colors and are best planted by themselves, or far enough distant so as not to detract from them. Mixed beds containing a number of varieties look very well, but beds of all one color show better taste. Where a number of beds are planted, greater attention must be given to work out a harmonious color scheme. Pink, white and light blue blend admirably; next comes yellow, then red and yellow and the various reds. It is a great deal more pleasing to the eye to let the colors run into each other by degrees than to create too big a contrast. Colonies of crocuses, snowdrops and scillas, singly and several together, irregularly scattered on the lawn, look very charming.

Pansies, bellis and myosotis are also extensively used. Although the pansies come in a multitude of colors, they are mostly used mixed and often with *Bellis perennis* as a border. Little advantage has been taken of working out color schemes with pansies, and yet if we stop to study their rich tints, tints which I think cannot be found in any other plant, the possibilities are wonderful.

Following these come the summer plantings with cannas, geraniums, heliotrope, begonias, petunias, coleus, acalyphas, abutilon, salvias, verbenas and a great number of other plants too numerous to be mentioned.

Almost all bedding plants thrive and flourish best in full sunlight, except tuberous begonias and fuchsias, which do best in half shade, where there is plenty of indirect light; other plants, like some of our hardy palms—phoenixes, latanias, chamærops—the various fibrous-rooted begonias, like *semperflorens*, *Vernon*, *Schmitti*, and fancy-leaved *caladiums*, do well under both conditions.

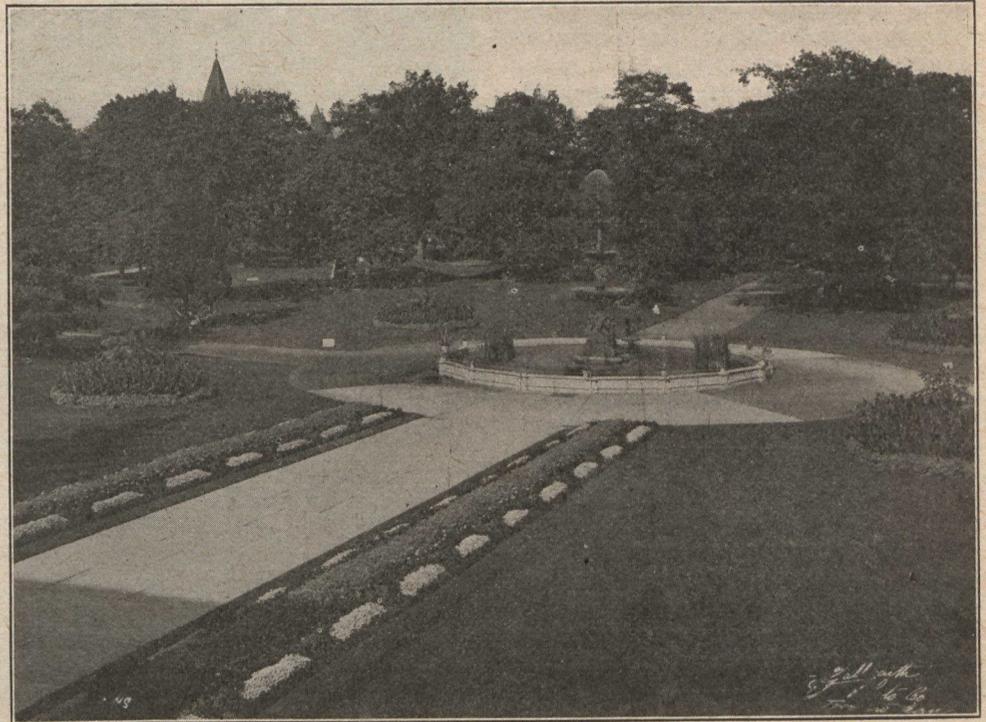
The soil for cannas, musas, ricinus and *Caladium esculentum*, should be very rich, their growth will be so much more luxuriant; while the rest of the plants, like geraniums, begonias, verbenas, salvias, cuphea, ageratum, and so forth, also need enriched soil. Care must be taken not to use too much fertilizer; this will

result rather disastrously and the plants will show an abundance of foliage in place of flowers.

Bedding plants, before set out in their summer quarters, should be properly hardened off, they should be exposed freely to the air and sunlight at least two weeks before the planting season commences. Nothing serves this purpose better than the hotbed, no matter how much some of the growers are opposed to this sort of cultivation. It is true, the cost of labor is somewhat higher, but the superior results obtained fully justify the expenditure made, and

or less formal, they should not appear stiff; every plant should have plenty of room for full development, and where a number of varieties are used in one bed, the tall ones should be massed, but here and there one should rise above the lower ones, so as to present a loose and pleasing arrangement; in this manner, every plant will show its valuable points more advantageously. We can improve the bad points of one plant with the good ones of another.

Particular stress should be given to the selection of the various tints, blending richly-colored foliage tastefully with



Bedding Plants in Allan Gardens, Toronto

plants hardened off in this manner suffer but very little in transplanting.

We have plants of every desirable height, from two inches up to eight feet, some with a wealth of flowers, others again with richly colored foliage, some with coarser, others with more graceful features.

### CONSIDER THE SKY LINE

In the arrangement of planting, one great object, which is one of the great principles in landscape gardening, is in many cases lost sight of, namely, the consideration of the sky line. Especially in large border plantations this should be applied; here we have tall plantings broken with lower ones, until they finally run out, to very low plants at the edge. In fact, in every bed, as well as in larger displays, the relation of one bed to the other should be treated in this way. While the beds are all more

the more gorgeous tinted flowers, so as not to create too big a contrast. Beds of solid colors, alternating with some of less contrast, will harmoniously tie the entire display together and this will help greatly to achieve the desired plan. It is in the designer's power to present a very brilliant or a very quiet picture, according to the scheme that is required.

Sub-tropical effects may be produced by the use of reeds and grasses in combination with large leaved plants. Try a bed with plants of "*Arundo donax*" and castor oil beans in the centre surrounded by cannas, and an outside border of "*Caladium esculentum*."

Rhubarb may be forced in the garden by means of boxes, without top or bottom, placed over the plants, banked around with manure and covered with glass.

\*In the March issue an article appeared on where to use bedding plants. This article discusses how to use them, and is by the same author, Mr. Alois Frey, Chicago.

# Good Taste in Gardening\*

Dr. H. M. Speechley, Pilot Mount, Manitoba

**G**OOD taste in gardening should be applied, first, to the formation and arrangement of beds, secondly to the arrangement of backgrounds, thirdly, to the allowance for variations in the heights of plants; and, lastly, to the disposal of color—all four good practical points. Perhaps, someone may say, "Why not follow nature?" We reply, "Certainly; while it is not always possible in a limited garden to follow nature's lavish ways, nature supplies us with two good principles, of which one is, 'never be formal or stiff,' and the other, 'never make right-angled designs.'" Bearing in mind these two principles, we approach, first, the formation and arrangement of beds. It is well-known that good drainage is an essential point in making a flower bed, which, therefore, should be raised well above the level, thus ensuring good drainage, and the best exhibition of the flowers grown on that bed. You combine utility and good taste. It is not the beds themselves that you want to show, but the form and beauty of your flowers. Good taste demands also that your flower beds shall be shaped in curved and rounded outlines, just as nature disposes of her masses of flowers with here and there a straw stem or flower flung out, just to be as unconventional as possible.

## AVOID ANGLES

Whoever saw a square mass of anemones, or bergamont, or sunflowers, or golden rod, upon the prairies? Unconsciously, people unskilled in gardening wonder why So-and-so, who has as good or better flowers than his neighbor, cannot make so good a show. Dispose your curves, then, as naturally as possible, so that the eye glances readily from curve to curve. It is all in good taste; there is none of that abruptness none of that stiffness, none of that conventionality, against which the artistic eye can protest.

## ABOUT ARTIFICIAL PATTERNS

Under the same ban come all such artificialities as large so-called ornamental pots, tubs, or cans, all of which are an abomination for outdoor gardening. For the same reason, geometrical figures are not in good taste. It certainly shows ingenuity when a man cuts out a bed to the shape of a Maltese cross, or makes wonderful patterns and designs in carpet bedding, but it is just as certainly poor gardening. That is why public gardens are so dismally formal when run by men who

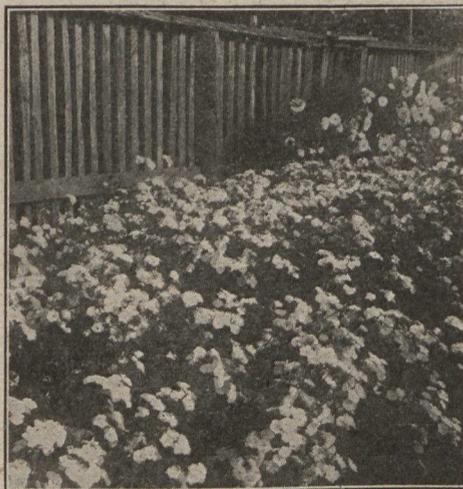
will make artificial patterns. It is not in good taste. Therefore, just as nature does not reveal all her beauties to you at



The Iris is Hardy and Beautiful

once, but hides them behind many a curving outline, so the lines of your beds will be in various curves, which will produce a series of pleasant surprises for your guests.

Often you will see a perfectly straight border full of all kinds of beautiful flowers, it is true; but open out that straight cut edge with a curving bay or two, and you will at once see the improvement. The same may be worked out in the arrangement of garden paths, whether of gravel, clinkers or cement. A cement path is essentially formal, and not really suitable except for the main business approach to a house, but even a slight



Phlox Drummondii Growing at Ease

curve will rob the cement walk of much of its formality. As, however, the other paths are likely to wander more or less in and out amongst the garden beds, you will probably dress them with gravel

or clinkers, and so dispose them that they will harmonize with the curving outlines of the beds.

## BACKGROUND OF GREEN

Now we come to our second point, the arrangement of back-grounds. Regarded as an artistic scheme, a garden requires as its natural setting a background of green; no other color shows up the brilliance of flowers so well. But in this country of strong winds and eccentric frosts, the background should serve as a protection against both wind and frost. It is not, however, desirable in a garden to have too many tall trees, especially if their roots go far afield. I recommend, therefore, the use of hedges, as backgrounds, both for small and large gardens.

If you want a hedge ten feet in height, Manitoba maple makes an excellent one, but if you require hedges of from four to five feet high, nothing better can be planted than hedges of lilac, caragana or Tartarian honey suckles. Happy is the gardener who can have hedges of each kind, because each flowers early, and each has its own peculiar shade of green. Spruce hedges are not to my taste, especially if cut to odd shapes. The cutting of hedges into the shape of birds and beasts, or artificial objects is, to my mind, a monstrosity, and in thoroughly bad taste. It is usually absolutely necessary to clip a hedge but formality is avoided by rounding off the top and the sides, and never cutting it on the square. You see the same effect in the rounded masses of willows which border every sloughy spot upon the prairie. Clipping will have to be undertaken at least three times through the spring and early summer, not only to keep back the fierce young shoots but to prevent a too lofty hedge from depriving the flowers of the light they need.

## VARIETY OF CONTRAST

Our third point is the allowance for the variation in the height of plants. Good taste demands of the gardener that he shall arrange all his plants so that not only shall each plant be seen to the best advantage, but as far as possible, each plant shall set off its neighbor by way of contrast. Young gardeners have always to learn this important point by their mistakes, just as most of us have to learn many other things in life. It is obvious that if you plant a dwarf nasturtium between a tall larkspur and a Shirley poppy, you will completely hide the nasturtium, especially if the larkspur is to the front.

The easiest way to think of this is to imagine that you have a broad border to

\*Extracts from an address before the recent Convention of The Western Horticultural Society held in Winnipeg.

plant all down the side of the garden. You wish it to hold herbaceous perennials in the background and in the middle distance, while in the foreground you would like to plant in due season a selection of hardy annuals. First, then, I would caution you against placing in the background any of the tall sunflower tribe, and especially goldenglow. Put these in clumps and odd spots amongst shrubs, preferably well back in the garden, where their ragged underlegs are easily concealed. Goldenglow is a terrible plant to sucker out in every direction to the harm of all its neighbors. The best background plants are hollyhocks and the various tall larkspurs. The latter with monkshood grow very well in the neighborhood of trees. In front of these you may grow perennial

With regard to stocks and asters, while they mix well with many other plants, it is only fair to these splendid flowers, and well within the best canons of taste, to give them if possible the main occupancy of separate beds.

Sweet peas should be grown in separate beds in order to enjoy their beauty and wonderful flowering capacity. Sweet peas are grown in the best taste only when they are grown on bush supports, rather than on the more formal wire netting. These brief hints will at least give some indication as to the most satisfactory stocking of a large bed.

#### BLENDING OF COLORS

Our fourth, and last point, bears on the disposal of color to the best advantage, a most important question of taste,

orange lily amidst a mist of waxy blooms of the zygadene. So indeed tulips glow more brilliantly when seen poised amongst the spring greenery of a perennial herbaceous border than when trimly packed in more or less formal beds. A mass of Shirley poppies make a wonderful blend of color that no effort of yours can spoil, and only requires a pure green background to be seen at its best.

#### SOME SUGGESTIONS

For a protected garden only, pink or white hollyhocks, pale yellow evening primroses, pale blue globe thistles and pink mallows will make a fine mass of color. For a dwarf bed, plant centrally some coreopsis, annual or biennial; surround these with white candytuft, and early blue Phacelia campanularia; and on the outer edge add the dwarf empress red nasturtium, alternating with dark blue lobelia. The result will, I think, be very pleasing, and in good taste. It must always be remembered that if planted in masses and with due regard to size of plants, beds of our hardy annuals are scarcely ever out of taste, so that the most inexperienced beginner, if he or she avoids crowding, which is in the worst taste, will be able to have a very beautiful and charming garden, without troubling about the refinements of gardening, until experience has educated the patient learner.

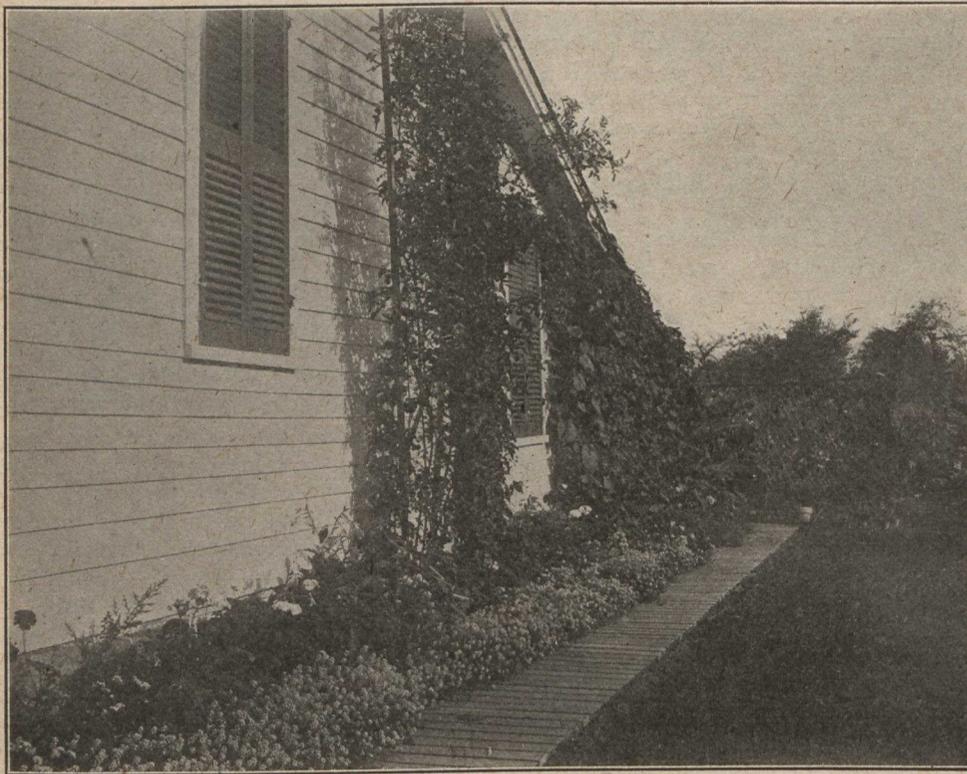
#### The Hardy Clematis.

Among the best of woody climbing vines is the clematis. Two of the most hardy and desirable of these are "Clematis paniculata" and "C. Jackmani." The former bears pure white, star flowers and the latter, violet purple flowers, measuring from four to six inches across. The former will cling well to a chicken-wire trellis; the latter does better as a pillar or porch climber. A white variety of the Jackmani type is "Clematis Henryi."

Probably the best soil for growing the clematis is one that is deep, mellow, rich and naturally moist. In dry soils and seasons, water must be applied freely for the large-flowered kinds. As soon as young plants begin to run, provide a support.

Prune old clematis vines in early spring. Cut the large flowered kinds back to the ground each year. Unless wanted for permanent bowers, the other types may be treated similarly. They will live, grow and increase in beauty from year to year.

THE CANADIAN HORTICULTURIST wants photographs of lawns and gardens that have been made or improved by amateurs. Take a photograph or two of them before work is started this spring, and then others later.



A Border of Alyssum, Geraniums and other Things easily Grown.

phlox in clumps, alternating with the tiger lily and the orange lily. Next, mix in clumps, early and late irises, German, Spanish or English, and not too many peonies, because they need so much room. No other spring flower is better suited to our western protected gardens than the peonies, whose blooms are more magnificent than the rose, and smells as sweetly, while its glossy leaves are an ornament to the late fall. Now you may put in day lilies, late tulips, dwarf larkspurs, Iceland poppies, sweet williams, pinks, coreopsis, and even an aster or two, with here and there a stock; while to the front together with pansies you can plant such hardy annuals as the dwarf nasturtiums, and snapdragons, candytuft; phlox, petunia or verbenas.

because it must be clear to anyone that to plant a pink geranium beside a red is as much a mistake as it is satisfactory to plant red and white geraniums side by side. The blending of colors in your garden is a fine exercise of imagination and needs experience. Every summer I try to imagine what next summer's garden shall look like, something different from the bed as it grows before me. You have to keep in mind also the habit of a plant, whether it will bloom early or late, or you may find that your calculations are upset. Nature makes some marvelous blends in very simple ways, to wit, a mass of coneflowers is flung in a ruddy brown sea of top grass, and the effect is handsome. Again, in excellent taste, is the effect of the burning cups of the

# Have a Flower Garden on the Farm

M. J. S., Port Kells, British Columbia

**H**AVE you a flower garden? One that is always bright with flowers from spring until fall frosts? If you have, you are fortunate. Such gardens are not the rule in most places. On many farms there is a small place somewhere near the house, known as the flower bed, but usually flowers are scarce, or there are none at all, and the bed is full of weeds. There is no reason why there should not be a nice flower garden around most every farm house.

You often hear the remark, "What lovely flowers you have. I can't get mine to grow." There must be something wrong somewhere, for flowers are not hard to grow. They require a little attention, especially when young, but when you get to know their needs, they are very little trouble, and will repay you many times for their care.

## NICE PASTIME FOR GIRLS

Are you going to grow flowers this year? Perhaps some of the girls will. A little work in the garden will be a pleasant, healthful change from so much house work. You can, and will, if you try, grow just as fine flowers as anyone. The soil will not hurt your hands, or injure your health.

It makes little difference who grows the flowers. What is needed is to look after the work well, and you will have something to be proud of. You will learn much each year, and will be able to look after more as you learn.

The ground in which to grow the plants should be especially selected and cared for. Most flowers like a rich, mellow soil, not inclined to be too dry. Well-rotted cow manure is the best fertilizer. The manure, besides enriching the ground, helps to keep plenty of moisture in the soil, and flowers need plenty of moisture in dry weather. A good sprinkling of hardwood ashes, will improve the color of the blooms.

As soon as possible in spring, manure your garden well and dig with a spade. Dig it two or three times before sowing or planting, so as to get the soil in good condition. Rake the surface smoothly.

## KINDS OF FLOWERS TO GROW

What are you going to plant? The seed catalogues have such a variety, one hardly knows what to select. A few good sorts will suit the beginner best, and you can increase your varieties each year. Now is the time to get your seed. Here are a few that will give you large quantities of lovely flowers: Pansy, phlox, aster, sweet peas, dianthus, (China pinks) daisy, zinnia and poppy. Look these up in the catalogues and see what is said about them. Always deal with a reliable firm. These varieties will not cost much and are very easily grown.

Summer flowering bulbs also are very easily grown. The gladiolus is the best for the autumn. They are not expensive and the flowers are grand. Plant in good soil in May, June or even July, about four or five inches deep, and about the same distance apart. With a little cultivation they will do the rest.

## START SOME SEEDS INDOORS

Of the above named seeds, sweet peas and poppies should be planted out of doors, as they do not transplant well. Sow peas as early as possible. The other varieties can be planted in the house and set out in the open ground when the weather becomes favorable. It is the best way, but it requires a little care. The plants will bloom earlier and produce more flowers when started indoors, and transplanted. You will get more seeds to grow, too, when sown in the house (if you take care of them), than outdoors, where they are exposed to all sorts of weather.

Small cans are the best to start the seed in. A can is better than a box in many ways. It is easily warmed through, readily transferred from place to place, and, should you chance to upset one, everything is not lost. To prepare the cans, paper them, either with fancy paper, or lead foil, to cover the rust, then make a few holes in the bottom, put in about one inch of charcoal, and fill the remainder with a mixture of one-half fine earth and one-half leaf mould, or well rotted material from the bottom of a stack. Press firmly into the can, but do not pack tightly. Now, sow the seed, (one variety in a can will be enough) and cover with the earth mould mixture. The leaf mould is to prevent the soil packing solidly when watering.

Place something over the mouth of each can to keep in the moisture. A piece of heavy woollen cloth cut to fit the top of each is best, or tie paper over the top. Set the cans in a warm place near the stove. Never place them in a cold window. Water as often as required; never let the surface become dry. Should any seeds appear on the surface through watering, press them under with a piece of wood. Water lightly and often. Do not flood the seeds.

As soon as the plants begin to appear (it may take ten days or two weeks for some) place the cans in a sunny window in not too cold a room. As they grow, remove to a cooler window, to harden them. Give them plenty of sunshine. Water occasionally, and stir the surface with a little wooden stick. It may be necessary to transplant some of the plants into roomier quarters as they grow larger. Take a knife blade or the handle of a teaspoon, and carefully lift

out the desired number, and plant them in a box or can in the window. Do not let the sun shine full on them for about a day after transplanting. Water the transplanted ones well. If the seeds are not started too soon, it will not be necessary to disturb them until they are to be set outside.

When ready to plant out in the open ground, soak the cans in water and take out all the plants at once. Separate carefully and set in place. Spread the roots well, press the earth over them, and pour a little water over each, unless it be a very moist day. Never set out the plants on a bright day—always on a dark or rainy one. Have the ground already marked out to receive the plants before you start. You will find them more easily cared for if each kind of flower is planted in a bed by itself.

Keep all weeds down, and stir the surface of the ground around the plants frequently, whether there be weeds or not. Always cultivate after a shower of rain. This will preserve the moisture. A good watering occasionally is good for flowers, but you should cultivate the ground shortly afterwards, or it will dry out in a short time. When your flowers begin to bloom, do not allow them to go to seed, and they will bloom longer.

After the plants are placed in the ground, cultivate as often as you can, especially after rains; keep down all the weeds, and do not allow flowers to seed. Above all things, never start a garden, unless you can keep the chickens out.

## To Have a Good Lawn

There is no reason why anyone should not have a good lawn. Simply apply in the early spring, a liberal sprinkling of good commercial fertilizer. Manure brings weeds, and though there are bound to be some anyway, you will have fewer if you use a commercial fertilizer. A few weeds will not hurt the appearance of the lawn if the mower is run over it with sufficient frequency. This should be done when the grass is growing well about three times a week. Use a good mower, keep it well oiled and it will be a pleasure to use it. Have the blades set high enough to leave from one and one-half to two inches of grass height.

If you mow the lawn as often as suggested, do not rake up the clipped grass but let it remain as it will settle among the growing stalks and form mulch, which will help to fertilize the soil. The only way to get weeds out, if you are determined to do it, is to take them out by the roots, one by one. If the weeds are plantain, you need not take the trouble; they are there to stay.—W.

## What Amateurs Can Do in April

**T**HE first work in the vegetable garden should be to attend to the asparagus bed. Take off the covering of manure it received last fall and fork

parsnip row so that cultivating may be done between the rows if necessary. The lettuce can be used before it interferes with the crop of parsnips.

A week or two later, beans, beets, carrots and salsify may be sown. Never sow seeds when the ground is wet and sodded.

If you sowed seeds of early cabbage in the hotbed last month, the young plants may be transplanted about the end of April or early in May. Seed of late varieties may be sown in the open ground about the end of May and transplanted about the first of July.

Sow the seed of egg plants in a seed box or hotbed about the middle of this month and transplant to the open when danger of frost is passed.

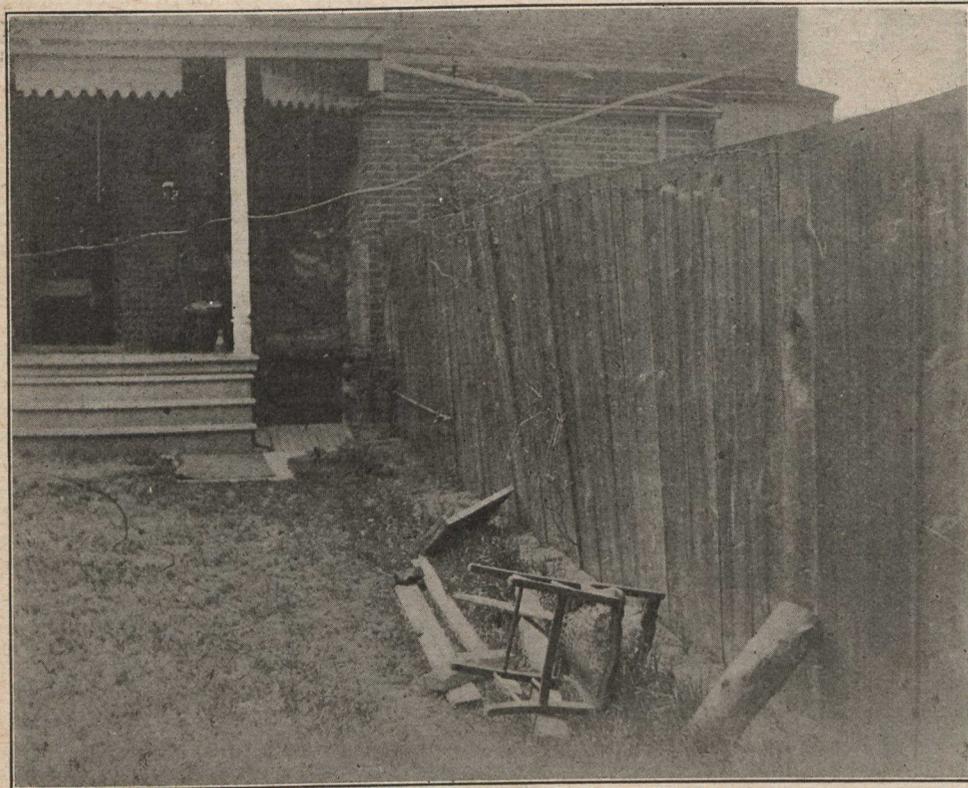
Sow early varieties of radish as soon as possible and at intervals of two weeks for a succession. Good varieties are Rosy Gem and French Breakfast. Do not forget a few early turnips, such as Golden Ball, for table use.

### WITH THE FRUITS

All small fruit pruning should be finished before the middle of this month. If not already done, conclude the work on your currant and gooseberry bushes at once as they break into bud early.

If you have peach and plum trees and there are mummied fruits hanging upon them, remove the mummies at once and carry them away or bury deeply. Give the trees a good spraying with Bordeaux mixture and Paris green.

The mulch on the strawberry bed should be taken off. Leave a portion of it between the rows to conserve moisture. Dig out and remove all perennial



**A Back Yard that a Little Labor and Expense Improved Greatly Last Season**

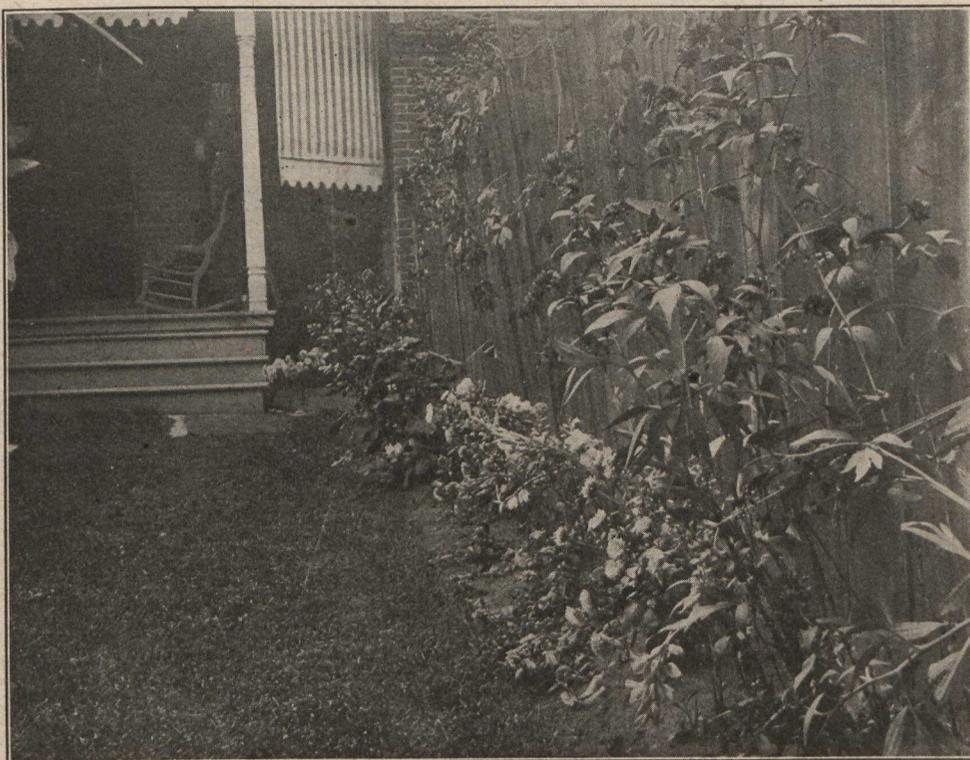
Many back yards appear worse than this in spring and remain so all summer. A few minutes work each day would make them places of beauty. This photograph was taken at the residence of Mr. Arthur Blakely, Toronto

the soil over lightly around and about the plants. Do this as soon as the frost is out of the ground and the soil is fit to work. If manure was not applied last fall a light dressing may be given now and worked in.

Every garden should have an asparagus bed. It is the earliest and most acceptable of early vegetables. A bed may be started by sowing seed as early as the ground can be worked. Sow in drills an inch deep and three feet apart. If you can secure two year old plants, they will give better results than by sowing seeds. Plant them eight inches apart in rows three feet apart. Have the asparagus plot on deep, rich land, where water will not stand in winter or spring.

Among the first vegetable crops to sow or plant are peas, spinach, lettuce, parsnips, parsley, leeks and onions. Always have the seed bed well prepared, particularly for onions. A little frost or snow after these seeds are in the ground will not hurt them.

Parsnips and parsley seeds are slow in germinating, often taking four or five weeks. It is a good plan to sow a few seeds of lettuce with these. The lettuce will come up quickly, marking the



**The Same Back Yard as it Appeared the Following September**

Many perennials were planted that make simply a start the first year. They should grow vigorously and bloom profusely this summer and fall. It is worth while to clean up and plant.

weeds as soon as they appear, such as dandelion, twitch grass and so forth.

Have you a strawberry patch? If so, how did you plant it, and what are your methods of growing? Tell your experience to the readers of THE CANADIAN HORTICULTURIST. Send a photograph of the plantation if you have one.

With all small fruits it is a mistake to plant before the soil is thoroughly prepared and enriched.

THE FLOWER GARDEN

Make a hotbed for raising petunias, phlox, asters, cockscombs, and other annuals. For the amateur who has not a greenhouse or hotbed, windows with a southern exposure may be used for starting seeds in boxes.

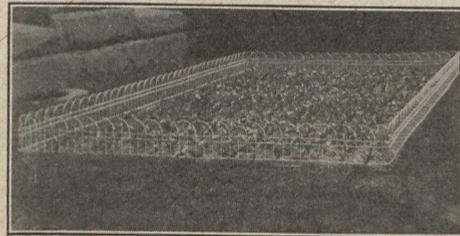
Use shallow boxes with holes in the bottom for drainage. Sow in light, sandy soil. Very fine seeds do not need to be covered. Sow them on top of the soil but have the soil moistened beforehand. After sowing, the seeds should be pressed with some flat object to force them in evenly. After germination begins, keep the soil moist. Do not give too much water at once so as to avoid washing out the seeds. When the plants are up, more may be given.

Large seeds may be planted deeper. Plant in depth from one to four times the diameter of the seeds. Asters, balsams and zinnias are seeds of this type.

Sow outdoors as soon as the ground is dry enough, seeds of mignonette, annual wallflower, snapdragon and sweet peas.

Do not sow nasturium seed too early as the young plants are liable to be damaged by late frosts. Better leave them until late in May.

Seedlings of annuals started inside should be transplanted when the second



One Means of Protecting a Bulb Bed

pair of seed leaves are in course of development. Handle them carefully. It is best to allow a small quantity of earth to adhere to the roots. Make a small hole where the plant is to go. Place the plant and press soil firmly around it.

Strike in boxes of sand, in the hotbed or house, cuttings of coleus, ageratum, geranium and lobelia. As soon as rooted in about ten days or two weeks, pot them in small pots. Give them a watering and shade for a few days until the roots start. As soon as they are rooted,

they should again be placed in sun and light.

Divide the roots of cannas. Put them in boxes, upon the bottom of which should be placed a couple of inches of soil. Water lightly, and expose to the light. After they have started into growth, they may be re-potted if so desired. Dahlias, also, may be divided for summer growth.

Plant or transplant perennials, such as peonies, dielytras and German iris as early as possible. Roots of perennials that are large should be divided.

Uncover the bulb beds towards the middle of the month if the weather is good. Remove the litter with a fork and avoid breaking shoots that have come through the ground.

Prune hardy roses. Cut out the weak wood and shorten the stout growths to within six inches of the ground. Place a liberal dressing of cow manure around the roots.

As soon as all frost is out of the ground and the weather is fairly dry, roll the lawn. If the sward is in poor condition, use some standard complete chemical fertilizer. Trim the grass edgings evenly. There is nothing that adds so much to the appearance of walks and driveways as clean, well-kept edgings.

Much of our small, imperfect, light-colored or wormy fruit comes from trees not growing under favorable conditions.

## A Planting Table for the Flower Garden

Dates for sowing depend upon local conditions. Those mentioned are for early districts.

NAME	TIME TO PLANT		DEPTH TO SEED	HEIGHT OF PLANT	DISTANCE TO TRANSPLANT	SEASON OF BLOOM		COLOR OF BLOOM
	INDOOR	OUTDOOR				BEGINNING	LENGTH	
Ageratum	March	June	1/8 inch	6 in. to 1 1/2 ft.	1 foot	July	3 months	Blue.
Alyssum	March	April	1/2 inch	4 to 6 inches	.6 inches	July	3 months	White.
Aster	Feb.	May	1/2 inch	15 to 18 in.	1 1/2 feet	July	3 months	White, pink, red, yellow.
Calendula	April	May	1/2 inch	1 foot	.8 inches	June	3 months	Orange and yellow.
Candytuft		April	1/4 inch	1 foot	.6 inches	June	4 months	White.
Carnations	March	May	1/4 inch	1 foot	.6 inches	July	3 months	White, pink, red.
Chrysanthemums	March	May	1/8 inch	4 feet	1 foot	August	3 months	Yellow, white.
Cosmos	April	May	1/8 inch	.8 feet	.18 inches	August	3 months	White, pink.
Dahlia	March	June	1/4 inch	.8 feet	.2 feet	July	4 months	White, yellow, pink, purple, maroon.
Dianthus	March	May	1-16 inch	1 foot	1 foot	May	4 months	Pink to red.
Gaillardia	March	May	1/8 inch	1 1/2 feet	.2 feet	July	4 months	Yellow and red.
Heliotrope	March	May	1/2 inch	6 inches	1 foot	July	4 months	Violet, purple and white.
Larkspur	Feb.	May	1/2 inch	1 1/2 feet	.2 feet	June	5 months	Blue.
Lobelia		April	1/4 inch	1 to 2 feet	.6 inches	June	3 months	Blue.
Marigold	Feb.	April	1/4 inch	1 foot	1 foot	June	3 months	Orange.
Mignonette	Feb.	April	1/4 inch	1 ft. to 15 in.	6 inches	June	4 months	White.
Nasturtium	March	May	1 inch	.5 to 6 ft.	1 foot	June	5 months	Orange, yellow.
Nicotiana	March	April	1/8 inch	.2 to 3 ft.	1 foot	July	3 months	White, red.
Pansies	Jan.	March	1/8 inch	.6 inches	.6 inches	May	5 mon.	Purple, white, mauve, violet.
Petunia	March	May	1-16 inch	15 inches	1 1/2 feet	June	5 months	Purple to white.
Phlox	March	May	1/8 inch	.2 feet	.6 inches	June	4 months	Red, white, purple, crimson
Poppies	Feb.	April	1/8 inch	14 inches	.8 inches	June	4 months	Scarlet.
Portulaca		June	1-16 inch	.6 inches	.2 feet	June	4 months	Crimson scarlet.
Salvia	March	June	1/2 inch	.2 feet	.2 feet	July	3 months	Scarlet.
Scabiosa	March	April	1-16 inch	.2 feet	.4 inches	June	5 mon.	Red, purple, pink lilac, white.
Stock	March	May	1/4 inch	1 1/2 feet	.1 foot	June	2 months	White.
Sweet William	March	April	1-16 inch	.6 in. to 1 ft.	.6 inches	June	4 months	White, crimson, scarlet.
Sweet Pea	March	3 to 5 inches		.6 feet	.6 inches	July	4 months	White, purple, red, pink, violet, maroon.
Verbenas	March	June	1/4 inch	1 foot	1 foot	June	4 months	Purple.
Violas	March	May	1/4 inch	.6 inches	.6 inches	June	4 months	Purple to white.
Zinnias	March	May	1/2 inch	1 foot	1 foot	June	6 mon.	Orange, red, scarlet, salmon.

# Root Maggots and-How to Treat Them

Dr. James Fletcher, Dominion Entomologist, Ottawa

**A**MONG the insects which the market gardener must consider every year, are the root maggots that eat the roots of onions, turnips, cabbages and cauliflowers. The root maggots are enormously abundant in some years. In those years it is almost impossible to control them. There is as yet no practical remedy which will always give us perfect immunity from attacks of these insects. The eggs are laid by small flies, very much like a house fly, but not half as large, close to the ground, on the stem, or near the roots of the plants they attack. The eggs hatch in two or three days, and at once bore into the stem of the onion, radish, or cabbage; and if they once get inside, you cannot reach them with any remedy.

The preventive remedy, which has given the best results, is known as the tar-paper disk. This is a piece of ordinary tarred building paper, about three inches square, split from the centre to one side, so that you can put it around the stem of the plant at the time it is planted. The tarred paper disk is pressed close to the ground, and the creosote in the tarred paper, prevents the insects from laying their eggs upon the stem of the cabbage, consequently, its roots are not attacked. With fresh tarred-paper, we can protect a very large proportion of the cabbages in a plot; but even with that protection in years of great abundance, we have seen clusters of eggs laid even on the tarred-paper. Last year there were root maggots at Ottawa, and we did not find a single egg laid on any of the plants where the tarred-paper disks were used. These are made very easily with a punch, and the time required to put them on is not very considerable.

## INSECT POWDER OR HELLEBORE

Another method, which has given us good results at Ottawa, is applied about July 1st, when the effects of the maggots become apparent. You can generally detect cabbage plants that are attacked, by the bluish appearance of the leaves. I do not advise you to treat only those plants which show they are injured but you should treat them all as a regular method of culture. When doing this draw away the earth from around the stem of the cabbage and see whether or not it is injured. If there is any sign of injury, the maggots may be killed with a decoction made of two ounces of insect powder or two ounces of hellebore in an ordinary pail of water. Mix with hot water first and then fill up with cold water. Draw the earth away from the

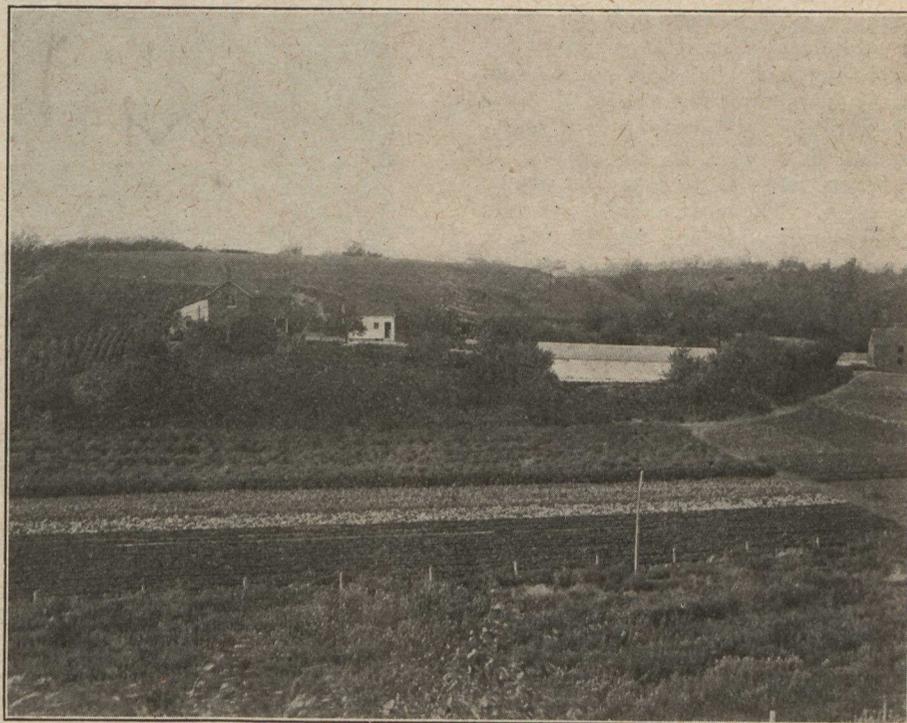
roots of the cabbage or cauliflower and then take a cupful of the decoction and pour it in. The poison from the insect powder kills any of the maggots that are lying in the soil around the roots of the cabbage and the moisture of the mixture applied at that time is very beneficial and gives the plant a push forward so that it will, as a rule, outgrow the injury done by the maggot. With us in Ottawa, July 1st, is the time to do this, and the results have been very satisfactory.

## CARBOLIC WASH

With onions, the attack occurs very early in the season and we have found both for onions and radishes, a good remedy in the carboloc wash, known as the Cook wash. This consists of one pound of ordinary soap or one quart of soft soap, dissolved thoroughly in a gallon of hot water, and when it is dissolved turn into it half a pound of crude carboloc acid. Boil for five minutes and then you

to put on any more. This will keep the flies off sufficiently long for you to get your crop of early radishes quite clean.

In the case of onions you must watch them longer. If they are in light, sandy soil, I have found a good remedy is to take a broom as soon as the bulbs begin to form and walk along the rows of onions and brush away the sand from the tops of the bulbs. The broom will take the sand away from nearly three-quarters the way down the onions and unless the sand is well up to the top the maggots will not work there. In heavy soil, this is not practical, but in light, sandy soil I have found it a good protection. If any of you are growing onions in light, sandy soil, it will be well for you to try this, but the chief standby is the carboloc wash. As I have said, however, we have not as yet any practical remedy by which maggots can be entirely prevented; but in Ottawa, I have grown crops of onions



A Well-kept and Well-managed Market Garden

Home and farm of Geo. Syme & Son, Carleton West, Ont.

have your stock emulsion. When you want to use it, mix one quart with 100 parts of water and apply as a spraying mixture directly on the plants or pour it along the rows, either with a sprayer or with a watering pot. You can go along the rows of onions as fast as you can walk at an ordinary pace.

When the young onions first appear above the ground, give them the first treatment and repeat once a week for about four times in the spring. By that time, the first crop should be ready for market and it is not as a rule necessary

and radishes when other people close to me had none. The smell of the carboloc wash keeps away the egg-laying flies.

## FRESH GAS LIME

An experiment which gave good results in a large field of onions where the land had been planted to onions for several seasons and was strongly fertilized and well kept up and had grown remarkably good onions for years, was based on the same principle. The onion maggot appeared suddenly and the whole crop would have been lost. After they had been cleaned thoroughly, the culti-

\* Part of an address delivered before the Ontario Vegetable Growers' Association at last convention.

vator was run between the rows and then a light dressing of fresh gas lime was broadcasted over the field. The gas lime is not a practical remedy to recommend because a supply is not always available, but if you happen to be near gas works and can get it, it is a very good thing to use. Gas lime is useful because the strong odor it gives off drives away the flies and the ammonia in the lime makes it a strong fertilizer. It must be used with caution for if a lump lies up against the plant, it will burn it. About twenty bushels to the acre was used in this instance and care was taken to sprinkle it between the rows. To clean land, 200 bushels an acre might be put on in the autumn and plowed under in the spring. If gas lime when fresh comes up against the roots, it will destroy them.

#### CHEESE CLOTH TENTS

A method of growing radishes and cauliflowers which has been used with success lately is that of covering the plants over with a cheese cloth tent or enclosure. Where it is done on a small area, it has given very good results, but the lack of light is the chief objection. With cauliflowers, it gives excellent results, but with onions, it is not so successful. In amateur gardens, I have seen beautiful cauliflowers grown under covers small enough to be moved by hand, where none at all could be grown in the open. The covers were six feet long, three feet wide and two feet high. They were removed after sundown to hoe the plants and then replaced. The flies which lay the eggs from which the maggots come for most part, work in hot sunshine.

#### SULPHATE OF IRON

A sulphate of iron solution, one pound to the gallon of water, poured around the roots of cauliflowers and cabbages, also gave good results. The experiment will be repeated next season.

### Planting Potatoes

H. A. Blunden, Sarnia, Ontario.

The potato will grow in almost any soil of ordinary fertility, but for an even-sized, marketable and edible tuber a well-drained, sandy loam is the best. The soil is best prepared in either of the following ways, namely, by manuring with well-rotted stable manure or by plowing under a crop of clover. If the former method is adopted the land should be plowed the previous autumn, and the manure evenly distributed at the rate of from ten to twelve tons to the acre, the following spring. After the manure is spread the land should be thoroughly worked with a disc harrow and then with a smoothing harrow so as to thoroughly incorporate the manure with the soil. For the latter method the best way is to plow under the crop

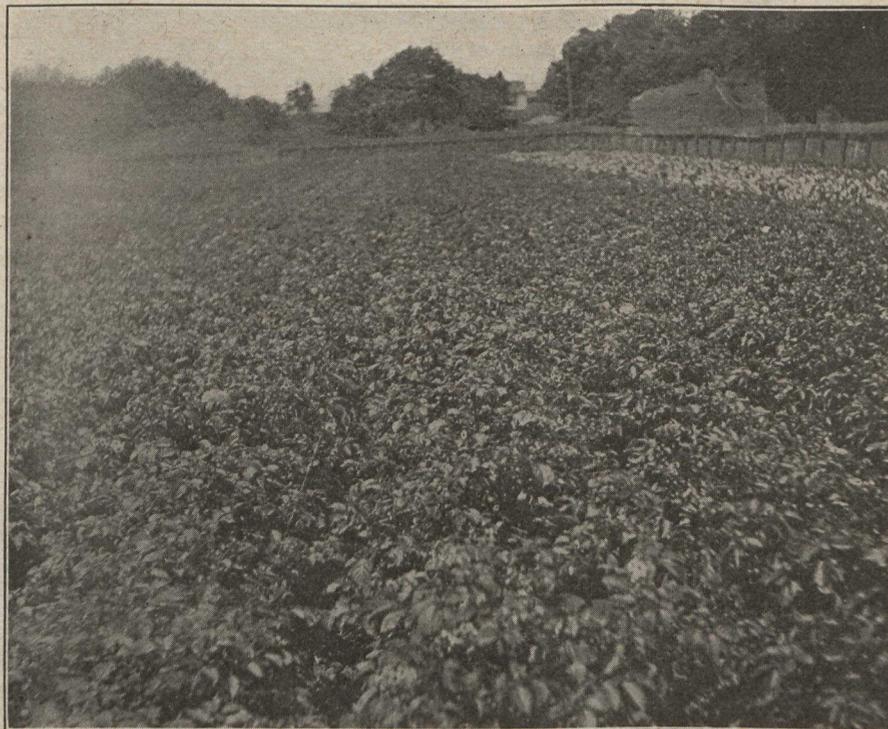
of clover in the spring as early as the land can be worked, followed by discing so as to break up the clover sod into as small particles as possible.

#### PLANTING

The seed should be cut the desired size and planted as soon as possible to avoid drying. If planting by machine it can be set so as to plant any desired distance in the row as well as between the rows, as well as the depth of planting, which should be about three inches in loose soil. For hand planting the handiest way is to take a heavy corn marker so as to mark the rows from thirty to thirty-six inches apart and about three inches deep, planting the seed or sets from ten to fourteen inches apart in the rows

the pot plants were stunted, while the others were kept growing with no check. For the benefit of those readers of THE CANADIAN HORTICULTURIST who, like myself, work only a few acres in mixed gardening and whose patches of tomatoes consist of only a few hundred plants, I will give a few facts from my experience.

Fourteen years ago I purchased 200 six-inch pots, and planted them with tomato plants in a rough greenhouse, placing the pots as close together as I could. When the plants met, I placed the pots farther apart, so as to give at least ten inches for each plant. I planted also the same number of plants in hotbeds.



A Exceptionally Heavy Growth of Potatoes

Grown last Season on truck farm of Mr. A. W. Shuter, Bracondale, Ont.

according to fertility of the soil. The rows of seed should be covered with a double mould board plow so as to leave the soil in a high ridge over each row. Cultivate throughout the season to keep the soil loose and to keep down weeds.

### Growing Tomatoes in Pots

S. B. Curtis, Toronto.

In the course of an excellent address delivered by Mr. R. H. Lewis, of Hamilton, at a recent meeting of the Toronto branch of the Ontario Vegetable Growers' Association, he mentioned the experience of one of his neighbors, who had experimented with starting tomato plants in pots (four-inch, I think), with the result that they were two weeks later than those grown in hotbeds. The reason given was that

On June 2, I planted the whole lot of 400 in the field. They were all good plants out of the same seed-bed, the only difference being in treatment of same. The pot plants had numerous stems as high as the main stem, while the hotbed plants had only a good main.

They were planted side by side, two rows of each. A rapid growth set in with the result that I gathered tomatoes for fully four weeks from the pot plants, and sold by the pound, before I had anything worth mentioning from the hotbed plants.

The conclusion that I came to is that in small pots the roots soon become clogged, with little to feed upon, and become stunted, whereas in larger pots, they are not punished to the same extent. However, I would not advise the use of pots to any great extent.

(Continued on page 93)

# OUR QUESTION AND ANSWER DEPARTMENT

Readers of The Horticulturist are invited to Submit Questions on any phase of Horticultural Work

## Removing Moss from Trees

Kindly advise me in respect to the strength of potash that it would be safe to apply to apple trees, twenty years old, to remove rough bark and moss. How many pounds to ten gallons of water, and how often would it be safe to use?—Joseph Burrell, Jr., Yarmouth, N.S.

It has been found from experiment that a two per cent. solution of caustic potash will remove moss and lichens from trees satisfactorily and will not injure the trees when they are dormant. Even a two and a half to three per cent. solution may be used without injury to the trees when dormant, but this strength is not necessary, and, as caustic potash is unpleasant to use even in a two per cent. solution, we should not advise using a stronger one. One thorough application would accomplish much, but two applications would be better and should be sufficient.

## Scale on Fern

I am sending a part of stem taken from a sword fern which has been going back rapidly. Will you kindly tell me what the trouble is, and suggest a remedy?—W. J. Bruce, Kincardine, Ont.

The piece of fern frond received was infested with a species of scale. The easiest method of getting rid of these pests on indoor plants is by mechanical means, that is, rubbing off by means of the fingers or an old tooth brush. They are easily dislodged. If a brush is used, it is better to dip it in a weak solution of whale oil soap, if available, or even common soap suds. When the piece of fern was received it was noticed that the young scales were moving. It is at this stage that they are most effectively treated by means of syringing, spraying or dipping, but this is not necessary if each frond is gone over separately with the brush.

## Strawberries as Fillers

I am interested in a plan for not losing all the benefit from ground for the first year while waiting for strawberries to come to bearing, if such can be done successfully and not be a detriment to the crop of berries. I want to grow them among young grapes and peaches until the latter reach good bearing. What element of plant food is taken from the soil by strawberries that should be returned each year, and what is the best way to supply it?—J. E. Lent, Fonthill, Ont.

Strawberries can be grown quite successfully in a peach orchard or between rows of grapes, if other conditions are satisfactory. It is probable, however, that they will not do so well in the vine-

yard as in the peach orchard, owing to the usual difference in character of soil. Most varieties of strawberries do not produce best results on clay land. While the fertilizers that should be applied to a strawberry patch should contain the three essential elements, nitrogen, phosphoric acid and potash, the latter is required in larger quantities proportionately. It can be supplied in hardwood ashes or by the application of muriate of potash. It would not be well to continue growing strawberries among grapes or peach trees when the latter commence to bear.

## Wistarias Do Not Bloom

Kindly tell me why wistarias often will not bloom, even after being planted several years? The vines are strong but no flowers appear. Do the flowers come on the current year's growth or on the growth of the preceding year?—C. E. Van Dyke, Grimsby, Ont.

It is quite a common occurrence for plants of wistaria to be shy in flowering the first few years after being planted. I planted a wistaria in 1883 which flowered very little for eight or ten years. The wistaria flowers on short spurs formed the previous season on wood of older growth. It will also flower sparingly on the long trailing canes or growth of the preceding year. Pruning the young canes of the last season's growth back in March, leaving spurs a few inches in length at base, will help in producing flowers. [If the plants mentioned are pruned as recommended, they should flower in a year or two at most.—Wm. Hunt, O.A.C., Guelph, Ont.]

## Azaleas did not Thrive

Some of the members of the Seaforth Horticultural Society clubbed together and got a dozen azaleas. They appeared in good shape but most of them shrivelled up and are dead. Probably we did not treat them rightly. Kindly give treatment, including how to treat them during the summer.—Wm. Hartry, Seaforth, Ont.

Judging by the general results I should say that the roots of your azaleas had become dry before they reached you, and that the azaleas were already dead or nearly dead when they were received. If the azaleas had been grown properly before you received them, as they probably had been, the flower buds were already formed so that all that was necessary for you to do was to keep the soil moist but not wet, to keep the plants in a moderately warm temperature, and to give them light.

If they had bloomed as they should, they should, after blooming, have been kept growing by keeping the plants watered and giving them as much light as possible. In the spring the pots should be buried in a partly shaded place and the soil kept moist, but not wet, by regular watering during the summer. The plants naturally begin to grow immediately after blooming, and it is important to have as healthy foliage as possible, for, unless there is good foliage made, there will not likely be many flower buds formed.—W. T. Macoun, C.E.F., Ottawa.

## Bordeaux for Stored Apples

Horticultural Editor, THE CANADIAN HORTICULTURIST: I have been trying an interesting experiment for checking rot in apples that are being kept in storage. I have dipped them in Bordeaux mixture, and would like to know if this has been tried by others. I am of the opinion that apples can be kept longer, and are less subject to rot when dipped in Bordeaux.

I had been treating a young plum orchard with Bordeaux to check plum rot. Although bearing well, this orchard had all its fruit rotted on the trees every year until it was sprayed. It occurred to me that if this mixture would kill the fungus on the plum, it might also do the same with the apple. Accordingly, I gathered a small box of windfalls a year ago last fall, most of them Colverts, and treated them with Bordeaux mixture. The majority of them remained in excellent condition until the following spring. Last fall, I repeated the experiment with several kinds, and so far the results are good.

As there is only a small quantity of blue stone in the mixture, I do not think that any danger would arise from eating the apples. For those who are timid, however, I would suggest that they peel the apples first. Then the fruit will be as good as if newly pulled from the tree.—Wm. Welsh, Kincardine, Ont.

Vegetable growers should use only the best strains of the best varieties of seed for planting.

The soil for strawberries should be rich and as free from weed seeds as possible. Wood ashes and bone dust are about as good fertilizers as any.

## The Canadian Horticulturist

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### The Only Horticultural Magazine in the Dominion

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FRUIT GROWERS' ASSOCIATIONS AND OF THE ONT-  
ARIO VEGETABLE GROWERS' ASSOCIATION

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January 1907.....	4,947
February 1907.....	5,520
March 1907.....	6,380
April 1907.....	6,460
May 1907.....	6,620
June 1907.....	6,780
July 1907.....	6,920
August 1907.....	6,880
September 1907.....	7,078
October 1907.....	7,210
November 1907.....	7,250
December 1907.....	7,500

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Sworn detailed statements will be mailed upon application.

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## EDITORIAL

### MODERN PARK SYSTEMS

Canadians should realize more fully than they do the enormous benefits that accrue from the improvements that a modern park system brings about. There is a universal recognition of the physical, moral and social helpfulness which outdoor beauty confers, but the financial investment that improvements bring about through the increase in desirability and value of nearby land is not so well appointed. It is this increase in the value of adjacent land that makes an up-to-date park system such a valuable asset to any city.

The work is not wholly debt-creating as many people suppose, but on the contrary, it invariably proves an investment that pays for the cost of all improvements. Upon the intelligent selection of ground, however, mainly depends the success of the undertaking. By an intelligent selection, the cost of development is decreased and the proper areas are left untouched and adjacent, so that the enhancement of their values may be worthy speculation for the community. Mr. C. Ernest Woolverton, landscape designer, Grimsby, Ont., who spent last fall and winter in Boston, Mass.,

### NOTE CHANGE OF ADDRESS

Exchanges, Agricultural Experiment Stations, Agricultural Colleges, Boards of Agriculture and Horticulture, and so forth, are requested to change the address of The Canadian Horticulturist on their mailing lists from Toronto to Peterboro, Ontario.

studying and practicing landscape architecture, writes The Canadian Horticulturist on this subject, as follows:

"One of the most admirable features of the American park system is in the intelligent selection of ground, and the knowledge of just how much to take. It is notable that the American park systems have been built on land that originally seemed worthless for ordinary use, that was either too steep or otherwise unsuitable for cultivation or building but had aesthetic value. It has been made accessible and developed for its beauty and the benefit to the adjoining land has paid the cost. This is especially applicable to parkway routes.

"There is, for instance, the low marshy ground that has been selected in the city of Boston. The Fens were once a tract of back water swamp with here and there rich clumps of willows and other tree growth breaking the dismal monotony. To-day the Fens contain the fashionable drives and promenades and is bordered by some of the most highly taxable property in the city. Great public, educational, religious institutions and mansions are securing sites adjacent, borrowing its beauty for a setting and enjoying the proximity for the use and benefit of its members. This sort of foresight on the part of the landscape architect working with the park board characterizes the American planning."

There is no reason why Canadian cities should not use their apparent waste ground to like advantage, and instead of using such places for dumping grounds and unsightly billboards, convert them into parks and parkways. The result would be that the land adjoining would be quickly bought for residential and building purposes and this would more than pay for the costs of the improvements.

### SHOULD BE MORE STRINGENT

It was announced recently in The House of Commons, that probably the Fruit Marks Act would be made more stringent. This announcement should be welcomed by all honest fruit growers and shippers. The innumerable reports from Great Britain during the past winter respecting false marking and packing indicate most forcibly that prompt official action is necessary.

Concerned in our export apple trade, there are many packers and shippers who operate on such a large scale that the fines at present imposed are not sufficiently large to cause them a moment's uneasiness. They seem to count upon a certain amount to be paid in penalties each year and continue their fraudulent practices without fear. They know that only a small percentage of their output can come under the observation of the inspectors and feel that the risk is little and take it.

A law that merely permits the imposing of small fines is a law that lacks means of proper enforcement. If it is not capable of reaching offenders, and experience has proven that it is not, the necessary amendments should be made at once. A period in prison after two or three offenses would aid in solving the difficulty.

The Cooperative Fruit Growers of Ontario which was organized about two years ago has been of much value to the local associations that have become affiliated with it. Included in its work, have been weekly reports on fruit crop conditions and prices in all parts of the province and elsewhere, the keeping of the associations in touch with each other and with buyers, the compiling of information respecting the cooperative movement in general, and so forth. This season the central organization is endeavoring to aid the local associations in the matter of purchasing the best grade of supplies for spraying and other operations at the lowest possible prices. To do this effectively, however, the association should be incorporated. It would then be in a position to increase its value to the local associations many fold.

Many British Columbia fruit growers want eastern stock. Why should the government prevent them getting it, and getting it in good condition? Eastern stock can be shipped to the coast in good condition, if 'twere not for the double-fumigation and the abuse in handling that it receives. No other province in Canada puts such restrictions upon the importation of nursery stock, and they plant annually hundreds of thousands of trees from outside sources. The government of British Columbia should see that its own interests and that of its people would best be served by amending its inspection law in such a way as to give the fruit growers of that province and outside nursery firms a fair chance.

We are receiving some inquiries this week from fruit growers regarding our harrow and are pleased to advise you that these are traceable to The Canadian Horticulturist.—T. E. Bissell, Elora, Ont.

# Niagara Fruit Growers Held Interesting Meetings

THE Niagara Peninsula Fruit Growers' Association held meetings at Grimsby and St. Catharines early in March. A number of practical and able addresses were delivered by Mr. J. H. Hale of South Glastonbury, Conn., Mr. W. G. Farnsworth, Waterville, Ohio, Mr. W. T. Macoun, Ottawa, Prof. H. L. Hutt, Guelph, and others. The sessions were presided over by the president, Mr. W. H. Bunting, St. Catharines. In a few opening remarks, he congratulated the growers on being united as a body from Hamilton to the Niagara River. By united effort, the association would be in a position to deal with questions that are beyond the power of the individual. Mr. Bunting referred to the rapid strides that fruit growing is making and pointed out the fact that while much progress already has been made, the industry now is entering upon a new era of prosperity.

## PEACH CULTURE

Mr. Hale gave the benefit of his long experience in the production and marketing of peaches. Mr. Hale owns and operates large orchards in Connecticut and Georgia and is known as the "Peach King" of the United States. He said that an essential factor in peach culture is early cultivation and it should be kept up until the bending boughs prevent further work. The ground should then be covered with a cover crop but grass and weeds are better than nothing. "Peach trees should be headed low," said Mr. Hale. "When planted, they should be cut back so within 10 or 12 inches of the ground. Much labor is saved by this method. Work in the orchard necessitates going over the trees once or twice for pruning, twice for spraying, once or twice for thinning and two or three times for harvesting. This time and labor is lessened greatly by having the tree low. It is just as easy, if you know how, to cultivate low-headed trees as high-headed ones. Furthermore, it is not so necessary to cultivate as closely to a low-headed tree as to one that is headed high because the tree itself shades the ground and prevents loss of moisture and the growth of weeds near the trunks." Mr. Hale starts his trees with a plain stick a foot long. When branches start, the lower ones are rubbed off. Each spring afterwards, the branches are thinned and the outer ones headed-in. Mr. Hale advised summer pruning on trees that are less than three years old and that are growing strong and vigorously. This should be done late in June or the first part of July and it will throw the trees into fruiting.

Thinning the fruit on the trees was strongly advocated. The fruit should be left not closer than six inches apart. More bulk and better peaches will be secured. The season for Elbertas can be extended 10 days or so by thinning. Mr. Hale recommended orchardists, who grow Elbertas extensively, to divide their orchards into three parts and to thin one lot to eight inches apart, another to six inches and to leave the balance unthinned.

Peaches should be left on the trees until well grown and matured before harvesting. A full developed peach will carry as well as a green one and be worth much more. All the peaches on a tree should not be picked at once. The tree should be gone over three or four times to secure the fruit at the proper stage for shipment. Handle the peaches tenderly. Have the baskets smooth on the inside and not too large. Use spring wagons. Employ women for grading and packing as they can

be depended upon more than men. Have every package the same from top to bottom. In the words of Mr. Hale, "Have the peaches right and make the people pay for it."

Mr. Hale plants his permanent trees 20 feet apart. Between these rows are planted early bearing peaches and these are left until two crops are taken from them; they are then removed. In regard to peach yellows, Mr. Hale advised pulling the tree the moment the disease is discovered as there is no other remedy. As a fertilizer for peaches, Mr. Hale uses 1,200 to 1,500 pounds of raw ground bone and 400 to 600 of muriate of potash per acre, with cover crops in addition. On parts of the orchard that need it, nitrate of soda is applied during the growing season.

White peaches are favored by Mr. Hale as they are better flavored than yellow ones and bring more money in his markets. If the Canadian market does not want white peaches, the consumers should be educated to appreciate them. Among the best of the white peaches is the Belle of Georgia. It is very productive and a good shipper and has been found hardy in the north.

"White peaches will not sell in this country," said Mr. E. D. Smith of Winona. "The growers must plant the kinds that the people want. The demand may change, but just now, the eye governs the taste. Yellow peaches are wanted, both for using in the fresh state and for canning. In my jam factory, I have 43 cases of white peaches still on hand from last season and have sold over 11,000 cases of yellow ones." Mr. Hale advised the association to advertise the value of white peaches so as to make consumers acquainted with them. Among the varieties recommended by Mr. Smith were Yellow St. John, Fitzgerald, Smock, Longhurst and Crosby. The two latter will give a crop every year, and if thinned regularly to five inches apart, they will yield fruit of good size.

## SPRAYING FOR SCALE

Spraying for San Jose Scale was a live question at all the meetings. Mr. Farnsworth referred to what is being done in Ohio. He said that thousands of trees in that state have been ruined by the use of crude petroleum. The best material for combating scale is the lime-sulphur wash. This mixture not only kills the scale, but it also destroys all fungi on the trees, which, in itself will pay for the expense of application. Best results have been secured by not using salt in the mixture, as was first advised.

When speaking of the seriousness of the pest, Mr. Farnsworth pointed out that scale produces three or four broods in a season, 300 to 500 insects in a brood. A little calculation will show the immense increase in numbers that occurs in a very short time.

The tank used for boiling by Mr. Farnsworth is elevated eight feet. A working pressure of about 100 pounds is used when spraying. Spraying should be practiced every year thoroughly whether scale is present or not. The mixture invigorates the tree. Mr. Farnsworth stated his opinion to be that only lime and sulphur can be used with safety on peach trees. Boiling should be done properly. When boiled to the green stage the mixture is injured. The coffee color is proper.

Mr. Hale said that while oils are valuable for killing scale, the lime-sulphur wash is the better for all purposes. It acts both as a fungicide and as an insecticide. He

has had best results by using oil one year, and lime-sulphur the next. In some experiments conducted by Mr. Hale with home made miscible oils excellent results have been secured at comparatively small cost. While the San Jose scale is troublesome, it is a blessing in the opinion of Mr. Hale. It makes growers look after their orchards and it will put the careless men out of the business. A further report of the discussion on San Jose scale will appear in our next issue.

## BETTER FRUITS

At one of the sessions, Prof. H. L. Hutt spoke on better fruits. He said that the money in fruit growing is made out of A1 fruits. Too much inferior fruit is produced. There is plenty of room for a high grade product. British Columbia is catering to a fancy market and puts up only the best. To have money-making fruits, we must have varieties that are adapted to the localities, productive and with shipping qualities. Professor Hutt said growers should not spoil the market for good fruit by growing poor varieties early in the season, as, for example, the Champion grape. Orchard and vineyard management must be of the best. There must be good drainage, cultivation, fertilization of the soil, pruning, thinning of fruit, spraying and so forth. The professor referred to the value of propagating from bearing trees instead of from young trees, which induces wood growth at the expense of fruitfulness.

## BEST STRAINS ARE REQUIRED

This question of individuality in trees and of propagating from the best was dealt with at greater length by Mr. Macoun. "The time is come," said he, "when growers and nurserymen must give more attention to the best strains of the best varieties of fruits. Each bud has an individuality of its own. As an example of this, we have the well-known fact that there are many different strains of the Fameuse apple. This variety has been propagated so long that its varying strains have been developed and increased. Only the best strains of this or any other variety should be propagated from."

At the Central Experimental Farm, over 4,000 tree fruits have been tested. In the case of the McIntosh Red, the largest yielding tree gave 485 gallons in a 10-year test and the least productive, 197. The differences in these trees is nearly two and one-half times, which means about \$96 an acre in one year. The heaviest yielding McMahan White gave in eight years, 611 gallons and the smallest, 163, a difference of \$74.46 an acre in a year. Many other instances were cited by Mr. Macoun who advised our nurserymen, growers and experiment stations to unite together on this matter and to do something.

Many other subjects were dealt with and discussed at the convention. Mr. Farnsworth discussed care of soils, the strawberry and other topics. Mr. Hale discussed, among other things, the business end of peach growing. Reports of these discussions will be published in a later issue. The convention closed with a banquet tendered to the speakers and visitors.

Wm. Cooper & Nephews, of Toronto, have appointed Mr. Robt. Thompson, of St. Catharines, sole agent for V1 and V2 Fluids, for the St. Catharines district, and Messrs. E. G. Prior & Co., of Victoria, Vancouver, Nelson and Kamloops, sole agents for V1 and V2 Fluids for British Columbia.

**Nova Scotia**

**Eunice Watts, Waterville.**

Several institute meetings were held in King's County during the month of February, in which apple culture has been a prominent subject. The Nova Scotia Farmers' Association held meetings at Cambridge, Harmony, Welton's Corner, Gaspereau, Sheffield Mills, Upper Pereaux, Berwick, Aylesford, South Berwick and Waterville. These meetings were addressed by Mr. W. H. Woodworth, an authority on spraying, and Mr. L. D. Robinson, a successful fruit grower, with the aid of government men sent from Truro.

The chief meetings were held at Berwick, on February 27, at the Seed Fair and Fruit Exhibition. The apples shown excited much admiration being splendid specimens, highly colored. A new law was introduced which excluded all exhibits from prizes which were not grown by the exhibitor. Unprincipled persons were thus prevented from buying fruits, or selecting them in the warehouses, a practice which has discouraged would-be competitors.

During the judging of the fruits and seeds, addresses were given to a crowded audience. Mr. Woodworth advised growers to use arsenate of soda, which is just as effective, safer and cheaper than Paris green. He makes his stock solution from two pounds of white arsenic and eight pounds of sal-soda boiled in two gallons of water. He claimed that one gallon of this mixture was equal to one pound of Paris green. Mr. S. B. Chute gave his experience in spraying with arsenate of lead which also he claimed is superior to Paris green as it will not wash off, or burn the foliage.

Much indignation was expressed at the

growing habit of spraying when trees are in blossom. The bees are not only killed, but the tender organisms of the flower are injured by the Bordeaux mixture.

Much interest was taken in the silver and bronze Banksian medals which were awarded to W. H. Woodworth, A. L. Morse, and F. A. Parker by the English Royal Horticultural Society at the Crystal Palace for apples.

Returns for Nova Scotia apples have latterly been very disappointing owing to the glut of oranges, grapes and other fruits in the English markets. The apples in the warehouses are turning brown, probably owing to the mild damp winter. We are having samples of most kinds of weather, and unprotected strawberry beds will suffer under the alternate frosts and thaws.

**Okanagan Valley**

**R. D. Riggs, Vernon, B.C.**

Orchard cultivation is a very important subject, differing greatly in various sections of the country. It has been the practice in the Okanagan Valley to cultivate the orchard land continuously and during the dry season to keep the surface soil in a state of tith, thus conserving the moisture beneath. This result is best gained by the use of the acme harrow. But constant cultivation and cropping of fruit has impoverished the soil to such an extent that the fruit is not now so highly colored as it should be. In some neglected and poorly-kept orchards last season, where weeds and grasses were allowed to grow, the apples were very highly colored and of a superior quality.

Some growers have already tried red clover for providing a sod for the orchard

and adding humus to the soil. The clover is cut and left on the ground as a mulch, it being unwise to take two crops, that is, a crop of clover, and a crop of fruit, off the land in one season. The grower must use his judgment as to the length of time the clover is left without being plowed under, which time depends considerably on the amount of rainfall and of water available by irrigation. Where there is insufficient moisture, some other method might be more suitable. Many growers intend seeding down their orchards this spring but due consideration must be given to the available moisture and the condition of the soil if the best result is to be obtained.

**New Brunswick**

**J. C. Gilman, Fredericton.**

The past winter will test the hardy qualities of strawberry plants, as the fields have been nearly bare, with frequent thaws, the most of the time. Some beds of ice, covering much of the surface, must seriously injure the roots of all young plants. Fruit buds seem to have wintered, so far, very well, and if no unfavorable conditions set in later, we may hope for a good show of bloom on fruit trees this spring.

The egg clusters of the forest tent caterpillar are very numerous on woodland growth, one branch of poplar, four feet long, having by count over 20 rings of eggs, some of which were brought into the kitchen of a farmhouse, and hatched in 16 days, by placing the twigs in a jar of water. With the prospect of such myriads of leaf eating enemies, the woodlands and orchards will be watched with much interest and some anxiety till the feeding season of caterpillars is past.

**Hardy Herbaceous Plants for the Flower Borders**

WE have selected a varied collection of Herbaceous Plants with a view of making an Effective Ornamental Border. Our plants are all hardy, bearing bright conspicuous flowers, and will yield a constant succession of bloom for Decorative Purposes. Where any particular effect is desired either as to their height or their arrangement in combination as to density, etc., it would be well to mention these features when sending enquiries which will always be cheerfully answered.

**Pæonies**

**Day Lilies**  
(Funkia)

**Leopard's Bane**  
(Doronicum)

**Perennial Sunflowers**  
(Helianthus)

**Monkshood**  
(Aconitum)

**Golden Glow**  
(Rudbeckia)

**Red-Hot Pokers**  
(Tritoma)

**Adam's Needle**  
(Yucca)

**Phlox, German and Japanese Iris, Dahlias, named and unnamed, etc., etc.**

An extensive collection, carefully prepared, of the hardiest and choicest blooming field-grown Roses, some budded and some on their own roots

Our assortment of Apples, Plums, Pears, Peaches, Cherries, &c., &c. is well-known throughout the Dominion and Catalogues explaining varieties will be mailed free on application.

HELDERLEIGH  
NURSERIES

E. D. SMITH

WINONA,  
ONTARIO

**Trees Wintered Well**

While it is yet early to determine the exact condition of fruit buds and wood, the indications are that trees and bushes have come through the winter in good condition. For the next issue of The Canadian Horticulturist, brief reports are requested from growers in all parts of Canada.

**GRENVILLE COUNTY**

Maitland.—Fruit buds and wood on apple trees are in excellent condition. With favorable weather from now on, we should have a perfect bloom, as the trees went into winter with well ripened and fully matured buds.—Harold Jones.

**HASTINGS COUNTY**

Belleville.—Apple trees wintered well, and from the appearance of the buds, prospects for a large crop of apples this fall are good.—F. S. Wallbridge.

**HALTON COUNTY**

Burlington.—The wood of trees and vines went into winter fairly well ripened and therefore in good condition to stand the cold. Owing to unusual snow falls, the frost did not penetrate the ground to any depth, so that with the exception of the more tender varieties of fruits, the buds of which might possibly have been impaired by the very low temperature of January, all should yield well.—A. W. Peart.

**LINCOLN COUNTY**

Grimsby.—Indications point to a very abundant fruit harvest. Peach buds have come through in excellent condition and there should be a bumper crop. Apples will be abundant; also, probably, pears and plums. In many orchards, the mummied fruits from last season's rot have been allowed to remain and will propagate the disease.—L. Woolverton.

Jordan Station.—Judging from present indications, peaches have come through the winter in good shape and promise a full crop. Strawberries are looking well, but the trying time is yet to come. Raspberries and blackberries appear to have suffered very little from the effects of the winter. It is difficult to find any variety of fruit that does not promise a good crop this season.—C. M. Honsberger.

**WELLAND COUNTY**

St. Catharines.—Strawberries are looking fresh and green. The woodgrowth on raspberries is small but they are in good condition. Peaches promise well and there are few buds injured. The cane growth of grapes is rather weak but not much frozen. Plums are full of buds. On the whole, all fruit has wintered well so far.—Robt. Thompson.

**NORFOLK COUNTY**

Simcoe.—Trees are looking well, but it is too early to ascertain what next season's crop will be.—Jas. E. Johnson.

**KENT COUNTY**

Chatham.—From present appearances, buds are all right and plentiful and I think no damage has been done by the winter. We have had a good snowfall this season which ought to assist materially. Prospects for a heavy crop are good.—W. D. A. Ross.

**The Popular Piano Player.**—The player piano has stirred up any amount of enthusiasm in musical circles, if the many sales being made by Heintzman & Co., Limited, 115-117 King street west, Toronto are to be taken as a criterion. This firm have a very wide selection of player-pianos at terms of payment to suit almost any purchaser.

**HARDY HERBACEOUS PERENNIALS**

- Hardy Phlox
- Tall English Delphiniums
- Oriental Poppies
- Pæonies
- Campanulas
- Anemones
- Pyrethrums
- Gaillardias
- Aquilegias
- German Iris
- Japanese Iris

and a host of other good things, all in choicest variety

Send for List and Prices

**PINELAND PARK GARDENS**

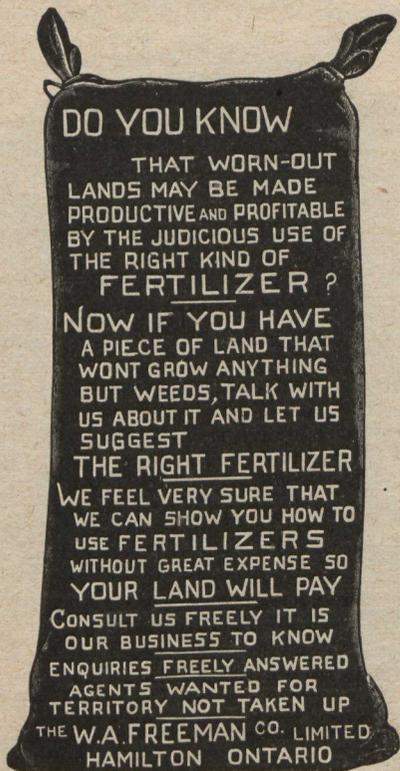
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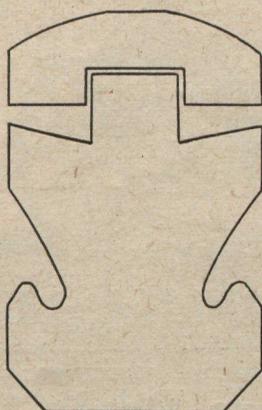
**The Williams Strawberry**

This celebrated Strawberry still maintains its lead in the Niagara District as the best all round commercial berry. In size, vigor, productiveness and the qualities that go to make up a first class shipper, it stands at the head of the list of proved varieties, and is now more largely grown than any other strawberry in this section. We can supply a limited quantity of first-class plants at lowest rates.

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TORONTO JUNCTION**

Mention the Canadian Horticulturist when writing.

Mention the Canadian Horticulturist when writing.

## Western Horticulture

The annual convention of The Western Horticultural Society was held recently at the Manitoba Agricultural College, Winnipeg. There was a fair attendance and much interest was taken in the papers and discussions. The following officers were

## FOR SALE AND WANT ADVERTISEMENTS

Advertisements under this heading inserted at rate of two cents a word for each insertion, each figure, sign or single letter to count as one word, minimum cost, 25 cents, strictly cash in advance.

**MR. CHARLES ERNEST WOOLVERTON**, Grimsby, Ontario, landscape architect, parks, cemeteries, pleasure, school and home grounds laid out, surveys made. Working drawings to a scale so that any gardener can work them out. Terms very reasonable.

**A MILLION STRAWBERRY PLANTS** for sale, not bought from dealers, but grown on my own farm last year. Fifty-five varieties. New Highland, Three W's, Victor, Wonder, Thompson's No. 2, President, Morningstar, Abington, Almo, Governor Rollins, and others, and all the leading old varieties. If you want plants this year that will please you when they arrive, and please you better still when they fruit, order Downham's. They have pleased others and will please you. It will pay you to get my free catalogue before you buy, ready to mail now. Raspberry and Blackberry plants, and Seed Potatoes. John Downham, Strathroy, Ont.

**FRUIT GROWERS!** Drain your land and double your income. This may seem exaggerated but it's a fact. Use Doyle's tile. Estimates given. R. J. Doyle, Owen Sound.

**SEND YOUR ADDRESS** for list of strawberry plants, also red and black raspberry plants and seed potatoes. R. C. Crysler, St. George, Ont.

**FOR SALE**—Six No. 8 Gurney Hot Water Boilers in good condition, suitable for private house or greenhouse work. Apply Stevenson & Malcolm Co., Guelph, Ont.

**GREENHOUSE FOR SALE**—Length, 42 ft.; width, 18 ft.; hinged double glass windows on each side, 5 top ventilators with floor stand and gear, equipped with a No. 3 Daisy boiler, and 6 run of 4-inch pipe on each side. Apply Box G, Canadian Horticulturist.

**A FIRST-CLASS MARKET GARDEN** for sale, sale, with no opposition. Two large greenhouses, large dwelling house, stable buildings, all new. Implements all up-to-date, good team of horses, new rigs, twelve acres of land. Can be bought for cost. Easy terms. Apply at once.—J. A. Brillinger, Box 377, New Liskeard.

**BROTHER, ACCIDENTALLY** have discovered root that will cure both tobacco habit and indigestion. Glad to send particulars. C. Stokes, Box 100, Mohawk, Florida.

**CANNAS, DAHLIAS AND GLADIOLI.** Choicest varieties, true to name. Write for list. William Colvin, Galt, Ont.

**FRUIT OR VEGETABLE GROWERS** requiring help for the spring season should write H. O. Ellis, 181 Bellefair Ave., Toronto. No charge made.

**TOMATO SEED, HILLSIDE COMET.** A very early variety, good inside or out, good croppers, size, shape and color, selected and grown in Canada. Packets 25 cents, 1/4-oz. \$1.00, cash with order. Frank Gilbert, Orillia, Ont.

lected for the ensuing year: Hon. presidents, Angus Mackay, Indian Head, Sask.; W. J. Black, Winnipeg; Jas. Murray, Brandon; pres., A. P. Stevenson, Nelson, Man.; 1st vice-president, Jas. Caldwell, Virden; 2nd vice-president, D. W. Buchanan, St. Charles, Man.; sec-treas., F. W. Brodrick, Agricultural College, Winnipeg; representatives to Winnipeg Fair Board, A. P. Stevenson, Nelson; directors, Messrs. Robt. Aitken, Louise Bridge, Man., Dr. H. M. Speechly, Pilot Mound, Man., Dr. S. J. Thompson, St. James, Man., S. A. Bedford, Brandon, Man., Rev. Dr. Baird, G. H. Greig, J. D. Duthie, Geo. Batho and Wm. G. Scott, all of Winnipeg.

Secretary Brodrick showed in his report a membership of 137 during the past year, with the finances of the society in a healthy condition. A report was read from Mr. J. A. Killough, Moosejaw, Sask., whose remarks were optimistic over the future of horticulture in the West. An excellent address on "Good Taste in Gardening" was delivered by Dr. H. M. Speechly, of Pilot Mound, Man. Extracts from this address are published in another column of this issue. Valuable papers were read also by Mr. J. J. Ring of Crystal City of "Wind-breaks and Shelter Belts"; by Mr. D. W.

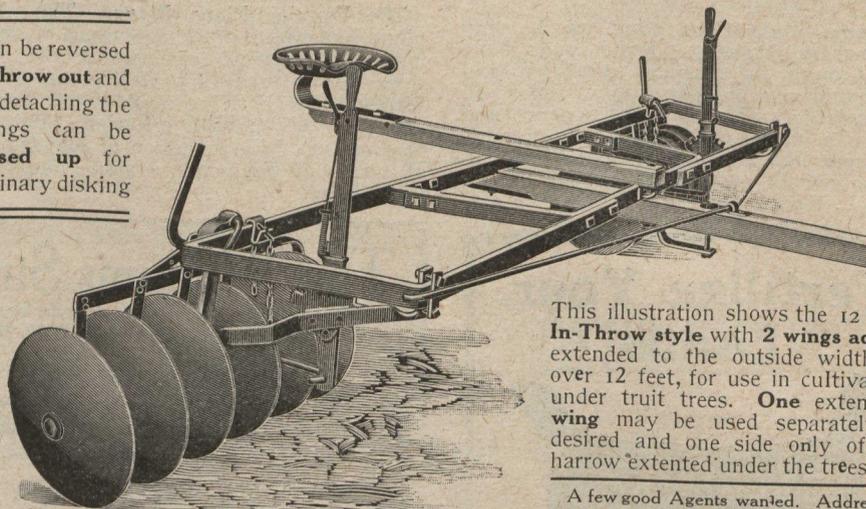
Buchanan of St. Charles on "Manitoba Horticulture"; by Mr. Norman M. Ross of the Indian Head Forestry Farm on "Hardy Conifers for Western Planting"; by Mr. A. P. Stevenson, of Nelson, Man. on "Propagation of the Apple"; and by Mr. Jno. Caldwell of Virden on "Forestry." We hope to publish these papers in part or in full, in later issues. Mr. Brodrick gave an interesting demonstration in judging garden vegetables.

A friend lent me a copy of The Canadian Horticulturist, and I am so well pleased with it I would not like to be without it any longer. It will be a great help to me in making a garden. Enclosed is my subscription.—Mrs. R. W. Hyndman, Port Arthur, New Ontario.

**Giving Organs Away.**—This heading is misleading if you like, only to the extent that when Heintzman & Co., Limited, 115-117 King street west, Toronto, announce that they are selling organs at \$10, \$15 and \$20 each, in payments of 50 cents a week, it is next door to giving the organs away. One can hardly expect that such bargains will last very long. Wise ones will see about the matter at once.

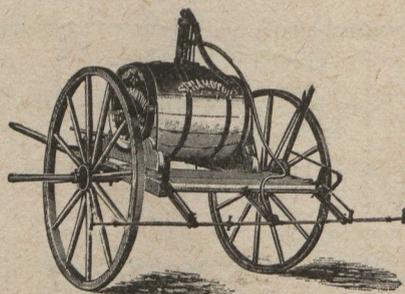
## THE "BISSELL" Orchard DISK HARROW

Can be reversed to **throw out** and by detaching the wings can be **closed up** for ordinary disking



This illustration shows the 12 x 16 In-Throw style with 2 wings added extended to the outside width of over 12 feet, for use in cultivating under fruit trees. One extension wing may be used separately if desired and one side only of the harrow extended under the trees.

A few good Agents wanted. Address: T. E. Bissel, Co., Ltd., Dept. N. Elora, Ont.



**THIS** is the HAND SPRAMOTOR No. 1 or No. 2 mounted on a No. 2 Wheel Cart. Has 52 inch. wood wheel with iron hub, cold rolled steel axle, hardwood frame, for one horse. Adjustable all-brass 4 row Sprayer for one nozzle to a row from 26 inch. to 36 inch. Fitted with our Patent Parallel Nozzle Controller, holding nozzles in correct position when raised or lowered, with rack and pinions all fitted for vineyard, and mustard, and orchards, and all kinds of hand work. Fully guaranteed. Prices from \$44.00 to \$50.00.

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DON'T WAIT TILL SPRING

## Sure Death to San Jose Scale

Add 16 gallons water to 1 Scalecide and it's ready to use. Absolutely permanent percentage maintained, saves time enough to pay for the material. Guaranteed. It's cheap, effective, easy to use, non-corrosive, non-clogging, and contains more oil and less water than any other commercial spray. In 1-5-10 gallon cans, 25 and 50 gallon barrels. Free booklet.

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# RENNIE'S XXX VEGETABLE SEEDS



RENNIE'S XXX MELTING MARROW PEAS

For thirty-eight years we have tested every known variety of Vegetable Seeds on our extensive trial grounds; and a careful analysis of these tests has proved conclusively that the varieties now offered as **RENNIE'S XXX VEGETABLE SEEDS** are, positively the finest possible to procure. Don't waste money experimenting, plant Rennie's XXX and be **SURE** of profitable results.

## RENNIE'S XXX MELTING MARROW PEAS

Closely follows the extra early sorts, filling in the gap between these and the midsummer varieties. Massive pods; robust plants, half dwarf, practically self supporting. Superb, rich, buttery flavor.

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Immense solid heads, 15 to 16 inches across. Crisp and tender. Perfectly blanched heart. A robust growing, deep rooting, heat resisting and sure heading type. Outer color, pleasing apple green.

## RENNIE'S XXX SCARLET ROUND WHITE TIPPED RADISH

The best for outdoor cultivation. Mild, crisp, white flesh; excellent flavor, never strong or rank. Attractive appearance: bright scarlet with distinct white tip which makes a vivid contrast.



RENNIE'S XXX SOLID HEAD LETTUCE

## Rennie's XXX Bush Green Pod Bean

First in Spring; last in Fall. Always solid, meaty and tender; entirely stringless. Plants thrifty, hardy, early and prolific; bears continuously for several weeks. Pods thick, broad, extra long and quite uniform in shape.

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The finest cylinder podded dwarf wax bean. Fine healthy plants, bushy and robust, free from rust or mildew and extremely prolific. Pods six inches long; solid, meaty and tender, snapping brittle and unsurpassed for flavor.



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Mention the Canadian Horticulturist when writing.

## PRICE LIST OF RENNIE'S XXX VEGETABLE SEEDS

- Rennie's XXX Bush Green Pod Beans, pkt. 10c., lb. 30c., postpaid; peck, \$2.50, 5 lbs. \$1.00, lb. 25c., by express, at buyers expense.
- Rennie's XXX Bush Butter Bean, pkt. 10c, lb. 40c, postpaid; peck \$3.75, 5 lbs. \$1.50, lb. 35c, by express, at buyers expense.
- Rennie's XXX Globe Beet, pkt. 10c, oz. 20c, 1/2 lb. 35c, 1 lb. \$1.00.
- Rennie's XXX Early Summer Cabbage, pkt. 10c, oz. 30c, 1/2 lb. 90c, lb. \$3.00.
- Rennie's XXX Autumn-Winter Drum-head Cabbage, pkt. 10c, oz. 30c, 1/2 lb 90c, lb. \$2.75.
- Rennie's XXX Golden Self Blanching Celery, pkt. 10c, ox. 70c, 1/2 lb. \$2.00, lb. \$6.50.
- Rennie's XXX Table Carrot, pkt. 10c.
- Rennie's XXX Snowball Cauliflower, pkt. 25c, 1/2 oz. \$1.10, 1/2 oz. \$2, oz. \$3.50, 1/2 lb. \$12.
- Rennie's XXX Table Cucumber, pkt 10c, oz. 25c, 1/2 lb 60c, lb. \$1.90.
- Rennie's XXX Early Sweet Table Corn, pkt. 10c, lb. 40c, postpaid; 10 lbs. \$2.50, 5 lbs, \$1.50, lb. 35c, by express, at buyers expense.
- Rennie's XXX Solid Head Lettuce, pkt. 10c, oz. 25c, 1/2 lb. 60c, lb. \$2.00.
- Rennie's XXX Golden Green Flesh Musk Melon, pkt. 10c, oz. 35c, 1/2 lb. 90c, lb. \$3.
- Rennie's XXX Connecticut Yellow Globe Onion, pkt. 10c, oz. 35c, 1/2 lb. \$1.00, lb. \$3.50.
- Rennie's XXX Connecticut Large Red Onion, pkt. 10c, oz. 35c. 1/2 lb. \$1.00, lb. \$3.50.
- Rennie's XXX Earliest Sweet Table Water Melon, pkt. 10c, oz. 20c, 1/2 lb. 60c, lb. \$1.90.
- Rennie's XXX Evergreen Curled Table Parsley, pkt. 10c, oz. 20c, 1/2 lb. 50c, lb. \$1.50.
- Rennie's XXX Melting Marrow Peas, pkt. 10c, lb. 40c postpaid; lb. 35c, 5 lbs. \$1.50, peck \$3.75, by express at buyers expense.
- Rennie's XXX Guernsey Parsnip, pkt. 10c, oz. 20c, 1/2 lb. 40c, lb. \$1.00.
- Rennie's XXX Earliest Table Marrow Peas, pkt. 10c, lb. 40c, postpaid, lb. 35c, 5 lbs. \$1.50, pk. \$3.75, by express at buyers expense.
- Rennie's XXX Scarlet Round White Tipped Radish, pkt. 10c, oz. 20c, 1/2 60c, lb. \$1.50.
- Rennie's XXX Autumn-Winter Green Hubbard Squash, pkt. 10c, oz. 20c, 1/2 lb. 50c, lb. \$1.50.
- Rennie's XXX Scarlet Oval Radish, pkt. 10c, oz. 20c, 1/2 lb. 50c, lb. \$1.50.
- Rennie's XXX Pink Skin Tomato, pkt. 15c, 1/2 oz. 35c, oz. 60c, 1/2 lb. \$2.00.
- Rennie's XXX Earliest Round Scarlet Skin Tomato, pkt. 15c, 1/2 oz. 35c, oz. 60c, 1/2 lb. \$2.00.



RENNIE'S XXX SCARLET ROUND WHITE TIPPED RADISH

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We will present a packet of either the New ADMIRAL POPPY; The new orchid flowered sweet pea, COUNTESS SPENCER; or Luther Burbank's "Never Fading" Flower, AUSTRALIAN STAR FLOWER (Cephalopterum Drummondii), on condition that the coupon printed on bottom right hand corner of this advertisement is attached to an order for Rennie's XXX Seeds.



RENNIE'S XXX BUSH GREEN POD BEANS.

## GOOD FOR ONE PACKET

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Admiral Poppy,  
Countess Spencer Sweet Pea  
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with all orders for Rennie's XXX Vegetable Seeds bought from this advertisement.

Attach this to order and state your choice.

# KELOWNA FRUIT LANDS

## READY TO PLANT

10 and 20 acre lots within 4 miles of the city of Kelowna (pop. 1,200) in the famous Okanagan Valley. Our fruit lands are free from timber, rock and scrub—already plowed. A beautiful valley—a prosperous settlement. Main road runs round the property. The land will easily pay for itself the first year. Some results for 1907:

1/2 acre Strawberries ..\$ 626  
 1 acre Tomatoes ..... 1,000  
 4 acres Onions, 75 tons.. 2,250  
 1/2 acre Crabapples yielded 10 tons.

**PRICE \$200 PER ACRE.**  
**TERMS, 1-4 CASH**

Balance in three annual instalments. If interested, write for our Illustrated Booklet.

**Central Okanagan  
 Land and Orchard Company**  
 Limited  
 KELOWNA, B.C.

## Ontario Fruit Growers.

At a meeting of the executive board of the Ontario Fruit Growers' Association held in Toronto on March 13, secretary Hodgetts read a letter from Prof. John Craig, of Cornell University, secretary of the American Pomological Society, accepting, on behalf of the association, the invitation to hold their annual meeting in St. Catharines in September, 1909, on a date to be subsequently elected. Secretary Hodgetts also reported that in accordance with the request of the association, "Mr. W. T. Macoun, C. E. F., Ottawa, had been added to the advisory board for fruit station work.

The representatives to The Canadian National Exhibition reported that the prize list for fruit had been re-arranged so as to induce a larger and more representative exhibit of Canadian fruit. The list of varieties had been cut down to a certain extent and a new class added for pyramids of fruit. Further changes were also made with a view to improving the display of all classes.

It was decided by the board to issue a small circular at once, giving the methods of spraying as adopted by three or four of our most successful fruit growers.

## Vegetable Experiments

The practical educational work carried on by the Ontario Agricultural College, through the Experimental Union, is now well known throughout Ontario. Thousands of people in both town and country interested in farming, fruitgrowing or gardening are carrying on experiments under the direction of the College and are profiting by the experience. The seeds or plants for these experiments and full instructions for conducting them are furnished free on the understanding that each experimenter will report the results of his experiment at the end of the season.

Owing to the great demand for the experiments with fruits and the limited funds for the purchase of plants for this purpose, the supply of these for this year is already exhausted. But we have on hand a good supply of seeds for the experiments with vegetables and hope to be able to furnish these to all interested in the growing of the best kind of garden vegetables.

Three of the leading varieties of each of the following kinds of vegetables are offered for testing this spring, viz., beets, carrots, onions, lettuce, early tomatoes and late tomatoes. The early tomatoes are best for northern sections where the later and better varieties cannot be depended upon to ripen.

Any person in Ontario who wishes to join in this co-operative testing may choose any one of the experiments above mentioned and send in his application for the seeds and instructions for conducting the same. These will be sent by mail free of charge, but each applicant must agree to follow the directions furnished, and report the results at the end of the season, whether successful or not. Applications will be filed in the order they are received until the supply of seeds is exhausted. Address all applications to H. L. Hutt, O. A. C., Guelph, Ont.

**A Piano for \$25.00.**—In every sense of the word the sale of somewhat used, but not badly used, square pianos at Heintzman & Co's, Limited, 115-117 King street west Toronto, is sensational. The announcement has brought this firm orders from almost every corner of the Dominion. The determination is to clear out every square piano in the place between now and stock-taking and surely prices like \$25, \$30, \$35, and \$40, will do it—in payments of \$5 down and 50 cents a week.

# TIME SAVING COUPLER

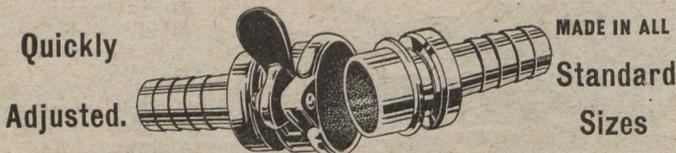
**No Lost Washers, Time,  
 Temper, Force.**



The New Way



The Old Way



Quickly  
 Adjusted.

MADE IN ALL  
 Standard  
 Sizes

MAY BE HAD FROM YOUR WHOLESALE OR DIRECT FROM  
**THE TIME-SAVING COUPLER CO.,**  
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Price List on Application.

# SPLENDID VALUE IN SEEDS

\$2.50 for \$1.25

## Bruce's Unequalled Floral Collections

- ASTERS—Bruce's Empire Collection, 6 separate distinct varieties, mixed colors, value 55c ..... for 25c post paid
- NASTURTIUMS—Bruce's Peerless Collection, Tall Sorts, 7 distinct separate colors, value 40c..... for 25c post paid
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- SWEET PEAS—  
 Bruce's Royal  
 Nosegay Collec-  
 tion, 10 distinct  
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- FLORAL GEMS—  
 Bruce's Collec-  
 tion of Annuals, 10  
 separated distinct var-  
 ieties, mixed colors,  
 value 65c  
 for 25c post paid



**FREE**  
 Our Illustrated 100 page Cat-  
 alogue of Vegetable, Flower,  
 and Farm Seeds, Plants, Bulbs, Implements  
 and Poultry Supplies is now ready  
 SEND FOR IT

**JOHN A. BRUCE & CO., HAMILTON, ONT.**

**Tomatoes in Pots**

Continued from page 84

They are difficult to look after, but to get the best results in localities as far north as Toronto we must have good plants. The easiest way and best way to grow tomato plants is to dig up a spent hot-bed, say one that lettuce has been grown in, and plant in strawberry boxes. Give them as much room as you can afford. Place on the bed and fill with loose earth to level of boxes. They are easy to water and the roots will feed from the bed.

**Work of Fruit Stations**

At a meeting of the new Advisory Board of Fruit Stations held in Toronto, on Feb. 26, it was decided that no changes be made in the old stations until a full report could be obtained as to their respective value.

At the new station at Jordan Harbor an extensive planting of all kinds of fruits will be commenced this spring with a view to experimenting along the following lines: 1. Semi-dwarf stocks for apples; 2. Testing of various stocks with standard varieties for northern districts; 3. High vs. low heading; 4. Use of varieties as fillers among standard winter sorts; 5. Culture tests with all fruits; 6. Method of training grapes; 7. Peaches on plum stocks; 8. Experiments with pears for the suppression of blight; 9. Standard vs. dwarf pears for commercial use; 10. Suppression of rot in plums; 11. Testing of hybrids originated at the Central Experimental Farm, Ottawa; 12. Pruning methods with all fruits, including small fruits; 13. Planting of selected seed of all fruits in large quantities for the purpose of obtaining natural hybrids of value; 14. Fall planting of peaches, pears and plums vs. spring planting; 15. Fumigation of nursery stock to test the theory that this process injures the trees.

It is likely that some special tobacco experiments will be carried on under the supervision of Mr. McKenney, the representative of the Department of Agriculture at Essex Centre. Extensive vegetable experiments will also be carried out at Leamington and Jordan Harbor.

**To Revise Plant Names**

The committee on the nomenclature of plants, which was appointed at the last annual meeting of the Ontario Horticultural Association, has begun its work. A meeting was held in the offices of THE CANADIAN HORTICULTURIST recently, at which it was planned to have some valuable information to present at the next annual meeting of the association. The members of the committee present were: W. Hunt, O.A.C., Guelph; J. Cavers, Oakville; W. T. Macoun, C.E.F., Ottawa, and H. B. Cowan, of Toronto.

The object of the appointment of this committee was to correct as many mistakes as possible in the names and descriptions of plants in common usage. The committee also hopes to present to the association at its next annual meeting, lists of the best varieties of some of the most popular kinds of plants, correctly named and described.

**High-Class Upright Piano for \$225.00.**—There have been taken into the warehouses of Heintzman & Co., Limited, 115-117 King street west, Toronto, within the past few days, two upright pianos, very little used, and bearing the names of well-known manufacturers. One of these may be bought for \$225, and the other for \$250. It is an opportunity to get what is practically a new piano at nearly half the manufacturer's regular price.

**Orchard Cultivation**

T. E. Bissell, Elora, Ont.

The advantages of cultivating orchards and vineyards with a disk harrow are coming to be more fully recognized. The disk principal is that of a revolving mould-board which enters the soil at an angle and lifts, turns and pulverizes, while the mould-board continues to revolve. Owing to the principal on which it works, the disk cultivator or harrow will accomplish more work and stir more earth with less horse power than any other style of cultivator. At the same time if the disk plate is of correct shape and turn, the soil is more thoroughly cultivated thereby than with any other style of implement.

The disk presents an advantage for orchard and vineyard work in that it does not catch on the rootlets and tear them up similar to the duck-foot or other cultivator of the tooth style. The frequent cultivation of orchards, vineyards and small fruits by the disk cultivator preserves the moisture and increases the vitality of the trees and vines ensuring better returns.

Enclosed find the money to pay for my advertisement. Judging from the way orders are coming in, I will not need any further advertising than that I have paid for; therefore, cancel my order for the next issue.—N. E. Mallory, Blenheim, Ont.

The Aspinwall Mfg. Co., Guelph, Ont., issue a neat little booklet entitled "Potato Culture," that contains valuable information for potato growers. Send for a copy, and also ask for a copy of their catalog of potato machinery.

Fruit growers are considerably interested in the new spraying mixtures that were mentioned in The Canadian Horticulturist, the V1 Fluid and V2 Fluid. At a recent meet of the Niagara Peninsula Fruit Growers' Association, a committee, composed of A. H. Pettit, Grimsby; Jos. Tweddle, Fruitland, and J. W. Smith, Winona, was appointed to test these mixtures. Experiments will be conducted also in other parts of Ontario and in other provinces.

**A Square Piano for \$30.00**—Heintzman & Co., Limited, 115-117 King street west, Toronto, are clearing out what is pretty much one floor of square pianos at not only \$30 but some of them at \$25, and others again at \$35, \$40, and \$45, in payments of \$5 down and 50 cents a week.

**CAHOON**  
 is the name of the most accurate and durable Hand Seed Sower on the market. Sows 4 to 5 acres per hour. Write for new booklet, "Sowing for Results," and 50th anniversary souvenir.  
**GOODELL COMPANY**  
 95 Main St., Antrim, N. H.

**TREES PLANTS VINES** SPECIALTIES  
 PERFECTION CURRANT HERBERT RASPBERRY  
 Shrubs, Roses, Norway Spruce  
 Descriptive price list  
**A. W. GRAHAM, ST. THOMAS, ONT.**

**Northern Grown Trees**  
 Apple, Pear, Plum, Cherry, Peach, Grapes, Small Fruits, Deciduous and Evergreen Ornamentals, Roses, Flowering Shrubs, Climbers, etc. Specialties: Mammoth Dewberry and Wismer's Dessert Apple. Catalogue Free; it tells the whole story.  
**J. H. WISMER, Nurseryman. Port Elgin, Ontario.**

**Orchids** Now is the time to place your orders for Spring delivery of freshly imported Orchids. Our prices are very low, quality considered. Also large stock of established Orchids on hand  
**CARILLO & BALDWIN**  
 SECAUCUS, N.J., U.S.A.

**THE SUPERIOR MFG. CO.** STENCIL FOR BRANDS AND RUBBER STAMPS  
 WE MAKE ALL KINDS FOR ALL PURPOSES  
 124 YONGE ST. TORONTO.

**WENTWORTH POTTERY**  
 [Standard Flower Pots, Fern Pans, Hanging Baskets, Cut Flower Jars, and all Florists' Supplies.]  
 Mail orders given prompt attention.  
**JOHN CRANSTON & SON**  
 HAMILTON - ONTARIO

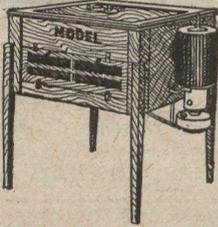


THE above shows the latest model of the H. P. SPRAMOTOR, working on large apple trees with an 8 - nozzle cluster. The air tank holds enough reserve pressure to spray one side of a large apple tree, and the pressure will not get too low. Guaranteed 125 lbs. pressure with 8 nozzles open. Easy work for one or two horses. Also fitted for vineyard, potatoes, grain crops and orchards. Never have to look at the nozzles, they're always clear. This AD. will not appear again in this paper, therefore if interested, write now to

**SPRAMOTOR, LTD., 1183 KING ST., LONDON, ONT.**

## CHAS. A. CYPHERS' Model Incubators and Brooders

On my Model Poultry Farm I now have poultry numbering **80,000** hatched and brooded in my famous Model Incubators and Brooders. Buying your incubators and brooders of a man who knows nothing (or next to nothing) about hatching and raising poultry is running a useless risk. Don't do it.



I not only sell you a Model Incubator or Brooder, but I add to them the valuable experience of years as shown in their construction. Model Incubators show excellent hatches, hatch every hatchable egg. The Model Brooder grow sturdy chicks.

Send your order in to-day, and get in line with the profit getters.

Free catalogue for everyone.

**THE MODEL INCUBATOR CO.**  
196-200 River Street TORONTO, ONT.

## POULTRY DEPT.

Conducted by S. Short, Ottawa

### Eggs for Hatching

February and March issues of The Canadian Horticulturist contained articles on incubation by machine and artificial rearing of the chicks by brooders. It was thought reasonable to say something this month on how to obtain fertile eggs and when to get them. If eggs are purchased—and it is taken for granted that, if they are, they will be from high-grade stock and therefore expensive—on no account order them for immediate delivery. Wait until spring is sufficiently advanced, that to your certain knowledge, the fowl in the pen from which your eggs are to be supplied have been running outdoors for at least a fortnight, that is, if you wish to get a good hatch. It is the exception to get even a fair hatch from

eggs laid at the end of March and beginning of April.

There are several reasons advanced for this fact. The hens are run down from their long confinement and while the egg is fertile, that is, it contains a germ of life, the germ is too weak to live through the three weeks of incubation, and rotten eggs are usually the result. The lime and egg shell material supplied the fowls does not in many cases enable some of the hens to lay eggs with strong shells so that a great many breakages occur if the eggs are set under hens.

Whatever the reason, the fact remains that eggs as a rule do not hatch well until after the hens have been outdoors. For all practical purposes, chickens hatched from eggs set from the middle to the end of April are plenty early enough to furnish layers for the following winter, if the chicks are properly fed and housed.

Of course, if the breeder has breeding pens of his own and plenty of eggs he may be willing to lose a large percentage of the eggs to get a few very early chicks for exhibition at the fall fairs. If he is unsuccessful, the loss is his own. It is another matter where the beginner pays from \$2 to \$5 per setting and only gets one or



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President  
The Manson Campbell  
Company, Limited.

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special  
price  
and  
special  
terms  
to-day.  
Will you  
write for  
them?**

## Let me send you the proof of the big money you can make raising chickens with a Chatham Incubator

**I** HAVE the proof from all parts of Canada and the United States, which shows emphatically that the Chatham Incubator is making good profits for its users.

Some people who "just kept" hens as a side issue are now making big money raising poultry with a Chatham Incubator.

Others who were raising poultry with other makes are now making bigger profits with a Chatham Incubator.

You know it doesn't do to put all your eggs in one basket. The year comes along when crops are not so good. The farm doesn't pay as much as it should. Then don't you think you will appreciate the sure and certain profit that you get from poultry raising with a Chatham Incubator?

Better still; the price I can sell you a Chatham Incubator for and the terms I can sell it on, mean that you will be making a profit out of it before you have paid me one cent.

I practically start you in a profitable poultry business—which really only takes a small part of your time, or your wife's or daughter's—and it doesn't cost you one cent until you are making a profit out of it.

Now, I want you to write me to-day—a post card will do. Then I will send you my 1908 Booklet, which tells all about the Chatham Incubator, how it is made—the five-year guarantee we sell it on. How strong and successful a company is back of this

guarantee. It tells all this and also of the way the Chatham Incubator works, how it has made money for others, how it can make money for you.

Write me to-day and let me send you all this information about poultry raising, and I will also give you my special price and special easy-payment plan.

To save time address my nearest office—do it now while you think of it.

The Manson Campbell Co., Limited,  
Brandon, Man.  
The Manson Campbell Co., Limited,  
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Cote & Co., 6 St. Peter St., Montreal,  
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**MANSON CAMPBELL**  
President

**The Manson Campbell Co., Ltd.**  
Dept. 83 Chatham, Ontario  
I also have a shipping warehouse at  
Halifax, N.S.



**Guaranteed  
for Five  
years.  
Freight  
prepaid to  
any point.**

two chicks. Therefore, to be on the safe side, if eggs are to be purchased, make sure

that the season is sufficiently advanced that the eggs have been laid by fowl which have had the advantage of outdoor air and exercise at least for two weeks.

# Pear Blight

*We Can Cure It*

*Our work has extended over a period of three years. Process and formula patented. Address correspondence to*

## Pear-Blight Remedy Co.

*Vacaville California*

Mention Canadian Horticulturist when writing

### IF YOU HAVE APPLES OR POULTRY TO CONSIGN

we can handle them for you to advantage. If apples are in car lots, write us and we can sell them for you f.o.b. your station

THE DAWSON COMMISSION Co., Limited  
Cor. West Market and Colborne St.  
TORONTO ONTARIO

**Ornamental Plants.**—What shall we plant in our perennial border this spring? This question will bother many of our readers and it is not easily answered; even when the average catalogue is consulted, many would still be confused. Mr. H. P. Van Wagner, of Stoney Creek, Ont., has made an extensive study of the best varieties of shrubs, perennials, tubers, bulbs, and so forth, to plant in Canadian gardens that will produce the best results. The many prizes that Mr. Van Wagner has secured at Exhibitions speaks well of his selection. We would refer our readers to the full page advertisement for a partial list of the varieties Mr. Van Wagner is offering for sale this season.

I enclose \$1.00, which will cover my subscription for two years at the present price, and I think I have got a good bargain. I should not like to be without THE CANADIAN HORTICULTURIST.—Geo. Milne, Pointe Claire, Que.

As evidence of the popularity of Wallace sprayers, Mr. W. H. Brand, sole agent for Canada, Jordan station, Ont., recently received the following: "It affords us pleasure to state that we have used one of the Wallace Standard Power Sprayers during the past season, and found it perfectly satisfactory, giving plenty of pressure with no trouble whatever. (Signed), Wilbur Winters, Frank H. Hall, John Usher, J. W. Roberts, all of Wicklow, Ont."

The Aspinwall new No. 3 Potato Planter was placed on the market for the first time in 1907. It gave a most satisfactory account of itself. By reports, it leaves little to be desired in the way of a planter. Any one interested in potato machinery should write the Aspinwall Company at Jackson, Michigan, for their 1908 Catalog, describing the whole Aspinwall line. Better do it now before the potato season is on.

**The Popular Piano Player.**—The player-piano has stirred up any amount of enthusiasm in musical circles, if the many sales being made by Heintzman & Co., Limited 115-117 King street, west, Toronto, are to be taken as a criterion. This firm has a very wide selection of player-pianos at terms of payment to suit almost any purchaser.

## Big Potato Crop at Least Expense

Write now for **Free Book** that tells how to increase your Potato Crop 40 to 75% and how to cut out **labor and expense** by using

### ASPINWALL POTATO MACHINES

which cut, plant, cover, fertilize, spray, dig and sort potatoes. Practical Success guaranteed and proven by our 25 years' experience in potato machine building. Address Head Office.

Aspinwall Mfg. Co.  
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Jackson, Mich., U. S. A.

Canadian Factory, Guelph, Ont., Canada



## Chinese Aster Plants

FROM BEST SEEDS

QUEEN OF THE MARKET—White, Early  
" " " "—Pink "

LAVENDER GEM—Early  
ROYAL PURPLE—Medium Late  
VIOLET KING — " "

VICK'S BRANCHING—White, Medium Early  
" " " "—White and Pink, Late  
15 Cents per dozen—40 Cents per hundred, postpaid

For prices on larger quantities please write.  
Packed to go anywhere by mail.  
May be planted with good results until 15th June  
Orders received now and will be filled after 15th May.  
Please send Postal Note with order.

JOHN CAVERS - Oakville, Ont.

## NOZZLE



THIS illustrates the Spramotor Nozzle, Fig. 56, designed to apply lime-sulphur mixture. It is made in brass with brass or steel removable discs, or with aluminum cap and body and brass or steel discs.

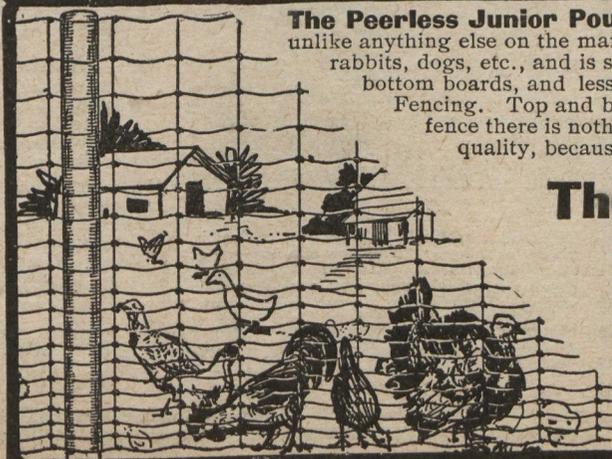
The particular merit of this type of nozzle is in the large liquid ways that prevent clogging and the double ways being at an angle that gives the most perfect form of spray.

We believe, for the purpose of spraying with lime-sulphur or any coarse materials under heavy pressure, it will be found unexcelled. Price, by mail, \$1.00.

Free Catalogue for Post Card.

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# PEERLESS JUNIOR POULTRY FENCE



The Peerless Junior Poultry and Garden Fence is in a class by itself, being unlike anything else on the market. It is woven close enough to turn small chickens, rabbits, dogs, etc., and is strong enough to turn large animals. It requires no top or bottom boards, and less than half the posts required by the ordinary Poultry Fencing. Top and bottom wires are No. 9 hard steel. As a general-purpose fence there is nothing obtainable that will fill the bill so well, and its lasting quality, because of its extra strength, makes it

## The Most Durable Poultry Fence You Can Buy

Peerless Junior Fence has double the strength that would ever be required of it. It has a breaking strain of at least 8000 lbs. Don't you think it is just the fence you want? For prices and further particulars, drop us a card.

THE BANWELL-KOXIE WIRE FENCE CO., (Ltd.)  
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**Miss Kate Lock** Colors—White, Enchantress-Pink, 50c. per trade pkt. No checks, Instructions, "How to Grow Asters," with every order. Not guaranteed unless bearing my signature  
**J. H. LOCK, Aster Specialist, 41 Manchester Ave., TORONTO, ONT**

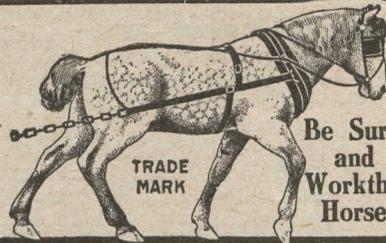
## THE "BUCO" HAND CULTIVATOR



One man with a "Buco" is worth two with a hoe. Tines are OIL TEMPERED STEEL SPRINGS, adjustable to width. It gets DOWN DEEP, loosens the soil thoroughly and cleans the weeds out by ROOT. Less labor, larger yield. Great around trees and shrubs.

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Be Sure and Work the Horse

## HE CAN WORK EVERY DAY

If you use Bickmore's Gall Cure your teams can work right along and be cured of Saddle and Harness Galls, Chafes, Rope Burns, Cuts, Scratches, Grease Heel, etc. while in harness. The more work the quicker the cure.

### BICKMORE'S GALL CURE

is the standard Remedy for all these and similar troubles. Is excellent for Mange and Sore Teats in cows. Above trade mark is on every box. For sale by dealers. Money refunded if it fails. Sample and Horse Book every farmer should read 10c.

**WINGATE CHEMICAL CO. LTD., Canadian Dist'rs,**  
 545 NOTRE DAME ST., W. MONTREAL, CANADA

**Seed Selecting Problem Solved.**—Indecision soon settles upon the amateur gardener after perusing the general list of garden seeds in the average seed catalogue. There are so many varieties which would apparently "just fit in" with his needs that the selection of the "right one" becomes a perplexing problem yielding to no simple solution. Finally a half guessed choice is made and too often the choice proves an unfortunate one.

Fortunately there has come a solution of the seed selection difficulty; there has been a wonderful revolution in seed culture. Thanks to the untiring efforts of the leading producers and distributors of garden seeds in Canada—The Wm. Rennie Co.—a new standard has been set. They have, by countless and costly experiments, ruthless roguing and unsparing selection, developed practically perfected types of the most useful vegetable seeds—24 different kinds in all. These types represent a combination of the best qualities found in the better classes of their respective kinds. We take pleasure in commending Messrs. Rennie in having achieved such excellent results and it is with confidence that we recommend our readers to try these grades this season. The new sorts are named "Rennie's XXX" and a full list of them may be found in their full page advertisement.

Will you please send me an extra copy of the March issue of The Canadian Horticulturist, it is so full of information and helpful that I would like my friends to see it, and may be able to secure some new subscribers.—Geo. H Switzen, Norval, Ont.



## The Central Nurseries

are supplying splendid value in Fruit and Ornamental Trees, Shrubs, Roses, Grape Vines, New Herbert Raspberry, Rykman Strawberry Plants in varieties. All well grown. True, dependable stock. Send for our Free Priced Catalogue. We ship direct to our customers with satisfactory results. Try us. 28th year. Seed potatoes: Climax, Eureka, Eldorado, Peck's Early, Early King, Golden Coin and others. Poultry: R. I. Reds; none better; cockerels from \$1 up. Eggs in season.



**BABY RAMBLER**  
 Ever-blooming Crimson Dwarf. Think of roses every day from June until frost out of doors.

**A. G. Hull & Son, St. Catharines, Ontario**

Surplus in Baldwin Apple Trees—SELECT STOCK—Write for Low Prices

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## SELECTED SEEDS

GIVE SATISFACTORY RESULTS

**Our Vegetables Seeds** are of undoubted purity and produce abundant crops. **Our Flower Seeds** are true to name and of the highest germinating power. **Sutton's Specialties** are always in stock. We do not make up special collections of seeds and advertise \$1.00 worth for 50c. as specials. We give every customer \$1 worth of pure seeds for every dollar spent with us. A trial order will convince you that we sell only those seeds that are sure to grow. Illustrated catalogues sent free to those who wish to grow pure seeds. SEND YOUR NAME TO-DAY.

## DUPUY & FERGUSON

36 JACQUES CARTIER SQ., MONTREAL

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## Strawberry Plants



### THREE W'S

Reported on by Mr. E. B. Stevenson, of Guelph, in 1906, as follows: "This new one was one of the best for market. At one of the pickings I picked 3 boxes without moving; at another later picking I picked one box for every 2 feet of row."

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Fifty leading varieties listed and fully described. Many illustrations and full cultural instructions.

### Some of My Leaders

- EXTRA EARLY—Virginia, Early Hathaway, Excelsior.
- EARLY—Bederwood, Climax, Haverland.
- MEDIUMS—Buster, Cardinal, Parson's Beauty, Tennessee, Prolific, Wonder, Dorman.
- LATE—Fountain, Irene, Marshall, Stevens' Late Champion, Gaudy.
- NEW—Arnout, Abington, Chesapeake, Commonwealth, Mead, Miller, Minuteman, President, Pride of Michigan, Three W's, Ruby.
- OLD STANDARDS—Bubach, Clyde, Glenn Mary, Sample, Senator, Dunlap, Warfield, Williams, Wm. Belt.

Varieties guaranteed true to name.

**W. H. VANDERBURG, POPLAR HILL, ONT.**

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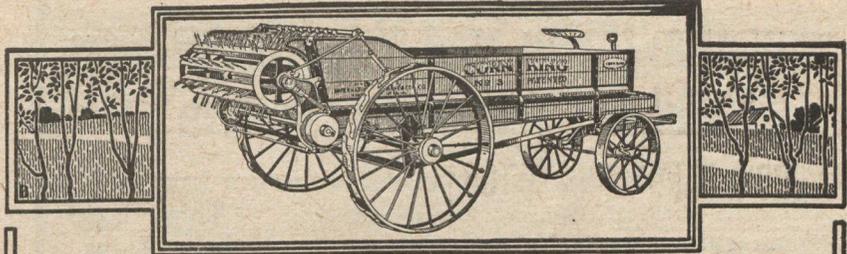
**Short Course at Guelph**

R. M. Winslow, O. A. College

The first short course in fruit growing ever given at the Ontario Agricultural College, Guelph, extended for 10 days, Jan. 28 to Feb. 7, and was attended by 60 men interested in fruit. They came from all parts of the province, from Maine and British Columbia, but about one-third were from the Niagara district. Quite a few were interested especially in co-operation, and gave most of their attention to spraying, picking, grading, packing, and so forth, under cooperative conditions. The whole course was marked by a deep and intelligent interest in all the subjects outlined in the program, and the men who attended, almost without exception, expressed themselves as having spent a profitable two weeks.

The program covered the whole field of fruit, from the Ontario viewpoint, as fully as possible during the time, and was very practical in its aim. The speakers were the best that could be secured. The discussion by the students was good, and especially so by the Grimsby men, who had attended the fruit institute held at that place a few weeks ago. This discussion was of value; not alone to the fruit growers, but it emphasized the points that might profitably be investigated and experimented on by the Government institutions at Ottawa, Guelph and Jordan Harbor. The problems of the selection of scions from bearing wood, and especially of "pedigreed" stock taken from trees known to be of high bearing capacity, and the adaptation of varieties to soils, seemed to need experimental work.

Most of the evening addresses were practical and bore directly on the main line of the course. A few, as for example the talk of A. McMeans, of the O.A.C., on "The Farmer's Vegetable Garden," and Prof. Waugh's "Some Phases of Ornamental Planting," were not so, but the



*Make the manure bring you  
\$ 4 a ton*

**Thousands of Successful Farmers Are Doing It**

There is no charm or secret about it. You simply spread it with a machine, and thus make it go twice as far, get twice as much good from it on the first crop, do your land more permanent good, and save half the time and labor of handling.

Manure is generally estimated to be worth \$2.00 a ton handled the old way. There is no doubt that it is worth twice as much to the farmer who spreads with a machine.

Two of the most practical and valuable machines manufactured for farm use today are the **Corn King and Cloverleaf manure spreaders**. They are each made in a number of sizes.

These machines differ somewhat in construction and operation, but both are right working and of great durability.

They are proven machines. They embody the best mechanical ideas, the materials used in construction are the best for the purpose, they are made as simple

as possible, and they handle manure in all conditions to the perfect satisfaction of users. Proof of all this is to be found in the record each machine has made in the field.

Is it not to your interest to own and use one of these spreaders on your farm?

Figure out for yourself and you must agree that it will be a paying investment, even if you do not have over twenty-five loads of manure to spread in a year.

You can't help but be pleased with the work, the easy handling, the light draft and the substantial making which saves you the annoyance of breakage and repairs.

Call and see these spreaders with the local International agent. He will gladly point out to you the superior features of these machines, as well as supply you with catalogue, colored hanger or other information.

The nearest branch house will supply you with any further information desired.  
**CANADIAN BRANCHES: Calgary, London, Montreal, Ottawa, Regina, St. John, Hamilton, Winnipeg**  
**INTERNATIONAL HARVESTER COMPANY OF AMERICA**  
 (Incorporated)  
**Chicago, U. S. A.**

**Feed Your Land**

WITH GOOD MANURE AND GET  
**GOOD RETURNS**

**MARCHMENT'S**  
**SURE GROWTH COMPOST**  
 IS THE BEST

Supplied to the Largest Nurserymen  
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**SPECIAL GLASS**  
**FOR GREENHOUSES**



Conservatories of The Dale Estate, Brampton, Ont.  
 Glass supplied by our Toronto Branch

GOOD QUALITY, FLAT, EVEN  
 THICKNESS AND WELL CUT

**PILKINGTON BROS.**

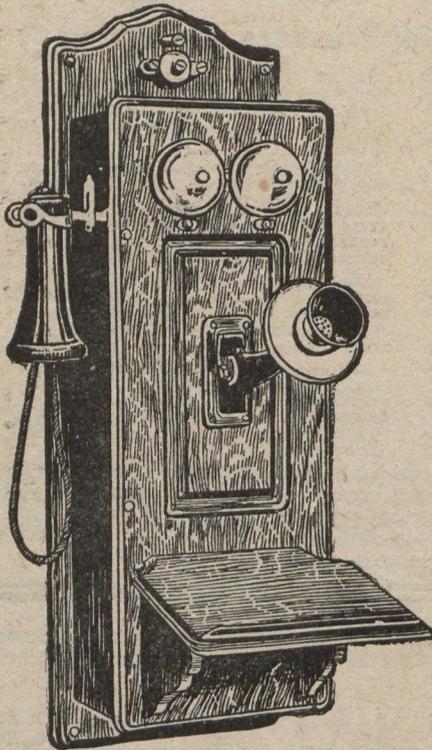
Limited

Toronto, Montreal, Winnipeg, Vancouver

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Think how quickly you could get assistance from each other in case of fire, accidents, sickness. Think how much safer your wife and children would be. Think how much time it would save you. Think what a convenience and pleasure it would be to talk with your friends when the weather is too bad to be out.



10 WALL TELEPHONE, MAGNETO TYPE

### Canadian Independent Telephones

may be installed in your and your neighbors' home, independently of the monopoly. We are supplying telephones for those who won't pay the prices asked by the monopoly and for those who can't get the monopoly to put in a phone. We are placing within reach of the people the best telephone system and the best telephones—guaranteed for ten years.

Write for full information.

**Canadian  
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26 DUNCAN STREET  
TORONTO

Mention the Canadian Horticulturist when writing.

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"PROVINCIAL" Fertilizers have been the STANDARD OF EXCELLENCE for nearly twenty years—

Write for Information and Descriptive Booklet

**THE PROVINCIAL CHEMICAL FERTILIZER CO., LTD.**

ST. JOHN, N.B.

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Get the Best. Styles for Lawns, Farms and Ranches. Made of high carbon wire, galvanized and then painted white. Tougher and stronger wire than goes into any other fence. Get 1908 prices and illustrated booklet.

**THE PAGE WIRE FENCE CO., LIMITED**  
Largest fence and gate manufacturers in Canada.  
WALKERVILLE TORONTO MONTREAL ST. JOHN WINNIPEG 219

Mention the Canadian Horticulturist when writing.

attendance and the interest shown proved them to be of high value. The discussion on the first-mentioned was so keen as to suggest that possibly there is a place for a short course in vegetable gardening in the near future.

Prof. R. Harcourt and Mr. W. H. Day found that the practical applications of their scientific subjects was very interesting to fruit men. "Fertilizers and Manures" and "The Chemistry of Cultivation," by Prof. Harcourt, were difficult subjects to handle, but were well discussed. In speaking on "Tillage and Drainage," Mr. W. H. Day, of the O.A.C., had a popular subject. The big job of draining at the Ontario Horticultural Experiment Station testifies to his knowledge of the subject, and the work has aroused a great deal of interest among Niagara men who are situated on heavy land, like that at Jordan Harbor. The lecture on drainage was made into two, at the request of the students. The interest and appreciation of these scientific subjects shows that the material of the Short Course was high class.

The subjects of cooperation and so forth were handled by good men. Special meetings were held in some subjects by the request, and for the benefit of, those specially interested.

The students of the course, realizing that this course marks the beginning of a new era in the work of horticultural education in Ontario, determined to hold a banquet at the end of the course, to distinguish it. President Creelman, J. P. Downey, M.L.A.; A. B. Cutting, of THE CANADIAN HORTICULTURIST, and the speakers of the short course were the guests of the evening. The speeches were in keeping with the occasion, and from all of them came the impression of bright prospects for fruit and the fruit growers in Ontario. Mr. Alex. McNeill, in particular, spoke of the exceptionally bright outlook for apple growing in most parts of the province, as a large part of mixed farming. Towards the close of the evening a vote of congratulation and of thanks was tendered to Prof. H. L. Hutt and his assistant, Mr. J. W. Crow, on the efforts they had put forth to make the course a success.

Some suggestions heard as to possible improvements next year are worthy of mention. It was suggested that a high-class peach specialist should give some valuable lectures. There is also need of more room at the O.A.C. in which to hold lectures and to conduct demonstrations, and also to give the students opportunity of doing more of the work, in packing, spraying, and so forth, than was possible this year. Brief reports of the various lectures and discussions that took place this year will be published in subsequent issues of THE CANADIAN HORTICULTURIST.

**Spraying Calendar Free.**—Do you know just how and when to spray all kinds of fruits and vegetables that are likely to need spraying? Do you know what special solutions are best for special purposes and how to make these solutions? You can get all this information free, in simple, clear form, from no less an authority than Prof. M. V. Slingerland, Entomologist of Cornell University College of Agriculture. Just write to the E. C. Brown Co., of Rochester, N.Y., and ask for a copy of their Auto-Spray Catalogue. This catalogue contains Prof. Slingerland's spraying calendar and formulas. It illustrates and describes "A Sprayer for every man's needs." The E. C. Brown Co. manufactures 40 different styles and sizes of spray pumps, including hand and traction power outfits, all being widely and favorably known as the "Auto-Sprays."

A copy of the seed catalog of Wm. Ewing & Co., Montreal, has been received. It contains complete lists of all the vegetable, flower and grass seeds that growers require, as well as bulbs, garden and greenhouse plants, roses, shrubs, fruit trees and so forth. Send for a copy.

**Seedless Apples**

Editor, THE CANADIAN HORTICULTURIST: In the January issue of THE CANADIAN HORTICULTURIST, regarding a seedless apple, I noticed a brief but justifiable precaution used in commenting on this apple. It was stated "Little value is placed on the elimination of the seed." Probably in your zeal to be candid respecting novelties, you have overlooked the very important and exhaustive effect produced on the economy of the tree at the time of maturing and ripening of the seeds, especially during the progress of ripening. We are told by pomologists and observing apple growers that at this time there are heavy draughts made on the vitality or juices of the tree, which are the natural secretions available for the full development of fruit and tree, and that a large percentage of these juices is appropriated by the seed (which contains, in embryo, the perfect plant or future tree) and thus stored for the reproduction of its species. This hypothesis is fully sustained by Prof. H. L. Hutt, B.S.A., in O.A.C. Bulletin 144, where he says: "It is the production of the seed which makes the greatest drain on the tree and soil." If, then, an apple can be produced minus the seed and the full flow of sap diverted to the development of fruit and tree, the probable benefit to fruit may be in size, quality or quantity,—in any one or all of these,—it would be a valuable addition to the present profits of apple growers. This is a desideratum much to be wished for.

In order to further illustrate this theory, Mr. Jas. Fleury, on whose farm the seedless apple referred to was grown, had two baskets of these apples which I was requested to call and see and to express my opinion on their characteristics and also to name the variety, if possible. In color, shape and flavor, they appeared to me as abnormally-grown specimens of Sherwood's Favorite or Chenango Strawberry. I grow this latter variety. On comparing the two, I was convinced that they are identical.

Applying a further test, I cut a couple of these apples longitudinally and was surprised to find in the cavity, small, immature, shrivelled seeds, as though Nature had rebelled against an over-wrought fertilization and resolved to dispense with the natural law of fecundity (as when extremes meet in the animal kingdom).

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Be this as it may, this is a phenomenal apple. It is one-third larger than the average apple of its variety. The only way I can account for this abnormal growth is that the secretions required to mature the absent seed have been absorbed in the large development of the apple.

If this diagnosis is permissible, pomology has made an important gain. A discovery of equal advantage to the scientific or materialistic world would be hailed with enthusiasm and heralded broadcast throughout the land.

I would like to hear the opinion of fruit growers on the merits or demerits of this new claimant. Although of humble and obscure birth, it should receive the attention, also, of experts in colleges and on experiment stations.—W. M. Robson, Lindsay, Ont.

**Landscape Designing.**—Mr. C. Ernest Woolverton, landscape designer, Grimsby, Ont., has returned recently from Boston, Mass., where he has been working in conjunction with a noted firm of that city. Mr. Woolverton is now an associate member of the firm and will manage the Canadian branch of the business. He is the son of Mr. Linus Woolverton, the well-known horticulturist. His talent in landscape designing is, therefore, a natural gift, and with the backing of one of the most highly reputed firms of Boston, he should have the support of all his Canadian friends and countrymen.

It is about 29 years since I became a subscriber to THE CANADIAN HORTICULTURIST. Since then, many changes have occurred in the publication. I am glad to notice that at present more attention is being given to the growing of vegetables and flowers.—Chas. James Fox, South London, Ont.

**Buy an Organ for \$10.00.**—The one hundred organs of well-known makers that Heintzman & Co., Limited, 115-117 King street West, Toronto, are clearing at \$10 \$15, \$20., \$25, \$35, and up, are going like a fire on a windy night. These organs can be bought at these prices, in payments of 50 cents a week.



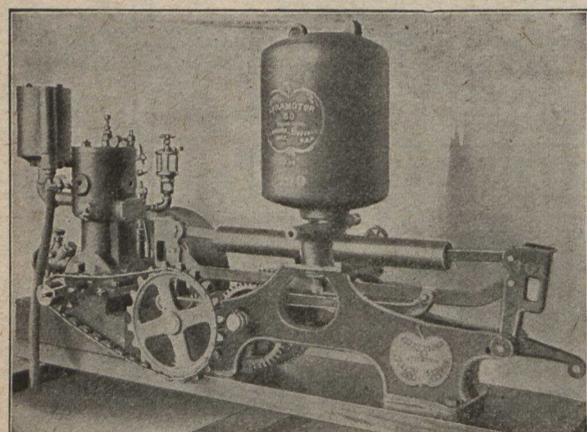
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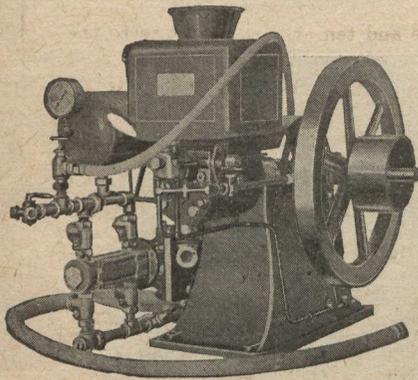
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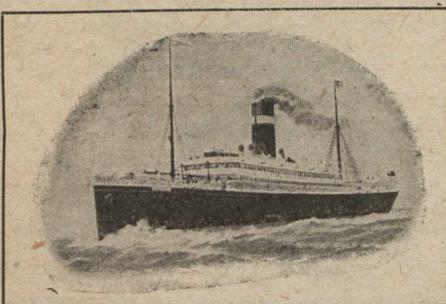
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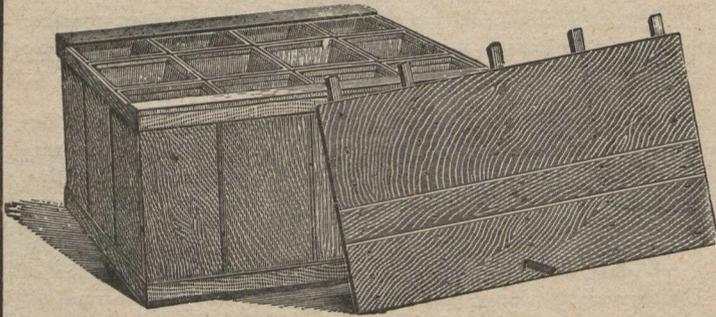
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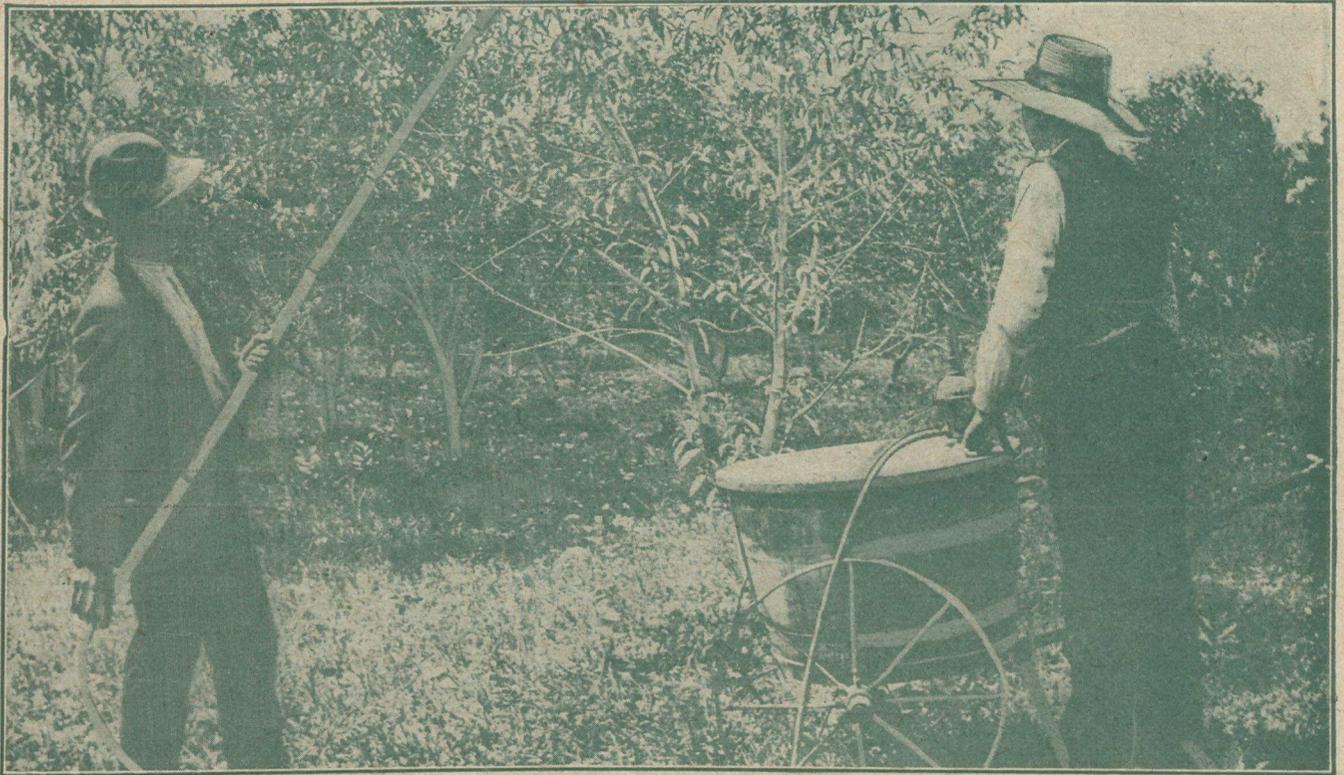
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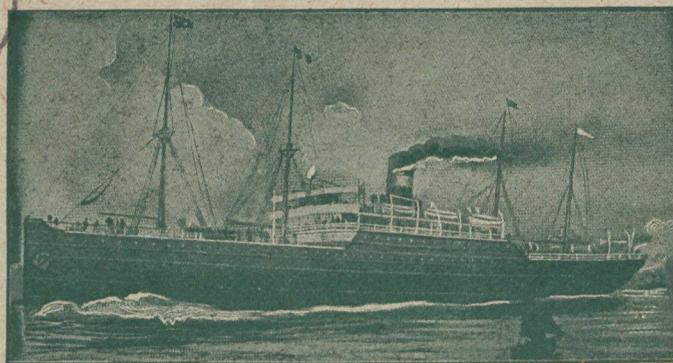
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