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The CANADIAN HORTICULTURIST.

PUBLISHED BY THE
FRUIT GROWERS'

ASSOCIATION
of ONTARIO.




St Catharines. Ont

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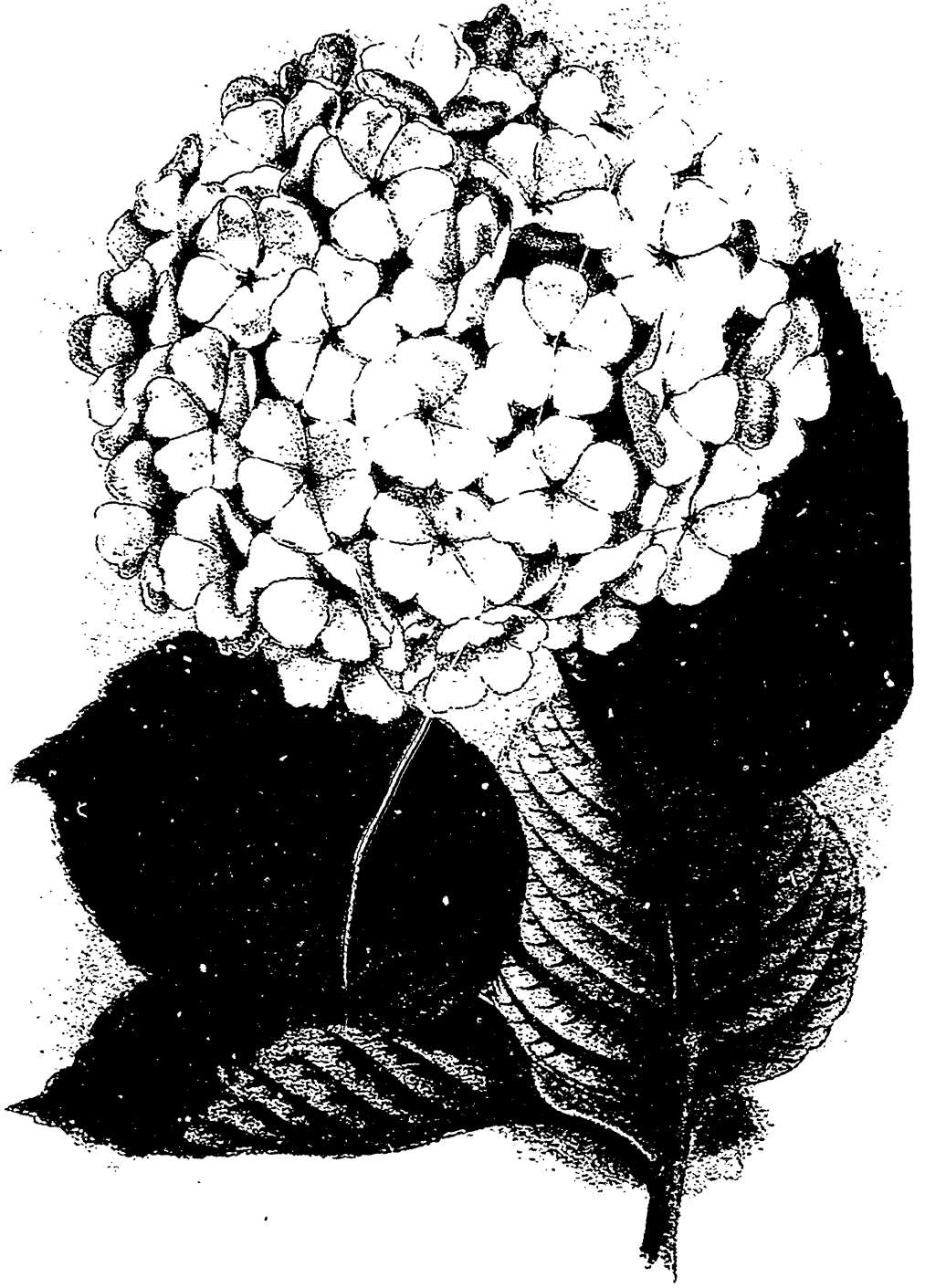
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SNOW BALL.

PAINTED FOR THE CANADIAN HORTICULTURIST.

THE
Canadian Horticulturist.

VOL. VIII.]

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[No. 4.

THE SNOWBALLS.

The Snowballs. At that word, how are the fountains of memory's great deep broken up, and visions of days long, oh, how long gone by, come welling in like a flood. There they are, those grand old shrubs. It is early summer, and the large white balls are blending with the lingering Lilac's rosy purple. Their overarching canopy shades a rustic seat. There the children are, as of yore, wreathing gathered flowers. Perched among the branches, a glossy black-squirrel is watching with eager interest every movement. Now bounding upon the shoulder of his young mistress, he rubs his head coaxingly against her cheek, then plunges into her pocket to bring out a nut or sugar-plum for his comfort.

But thus it could not always be. The brother leaves the home so bright and sunny, and on the rustic seat carves for those remaining the words of the old Latin poet :

"Forsan' et hæc olim meminisse juvabit."

It may be in after days these shall be remembered with joy.

Aye, with joy. A sobered joy, for a minor chord is sounding through all the music of bygone days. Where now is

the home made attractive with Flora's brightest gems? Where now those merry peals of childhood's laughter? Where those children? The echoes answer, pealing through the corridors, memory's corridors, faintly and more faintly dying to a whisper, "Where?"

But the Snowball. Yes, the Snowball; yet is there any need to write of it? Is it not, gentle reader, even as your eyes trace these words, palpable to sight? An old familiar friend, into whose ear you have whispered profoundest secrets; upon which you have looked in each returning season with friendly interest and ever increasing pleasure; so wrought into your life's morning hours, and into your noontide's brightness, that it has become a part of your very being? Yet it may be that an added pleasure will be given to be reminded that it is a near relative of the twining Woodbine that covers your lattice; of the rosy pink Honeysuckle, whose bright flowers make the lawn so cheery in summer, and whose ruddy berries brighten the autumnal days; and of the pretty pure white Snowberry, heightening the beauty of their common cousin, the Redberried Elder, by the harmony of contrast? Yes, our

Snowballs belong to the Honeysuckle family, that family which unites in consanguineous bonds the houses of Linnæa, so charmingly represented by the lovely sweet-scented *L. borealis*; of *Symphoricarpos*, known to us all by the Coral-berry and the Snowberry; of *Lonicera*, that climbing over our arbors fills them at eventide with delicious perfume, or standing erect upon the lawn brightens it with rosy-pink or golden-yellow flowers; of *Sambucus*, that so delights our boys, more by the softness of its white yielding pith, than with its blackish purple berries: and of *Viburnum* so numerous represented in our northern latitudes, to which our garden Snowball belongs.

The following members may be found growing within the bounds of our own Dominion:—

THE SHEEP-BERRY (*Viburnum lentago*), whose black berries are half an inch or more in length, will be well-known to most of our Canadian readers, who doubtless long ago made the discovery that the fruit is edible.

THE ARROW-WOOD (*Viburnum dentatum*), is common in wet places in our northern climate, and is readily recognized in the fruiting season by its small bright blue berries.

THE DOWNY ARROW-WOOD (*Viburnum pubescens*), is also found growing northward, usually in rocky places, as a low straggling shrub, the under side of the leaves, especially of the young leaves, softly downy, and the fruit of a dark purple color.

THE MAPLE-LEAVED ARROW-WOOD (*Viburnum acerifolium*), so called from the striking resemblance which its leaves bear to those of the maple, is found growing in rocky places, and yielding a crimson fruit, that turns to a purple color at full maturity.

THE CRANBERRY TREE (*Viburnum opulus*) grows from five to ten feet high in low grounds along the borders of streams. The flowers appear in cymes, of which the marginal ones are destitute of stamens and pistils, but whose corollas are much larger than the others, which gives a singular appearance to the cluster. The fruit when ripe is of a bright red, pleasantly acid in flavor, containing a flat, smooth stone. Where cranberries do not abound this fruit has been used as a substitute for those berries, whence the name of High-bush Cranberry applied to this species. Not very long ago it was extensively advertised by some enterprising dealers in fruit-bearing plants, and the value of its fruit for sauces, tarts, jellies, &c., abundantly set forth, especially for the benefit of those who were fond of cranberries but had no suitable place where to grow them.

Our Snowball, or as it is more usually called in England, the Guelder Rose, is this *viburnum opulus*, or cranberry tree, whose flowers have become all sterile, that is, all the flowers of the cyme have become destitute of stamens and pistils, and have taken on the large corolla, which was at first the peculiarity of the marginal flowers. The

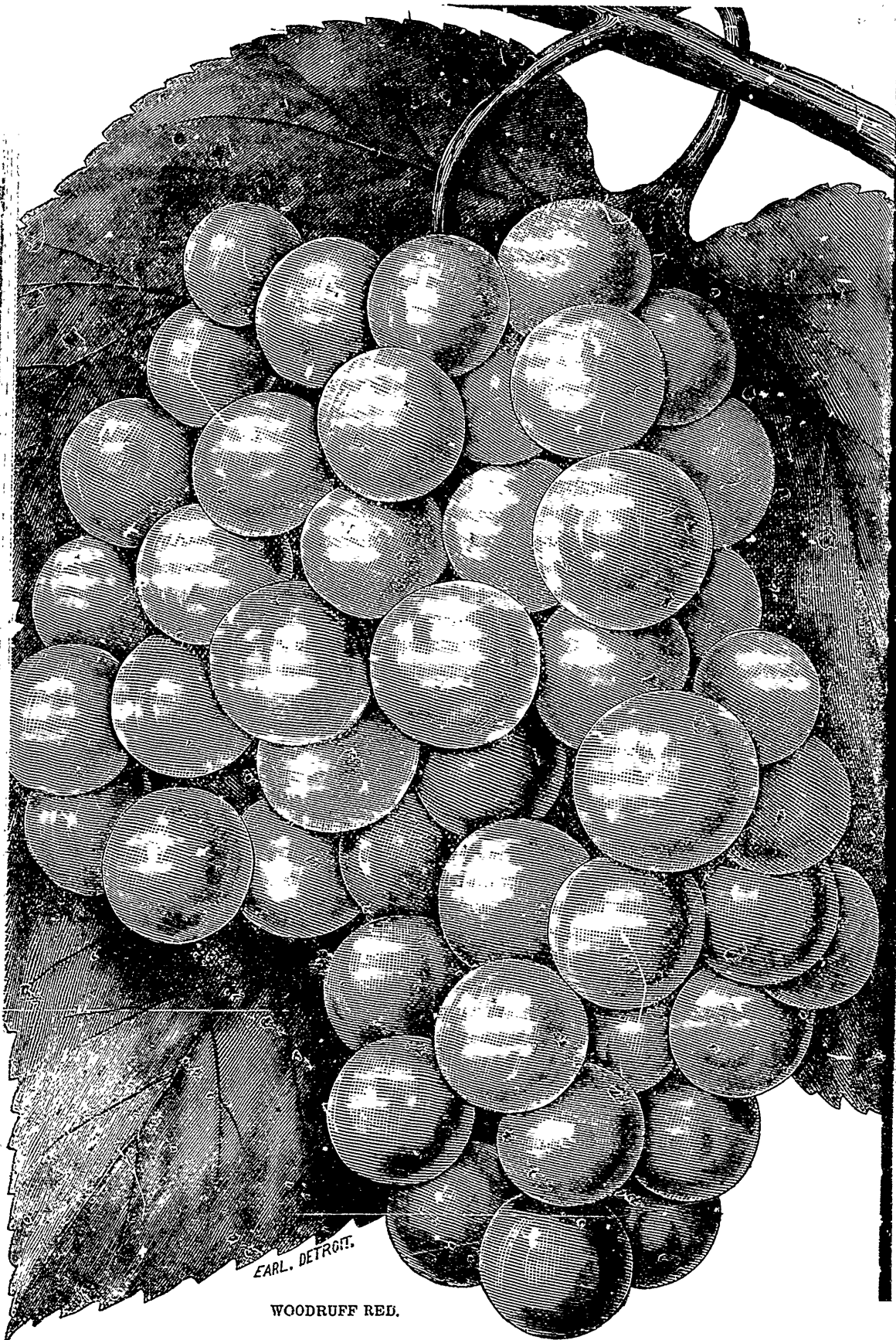
older botanists regarded the cranberry tree as a distinct species, and gave it the name of *Viburnum oxycoccus* or *Viburnum edule*; but later researches have established its identity as a cultivated form of the cranberry tree. It makes a large massy bush, whose branches bend gracefully to the earth beneath their load of showy snow-balls.

THE AMERICAN WAYFARING TREE or Hobble Bush (*Viburnum lantanooides*) is deserving of more attention as an ornamental shrub than it has received. Its leaves are somewhat heart-shaped and hoary, its flower cymes very broad and flat, and its fruit of a rich dark red when ripe: so that both in fruit and flower and leaf it is highly ornamental. It is found in cold, moist woods as a straggling shrub.

Perhaps the time may come when we shall have somewhere in Ontario a collection of at least our *native* trees and shrubs, where the families shall be so grouped and the several genera and species planted together in such a manner that the student can at a glance perceive their points of similarity and contrast, and become so familiar with their several characteristics as to be able at once to recognize them wherever he may chance to meet them. It was natural to have expected that such a collection would by this time have been planted in the grounds of our Agricultural College, but although some little beginning has been made in this direction the realization of such an arboretum is apparently in the re-

mote future. To the writer's mind it appears likely to remain there until some more permanent Governor shall be invested with control than the Commissioner of Agriculture for the time being, or the Government of the day, which may be wise or otherwise. Why the farmers of Ontario, in whose interests the Agricultural College is supposed to have been established, have not taken this matter into their own hands and insisted that this institution shall be fully equipped, properly officered, and controlled by men of well known ability in the several branches of agricultural pursuits, remains an unsolved mystery. This will never be done until they do.

But we were writing of the snow-balls. There is yet another member of this genus which, though not native to our climate, seems to bear it well, and which on many accounts deserves to find a place among our ornamental shrubs. It is called the *Viburnum plicatum*. It comes to us from northern China. Its plaited leaves are of a most beautiful bright green, and its flowers are of pure white. Were it permitted us to give it an English name we should suggest that it be called the PLAITED-LEAVED SNOWBALL. It is this species that the artist has tried to represent in the colored plate which accompanies this number; but it is quite impossible to shew forth the purity of the whiteness of its flowers as they appear in nature contrasted and heightened in beauty as they are by the surrounding foliage.



WOODRUFF RED.

FUNGOID DISEASES OF THE STRAWBERRY.

Mr. F. S. Earle, of Cobden, Illinois, read a very interesting paper on this subject before the American Horticultural Society, at its recent meeting in New Orleans. He states that he has observed ten different species of fungi infesting the strawberry plants of Southern Illinois, of which five proved to be new and undescribed species. Of the injurious fungi, the species known as *ramularia tulasuei* (Sacc), is the most important, occurring on wild and cultivated strawberry plants from New England to California. Its presence on the leaf is usually indicated at first by a reddish blotch, and later by a white spot about an eighth of an inch in diameter, surrounded by a reddish border, and remarks that the greatest damage ensues when it attacks the stems and calyx of the growing fruit. Thus far it seems to have caused more damage toward the southern and less toward the northern border of the strawberry belt. The only remedy proposed is dusting the plants with lime, which, he says, has been practised for some years by growers in Connecticut and Tennessee, with good results.

The next species in importance is *glæosporium potentilla* (Ouds), which has perhaps as wide a geographical range as the other, and in its earlier stages is difficult to distinguish from it, but which instead of developing a central white spot, shews a number of very minute black pustules bursting up through the epidermis. This fungus has proved with Mr. Earle more

destructive, but fortunately so far restricted to limited areas and a few varieties. He knows of no remedy having been tried for this species. Mr. Earle's paper is one of great interest to all strawberry growers, and is well worthy of their careful perusal. It will be published in full in the forthcoming transactions of the American Horticultural Society.

WOODRUFF RED GRAPE.

This is said to be another Concord Seedling, ripening a little earlier than the parent, and considered to be worthy of dissemination for the reason that it is very hardy, a stronger grower than the Concord, remarkably healthy, never having been known to suffer from mildew or rot. The fruit is attractive in appearance on account of the large size both of bunch and berry, and its bright color; and it is said to be remarkable for its keeping qualities, having been kept in good condition until the middle of February. We have never yet tasted this grape, and therefore cannot give our opinion of its quality, but we understand it shows the usual characteristics of the *Labrusca* family to which it belongs. A fruit dealer says that it outsells anything in the grape line he ever handled, bringing three times as much as the Concord every time. (*See p. 76*).

MINNEWASKI BLACKBERRY.

This is a new variety, originated by Mr. A. J. Caywood, of Marlboro', N.Y., and which is said to be wonderfully prolific, yielding very large berries, some of them measuring an inch in

diameter and an inch and a quarter in length, without core, seeds very small, and of an excellent and sprightly flavor. It will be offered for sale next autumn, and then our readers can procure the plants and give it a trial in our climate. We very much need a blackberry as hardy as the Snyder, of large size, great productiveness, without core, and of excellent flavor. Will we find it in this new sort?

A VERY DOUBLE BON SILENE.

Perhaps some day there will be a rose that will be fairly entitled to be called perfect. As yet our best roses have some imperfection, lack some quality that some other rose has. Rosarians are after a rose that shall combine in itself every desirable quality. Bon Silene was thought to be possessed of many excellences, having all that could be asked of a rose in beauty of bud, attractiveness in color, deliciousness of perfume, abundance of flowers; but, alas, it had one defect, the expanded blossoms were worthless, nay unsightly, especially when bedded out in the open ground. We now learn from the *Gardener's Monthly* for March that a sport from Bon Silene appeared, over a year ago, in the greenhouse of E. Hippard, Youngstown, Ohio, which is very double, in shape and thickness of petals resembling the Souvenir de Malmaison, in color and beauty of bud the old Bon Silene, and having a uniform dark rose color to the centre when fully expanded. When this rose is offered for sale, shall we be told that we have at last attained to a perfect rose?

THE BENNETT ROSE.

A correspondent of the *Gardener's Monthly* states that he has been to see this celebrated rose, which is owned by Mr. Evans, of Philadelphia, and reports that it is a very strong grower, the foliage large and bright, the color of the flowers much like that of General Jacqueminot, their size and shape like a good Niphetos, their fragrance unsurpassed by any Tea rose, and in beauty far exceeding the beautiful La France.

AMERICAN HORTICULTURAL SOCIETY.

At the last meeting of the Mississippi Valley Horticultural Society it was thought that the time had come for enlarging the field of operations, and taking a name indicative of the extent of the field embraced and the cosmopolitan character of the work to be overtaken. The transactions of the Society, now embracing two volumes, have been commended to the notice of our readers as they have appeared, as containing exceedingly valuable and practical papers, which could not fail to profit every fruit-grower and horticulturist.

The forthcoming volume will beyond doubt be full of practical information and suggestion, the papers contributed being from many of the most experienced and eminent men of the United States in their several departments. This volume will also contain a "Business Directory," consisting of a two-line advertisement, giving name and address and specialty, intended to embrace the leading fruit-growers, nurserymen, flor-

ists, seedsmen, gardeners, fruit-dealers, commission houses, canning and drying establishments, manufacturers of horticultural supplies, as implements, fruit and vegetable packages, labels, &c. There will be given in addition a list of the principal horticultural and pomological societies in the United States and British Provinces, together with the names of their officers. The Society is wholly dependent upon the fees of members and patrons to defray expenses. The membership fee is \$2.00 a year, the Directory fee \$3.00 additional. New members will receive as a present a copy of the Transactions for 1884 until the edition is exhausted, in addition to the forthcoming volume for 1885. Address W. H. Ragan, Secretary, Greencastle, Indiana, U.S.A.

SPECIAL NOTICE.

The Editor desires to express his thanks to those of his readers who so kindly and promptly responded to his request for a copy of the April number of Vol. V. He believes that he has sent Vol. IV. to all those who favored him with that April number and expressed a desire to receive Vol. IV. in return.

He now finds that he could supply the desire of some to obtain a complete set of Vol. V. if he could obtain three copies of each of the following numbers, namely, February, March, May, July, and December, and one for November, of the year 1882. He can send in return for any of these a complete set of Vol. I., or of Vol. II., or of Vol. III., or of Vol. IV., or any one of the following reports, namely, for 1873, or 1875, or 1876, or 1879.

Further, the Editor is under the impression that there is one or more

persons entitled to receive a copy of the book "EVERY WOMAN HER OWN FLOWER GARDENER" as a premium for obtaining new subscribers. There was considerable delay in procuring the book owing to the edition having been exhausted, but they have now been received, and meanwhile the memorandum has been mislaid containing the names of those entitled thereto. Will you who are entitled please send your name and post-office address on a postal card to the Editor, that he may send the book to you at once.

McLAUGHLIN PLUM.

Mr. Gibb, writing from Como, Province of Quebec, says that the McLaughlin Plum stands our climate well; Mrs. Caustin, of Lachine, has fruited it for several years.

NEXT WINTER MEETING.

The Stratford Horticultural Society has sent an invitation to the Fruit Growers' Association of Ontario to hold the next Winter Meeting of that Association in the Town of Stratford. This invitation will be submitted at the Summer Meeting to be held in Uxbridge.

QUESTION DRAWER.

DEAR SIR.—Are the Snider and Wauchusett Thornless Blackberries suitable for this locality. Please answer through the *Canadian Horticulturist*.

THOS. H. MILLER.

Askin P. O.

REPLY.—The Snyder will surely stand your climate; the other is not as hardy, but may do well. Try a few plants, and report your experience to the *Canadian Horticulturist*.

I like the *Horticulturist* very much, and the annual report is worth the dollar itself, without the premium or monthly magazine. I have been trying to send you a new subscriber, but have not been successful yet.

Please mention about four of the (1) best kind of strawberries suitable for a loamy soil—a soil which grows too much straw for profitable grain raising, and the (2) best black cap and (3) red raspberries for the same soil, in the March number, if you receive this in time. We live about ten miles north and ten east of Toronto. The thermometer has registered as low as 26° below zero this winter. That is about the lowest we ever have it.

Wishing yourself and the Fruit Growers' Association success in the highest degree.

P. BREAK.

Box Grove, York Co., Ont.

REPLY.—(1). Wilson, Crescent, Arnold's Pride, Manchester.

(2). Doolittle, Ohio, Souhegan, Mammoth Cluster.

(3). Highland Hardy, Turner, Philadelphia, Cuthbert.

These are given with reference to your climate as well as your soil.

CORRESPONDENCE.

CATALPA SPECIOSA.

SIR,—In the autumn of 1882 I purchased three *Catalpa Speciosa* from St. Catharines Nurseries, which I planted in a sandy loam, one of them on the north side of a high board fence. They have all made excellent growth and stood the severity of the last two winters well, so I have no fear but what they will be all right next spring. One of them flowered the first season, but none since. Hot winds seem to shrivel

up their immense leaves that have such a beautiful bloom, but the first cool day they quite revive. I think your correspondent from Lindsay can safely plant them.

Yours truly,

L. H. KIRKBY.

Collingwood, Feb. 26th, 1885.

WHERE MAY GRAPES BE GROWN?

Any one who takes an interest in the development of the fruit-growing industry must experience a sense of great gratification at the results attending the experiments in grape growing (although on a small scale) in so many places in the interior of this Province, where, until within a few years, it was supposed to be impossible to grow this most desirable fruit.

The fine exhibits of well grown and highly flavored grapes which have been made at so many local exhibitions in the more central parts of the country during the past season show that this branch of fruit culture may in the near future prove to be one of the most profitable, as well as one of the most pleasant occupations, for large numbers of our rural population over an extensive tract of country hitherto supposed to be unsuited to that purpose. The part of Ontario to which I refer especially (and I believe there are many other districts even more favorably situated), extends from the neighbourhood of Kingston in a westerly direction up the Bay of Quinte; from thence up the Trent waters to Balsam Lake, and across the height of land to the southern end of the Georgian Bay.

Let us for a moment consider what are the conditions necessary to this end, then we need not be surprised at the results. First.—Suitability of soil. Most authorities agree that the soil best suited for this purpose must be light, porous, friable, dry and warm. Along the course indicated, embracing

large tracts on both shores of the Trent waters, and also a large portion of the land near Lakes Simcoe and Couchiching, and also westwards from Lake Simcoe, there are thousands of acres which cannot be excelled for this purpose in any part of this Province. But the most important factor to be considered in forming an estimate of the probabilities of success is the meteorological conditions of such localities; and it is in this particular, as may be learned from the following table, that much of this large area has advantages over some of the more southern portions of the Province, inasmuch as during the period between the latest frosts in spring and the earliest in autumn severe enough to injure the crop, the atmosphere over these parts is much hotter and dryer during the daytime than over much of the more southerly portions:—

AGGREGATE OF MONTHLY MEAN MAXIMA TEMPERATURE at the following places from May 16th to September 30th inclusive, for the years given.

PLACES.	1880.	1881.	1882.	1883.	1884.
Welland				357.16	362.91
Oshawa				343.37	369.43
Toronto	369.05	374.33	354.82	343.89	359.36
Deseronto				364.19	376.92
Lindsay	377.93	385.90	363.27	346.24	375.03
Barrie	367.24	375.62	361.40	349.73	360.88
Gravenhurst.	372.56	380.24	357.10	347.99	369.80

From personal observation during many years, taken in connection with the material from which this table is compiled, I am of the opinion that during the seasons included in the four and a half months referred to, an aggregate maximum temperature of 350° is the minimum of heat required to ripen the earlier varieties of grapes, and that at least 10° of additional heat is necessary to ripen the later varieties, such as the Concord, and others ripening a few days after that variety.

The summer of 1883 will long be remembered by vineyardists as being a very unfavourable season for the grape crop. By referring to the above table it will be seen that the aggregate of 350° of heat was exceeded only at Welland and at Deseronto during that season, and even in the Welland district the heat was not sufficient to ripen the late varieties before the 1st October. North of Lake Ontario the heat was not sufficient to ripen the earlier varieties in either of the localities given but at Deseronto; at which place the climate (judging from the observations recorded during the last two years) would seem to be peculiarly suited to the successful growth of the grape vine.

If the conclusions here arrived at are correct, then people in any locality may easily ascertain if that place is suitable for the successful cultivation of the grape plant, and the answer to the question, "Where may grapes be grown?" will be:—Where the soil and situation are suitable; where there are no spring frosts after the 15th of May; where there are no autumnal frosts earlier than the 1st of October more severe than two or three degrees below the freezing point on an occasional night, and where the maxima temperatures of the several months between the dates given shall at least be three hundred and sixty degrees, *i. e.*, that from the 16th of May to the 1st of October—138 days—the maximum daily temperature must average over 72° . Throughout this tract of country, extending nearly 200 miles from east to west, and ranging in width from 5 to 20 miles, many thousands of acres of land may be found where the quality of the soil and its exposure are eminently suited for this purpose, and of but little value for ordinary agricultural purposes, and where the climatic conditions favor the growth of our

quick ripening varieties of grapes to such a degree that we may soon expect this industry to become one of our most extensive and most profitable branches of horticulture.

This statement will appear more probable when we compare the climate of some of the wine-producing districts of France and Germany, taking Paris as a centre from which to obtain reliable meteorological information with that of Toronto and its outlying districts. From "The Atmosphere," by E. Flammarion, we find that the average mean temperature of the summers at Paris for the 30 years from 1841 to 1870 inclusive, was 64.52° , and from "Abstracts and Results," issued from the Meteorological Office at Toronto, that the average mean temperature at that place for the same period was 65.05° . From more recent records we find that the average mean temperature for the last 5 years at Toronto was 65.42° ; at Lindsay, 64.39° ; at Barrie, 65.75° ; and at Gravenhurst, 64.01° .

The mean temperature, however, as before shown, is only one of the factors necessary. The length of the season is of equal importance, and it is in this particular only that the wine districts of France and Germany have any advantage over this country. Frosts in May and June are more frequent and more severe than in any portion of this district. There the season for commencing spring operations is several weeks earlier than with us: hence the chief reason why the varieties grown there cannot be grown in the open air in this country. The rain-fall in the wine districts referred to is about the same as in Ontario; but such intense middle heat as so often prevails in some of the inland portions of this Province is very rare in the wine districts of France and Germany.

Let the facts be established by experiments on a fairly large scale that

suitable lands for vineyard purposes are plentiful over this large area, and that the climate is all that is necessary to insure—under proper management—healthy cane growth and well ripened fruit in average seasons, then men of experience having capital to invest will soon revolutionize the grape market. And that these facts will at an early date be established is evident from the success attending the efforts of such men as Mr. P. C. Dempsey, at Murray; Mr. J. W. Johnston, of Campbellford; Mr. T. C. Chapman, at Baltimore; Mr. John Knowlton, at Sturgeon Point; Mr. P. Bertram, Mr. H. S. Scadding and others at Orillia, who will in a short time place this question beyond doubt.

Since the foregoing was written my attention has been called to a most valuable paper on "A Few Canadian Climates," by J. Gordon Mowat, Esq., and published in the Proceedings of the Canadian Institute for July, 1884, the last paragraph of which, and also the "Note" is hereto subjoined, and to which (in the table) I have added the average monthly means for the last 5 years—1880 to 1884 inclusive—of Lindsay, Barrie and Gravenhurst:—

"By a British standard the summers of much of the Province may be considered long. May in south-western Ontario is warmer than July at Edinburgh; September is warmer than July in London, and warmer than September at Vienna. The vine, maize and sorghum fully mature in most parts of the Province south of the 46th parallel, and in not a few districts yield as abundantly as in any part of America or Europe. The limitations on the cultivation of the vegetables of similar latitudes in Europe is more in the intensity of the winter frosts than in the lack of a sufficiently long or warm summer."

"NOTE.—The length and heat of Ontario summers contrasted with those of other places in Canada, and various places in Europe, may be seen by a glance over the following table. The means for Toronto, Hamilton, Windsor and Winnipeg are de-

rived from the annual records of the Canadian Meteorological Service for eight years (1874-81); those from Montreal from same records for six years (1875-80); those from Pelee from C. M. S. station reports for three and a half years. The averages for European stations are quoted from Blodgett's "American Climatology," and are for periods, with few exceptions, longer than eight years."

MONTHLY MEANS OF CANADIAN SUMMERS.

	May.	June.	July.	Aug.	Sept.
	o	o	o	o	o
Toronto	54.2	62.6	69.0	67.8	60.3
Hamilton.....	57.6	66.0	73.4	71.3	63.9
Windsor.....	60.8	67.9	73.4	71.4	63.8
Pelee.....	59.2	67.1	73.5	72.9	66.3
Montreal, Que. .	55.0	65.0	69.8	68.1	59.0
Winnipeg, Man..	52.9	61.8	67.3	64.1	51.9
Lindsay.....	52.8	61.7	65.6	65.6	59.2
Barrie.....	53.4	62.8	67.4	67.0	60.5
Gravenhurst...	52.8	61.7	65.4	64.5	58.1

MONTHLY MEANS OF EUROPEAN SUMMERS.

	May.	June.	July.	Aug.	Sept.
	o	o	o	o	o
Edinburgh.....	50.3	56.0	58.7	56.8	53.4
Aberdeen.....	52.3	56.7	58.8	58.0	54.6
York.....	54.5	59.2	62.0	61.1	55.7
London.....	55.8	58.1	61.7	58.9	56.6
Dublin.....	54.4	60.2	61.5	61.4	56.5
Paris.....	58.1	62.7	65.6	65.3	60.1
Rochelle.....	59.4	67.5	69.0	66.5	62.4
Vevay.....	58.2	64.4	68.4	64.4	59.6
Munich.....	57.6	62.1	64.7	64.1	58.1
Berlin.....	56.5	63.3	65.8	64.4	58.4
Koningsburgh..	52.0	57.3	62.6	61.7	53.6
Vienna.....	62.1	67.5	70.7	70.0	61.9
Bucharest.....	56.3	62.5	68.1	65.2	58.3

THOS. BEALL.

Lindsay, January, 1885.

SCAB ON THE APPLE.

DEAR SIR,—At the winter meeting of the Fruit Growers' Association held at Woodstock, I consented to act as one of a committee appointed to conduct a series of experiments to test the value of sulphur and sulphur compounds as preventives of the black scab on apples. The varieties that I experimented with were the Swaar and the St. Lawrence. I applied flour of sulphur in the proportion of one pound to twelve gallons of water at two different times. The first application the

young apples were about the size of marbles, and two weeks after the first application I showered them for the last time. When I gathered my apples I could not detect any material difference between those to which I applied the sulphur and those of the same varieties that I did not; both to all appearance being equally affected by the scab.

Yours truly,

S. CORNWALL.

Norwich, Oct. 31, 1884.

THE RUST ON THE BERBERRY.

The following correspondence on a much vexed question is published in the hope that some one may be able to contribute something tending towards its solution:

WROXETER, Nov. 28, 1884.

Geo. Leslie & Son,

Dear Sirs,—Enclosed find your letters from Messrs. St. George and Beadle. I thank you for the opportunity of perusing them, also for the trouble you have taken in supplying me with much valuable information on this very interesting subject. Mr. St. George's determination to institute a number of experiments next summer, to ascertain whether the rust, natural to the one, can be cultivated on the other, is, in my estimation, a very important step. If carefully conducted, it will do more to settle this question than any other method that could be adopted. I hope Mr. St. George will make public the result of his experiments.

Very truly yours,

S. B. SMALE.

OAKRIDGES, Oct. 20, 1884.

Dear Sir,—I have yours of the 27th and Dr. Smale's, which I enclose. I have for a number of years planted Berry hedges, and cannot find any con-

nection between the rust in Berberry and wheat or oats. Dr. Smale says his wheat this year was badly rusted near the Berberries, but not elsewhere. He does not say how his fields are situated. I and many others have noticed that in places sheltered by a belt of trees or otherwise, the wheat was often badly rusted, when parts of the same field where the wind had free access were but little or not at all rusted. This year, on the ridges, we have been very free from rust, whereas I have seen a great deal of it in other parts where probably there was not a solitary Berberry within miles. As for oats, in former times, before I had any Berberry hedges, we had a great deal of rust. Since we have given up the common black oats for the white. I have not seen any rust at all, although there are Berberry hedges all around. I must also say that there is very little rust on our Berberries at any time, and you must search pretty close to find some, and will not always succeed. I have never tested it personally, but often heard it said in England, that by microscopic investigation you could ascertain that there is no connection between the rust proper to wheat and to Berberry. In Loudon's (*Arboretum et Fruticetum*, vol. 1, page 302) article, Berberry, I find the plant makes an excellent hedge; but there exists a prejudice against it amongst the agriculturists from its supposed influence in producing blight or mildew on the corn adjoining it. This opinion, though totally unfounded, is of unknown antiquity. It appears to have been first considered as an erroneous prejudice by Dr. Hamel, who assures us that it is totally void of foundation; and Broussonnet and other botanists subsequently proved the fact. But the most scientific refutation of the error was given by Dr. Greville, in the *Scottish Cryptogamic Flora*. In that ex-

cellent work, Dr. Greville has shown that the mildew which attacks the Berberry (*Elcidium Berberidis*) is quite different from the fungi which are found on corn; the Berberry mildew, when magnified, is found to consist of a number of small orange cups, with a white film over each when ripe; these films burst and the top of the cups assume a ragged, uneven appearance, in which state they look like white fungi; the cups are filled with innumerable little cases containing seeds or sporules, and these constitute the bright orange powder which is seen on the leaves and flowers of the common Berberry. Among the many beautiful objects that are to be met with in the lower and more imperfect tribes of plants, Dr. Lindley observes: "It is difficult to find one more worthy of an attentive examination than the *Elcidium Berberidis*." The blight on corn is generally a species of *Aredo*, and does not correspond in botanical character with the *Oidium*. Still it is an important question, as we must at some future time, owing to the increasing scarcity of timber, have recourse to hedges to enclose our fields; wire requires posts, is very expensive, and not at all satisfactory. Other hedge plants, even when efficient, require constant attendance, and do not suit every soil. The Berberry, when, after a few years, the stems are about half an inch in diameter, and five or six feet high, surrounded by innumerable suckers, is a fence which no bull or mouse can face, and requires no attendance at all. I never trimmed or pruned any of mine. It might be barely possible that besides suffering from its own proper rust, the wheat is liable to be attacked by the *Elcidium Berberidis* when it is blown on it from neighboring plants, this I will take care to ascertain for myself next summer, if any rust is to be found on wheat, and there always is more or less of it every

year. I will carefully compare with a microscope: trace one on the Berberry itself and on the wheat near the Berberries, and also on wheat at a great distance from any Berberry plants, and will have much pleasure in communicating to you the results of those observations, which I trust might be conclusive.

Very truly yours,

H. QUETTON ST. GEORGE.

Geo. Leslie, Esq., Leslie P. O., Ont.

CUTHBERT AND GREGG RASPBERRIES.

The Cuthbert now stands at the head of the red raspberries, and the Gregg occupies the same position among the black caps. These stand head and shoulders above their competitors. They have many valuable characteristics in common. Both are rampant growers. Both produce very large, firm fruit, that can be sent to distant markets, and will not shrink much in canning or drying. Neither of them ripens very early. Neither of them produce the very finest fruit in either appearance or quality. The Cuthbert, however, gives handsome fruit, of good quality. The dry quality of the Gregg really adds to its value. Both Cuthbert and Gregg are very productive. Both of them retain their fruit for some days after it is ripe, which adds much to their value. Fruit ripe on Saturday may be left until Monday. A rain-storm often destroys many berries of other varieties. Both varieties disappoint the pickers, because the beautiful berries do not readily leave their stems. Both varieties lengthen the season. The Cuthbert extends the season for about fifteen days. There are some points of difference. The Cuthbert will, I think, flourish upon a variety of soils. The Gregg is somewhat fastidious. The Cuthbert is, I think, as hardy as any red raspberry, except perhaps the Turner. It is

thought that the Gregg in hardiness as well as in quality is beaten by the Mammoth Cluster and several others. We now want earlier varieties, equal to the Cuthbert and Gregg. Many claimants are in the field. It remains for them to prove their claims. For family use, berries softer and better than the above are obtainable. Many sensible families, however, prefer to risk the best market varieties.

Niagara Falls, South.

E. MORDEN.

BLOSSOMING OF FRUIT TREES.

The profusion of blossoming on the majority of our cultivated fruit trees is really no indication that a corresponding crop of fruit will follow. Various causes may be assigned, but the most probable is that in deviating from the original condition of things consequent upon cultivation, eccentricities may be looked for both in the blossoms and fruit; part of the blossoming may be abortive, and a preponderance of pistillate over staminate blossoms, or *vice versa*, may occur, and the size of the fruit at the expense of the quantity. The nearer the approach to the original types, abundant fruit corresponding to the blossoms may be calculated on—for example, the Siberian crab apple, the crab pear and the Guigne (*cerasus avium*)—but just as soon as a removal takes place another order of things is substituted, nature being interfered with.

The failure of the fruit crop generally may be attributed to various causes, late spring frosts and rainy weather just at the time of blossoming, but the chief and greatest cause is the absence of insects of the bee family just at the opportune time for the purpose of fertilization.

You may calculate to a certainty when you hear the hum of insects on a fruit tree that you are going to have

fruit on it in season, everything else being equal.

SIMON ROY.

Berlin, 16th Feb., 1885.

THE GRIMSBY FRUIT-GROWERS' ASSOCIATION.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

DEAR SIR,—Having taken a few notes of the discussion at the regular Winter Meeting of the Grimsby Fruit-Growers' Association, I forward them to you, believing they may be of some interest to the readers of the *Horticulturist*.

The meeting was held on Friday, 27th February, and about fifty gentlemen were present, nearly all of whom took part, more or less, in the discussion.

For subjects of discussion the meeting was almost wholly dependent upon a "question drawer." This method was very successful, being the means of bringing up just those subjects most interesting to members present.

The first question was, "*Is there a more profitable grape than the Concord?*" Mr. Smith said the Concord is the most profitable grape for neglectful people, but other kinds are better for those who take proper care. We could make more money, for example, out of a good packing grape, as perhaps the Vergennes. Dr. Millward thought that in the near future the Concord would be displaced: first by an earlier grape, and second, by a later grape that would keep. Mr. Orr said the Champion has paid him better than any other grape he had grown. The Delaware had paid him better than the Concord. He had averaged only about 4c. per lb. for Concord, which was too low a price for profit. Mr. Cline thought Niagara or Pocklington promised to be far more profitable than the Concord. Mr. E. J. Woolverton, the president, said that this year the Pocklington had paid him better than the Concord by 50 per cent.

Mr. Murray Pettit, a prominent grape culturist, said if the Champion were planted extensively, as the Concord is, they would be a drug on the market. The market could soon be glutted even with Moore's Early. The Delaware, as a rule, does not receive sufficient care from growers to make it profitable. It requires great quantities of manure. He attributed his success with them to a compost in which the most important element was dead horses. *Grapes for packing*, too, might soon overstock the market. And so even with the Niagara or Pocklington. If planted in large quantities, the market might soon be as full of white grapes as it now is of black.

The next question was, "*What action has been taken by the Municipal Council to stamp out the Yellows, and what course should be taken to aid in the accomplishment of this object?*" Reports were received by members of the Village and Township Councils, from which it appeared that inspectors were annually appointed, who did their work well, but the difficulty was that many owners of orchards would neglect to destroy the trees even after they were marked by the inspector. A resolution was passed to encourage the Councils in compelling owners to destroy diseased trees.

The question next taken up, is perhaps the most prominent one just now in the minds of the fruit-growers about Grimsby, viz., "*Is it advisable, after the experience of the last three years, to continue planting Peach trees in this section?*" With this question was also coupled a second, viz., "*What proportion of Peach fruit buds have survived the winter?*" The writer being called upon to introduce the subject, said he would not be entirely discouraged in the culture of the peach. He would, however, plant on a much more limited scale, and give more room to small fruits, grapes, &c., instead of depending so largely on an uncertain crop. He ex-

hibited some peach boughs, and showed that about one-fourth of the fruit buds had apparently thus far survived the winter, and therefore a few peaches might reasonably be expected this season. Mr. D. Vanduzer had not previously been able to find any live peach buds, but had been to-day convinced there was a small proportion. Mr. W. H. Nelles thought that three crops of fruit was about all that could reasonably be expected from a peach orchard. In planting ten acres, he would give a very small area indeed to peach trees. Mr. Orr said, if he had not seen a live peach bud this season, he would not give up peach culture if he lived in the Griusby section. (Applause.) It was generally conceded that the "Yellows and Curled-leaf" were more discouraging features of peach-growing than cold winters.

To the question, "*What was the cause of the failure of the Plum crop in this section last year?*" Mr. Cline said the crop had not failed with him. He had Paris-greened his plum-trees four times with three ounces Paris green to forty gallons of water. The opinion prevailed that the Curculio and not the winter had caused the failure.

The two following questions were grouped in one, viz., "*Is there any danger of overstocking the apple market?*" and "*What varieties of apples would you recommend for profit, in planting 500 trees?*" The writer being asked to reply, said, on the whole, the prospect is encouraging. It is not probable that the area devoted to the apple in England, France or Belgium will ever be much larger than at present, and, therefore, the foreign demand for Ontario apples will probably never be less than it now is. Besides this, the cities West and South are beginning to look to Ontario for their supply of good keeping apples. In reply to the second question, he gave the following list of

500 apple trees for profit, viz.: Red Astracan, 50; Duchess of Oldenburg, 50; Baldwin, 200; Rox Russet, 100; Golden Russet, 100. He would omit the Early Harvest, Rambo, Fall Pippin, Greening, and Northern Spy on account of the black spot which was gradually coming upon them; the King, because it bears such light crops, and the Cranberry Pippin because it is often so misshapen. Mr. A. H. Pettit gave the following list for 500 apple trees: Cranberry Pippin, 150; Baldwins, 150; Colvert, 25; Golden Russet, 75; Greening, 75; Rox Russet, 25; Northern Spy, 50; Astracan, 20; Duchess, 20; Ribston Pippin, 10.

The following questions were also discussed, in addition to many others, viz.: *What varieties of Raspberries and Blackberries are most profitable? What damage is to be feared from the Pear Slug? Would you recommend the planting of Pear trees at present high prices? What varieties of Quince would you recommend for general cultivation?*

And now, Sir, that I have given you a brief account of our meeting, I want to ask whether the Ontario Association could arrange for some kind of relationship between such smaller associations and itself. Certainly it would contribute very much to the success of such meetings as this one, if some delegate from the Fruit-Growers' Association of Ontario could be present to give us the benefit of his counsel upon the subjects under discussion; and for this, I am sure, no one would be more welcome than yourself.

L. WOOLVERTON.

RASPBERRY SAW-FLY.

The raspberry saw-fly (*Selandria rubi*) is not a difficult insect to keep in check if noticed in time. It is very inconspicuous on account of its colour and appearance. A weak mixture of about an ounce of "hellebore" to a

pailful of water syringed onto the plants will easily destroy the larvæ. This should be done in the beginning and middle of June and is quite safe.

Yours obediently,

J. FLETCHER,

Ottawa, Feb., 1885.

Entomologist.

A SMALL GREENHOUSE.

The following is a plan of a small amateur greenhouse, that may be acceptable to some of your readers, from Part 5, "Amateur Work; or, Help and Guidance for Self-helpers; Every Man his own Mechanic:"

A convenient size for the house (including the potting-shed, which is at the north end), is about 18 feet long and 8 feet wide, outside measurement. In referring to the drawing, it will be seen there is a ground-plate running all round the base; this is lettered A A, and is $1\frac{1}{2}$ inches deep and 5 inches wide, and is formed into a frame 8 feet 1 inch wide and 18 feet 1 inch long. Securely fastened at the corners, there are four upright posts, C, which are 4 inches square; these are kept in a vertical position by eight struts, J, which greatly help to stiffen the framework, until the boards are fastened over it. The space between the end posts is divided on either side of the house into five equal spaces by four posts, three of them, D, being 4 inches by 3 inches, and the fourth, marked X, 4 inches by 4 inches. This latter divides the potting-shed from the greenhouse, as shown in Figs. 2 and 5. These are all 4 feet 9 inches long, and as they are mortised into the wall-plate at the top, and the ground-plate at the bottom, each of which is $1\frac{1}{2}$ inches thick, the space between the wall-plate and the ground-plate is 4 feet 6 inches; the wall-plate, B, is 4 inches wide. Six other posts, D, 7 feet 4 inches long, 3 inches thick, and

4 inches wide, must be provided. These are all mortised at one end to the ground-plate, and at the other are nailed to the rafters, E. Of these two at either end form the door-posts, of which the door-ways are 6 feet 3 inches high by 2 feet 3 inches wide. The rafters, lettered E and F, are nailed at one end on the wall-plate, and on the other to the ridge-board, H, which is 18 feet 3 inches long, 6 inches deep, and 1 inch thick. Those lettered F of the form shown (Fig. 7) which represents the actual size of the section, they are all 4 feet 9 inches long. These rafters can be purchased of the section shown, and should be all carefully placed at equal distances (see Fig. 2) when the width must be measured and the glass ordered accordingly.

To ventilate the house, about 9 inches next to the ridge-board on one side should be unglazed, and the space covered with half-inch board, hinged in four lengths opened from the inside, as shown at L (Figs. 3 and 6), and the same must be adopted at the bottom of the opposite rafters, where four lengths of boards M are hinged to the wall-plate B. The house should be glazed with glass 16 ounces in weight to the square foot. With regard to doors the amateur had better get them made by a carpenter to look well. The framing of the sides must be covered with $\frac{1}{2}$ or $\frac{3}{4}$ inch boarding tarred or painted on the outside, and the space between the inner and outer boards filled with saw-dust, which is a slow conductor of heat. As the house that has been described has a span roof and a door at each end, zinc or iron guttering, supported on brackets, must be placed immediately under the eaves along the front and back. A sliding pannel in the partition between the potting shed and the house will be found useful for passing in newly potted plants, &c., without carrying them round in the front of

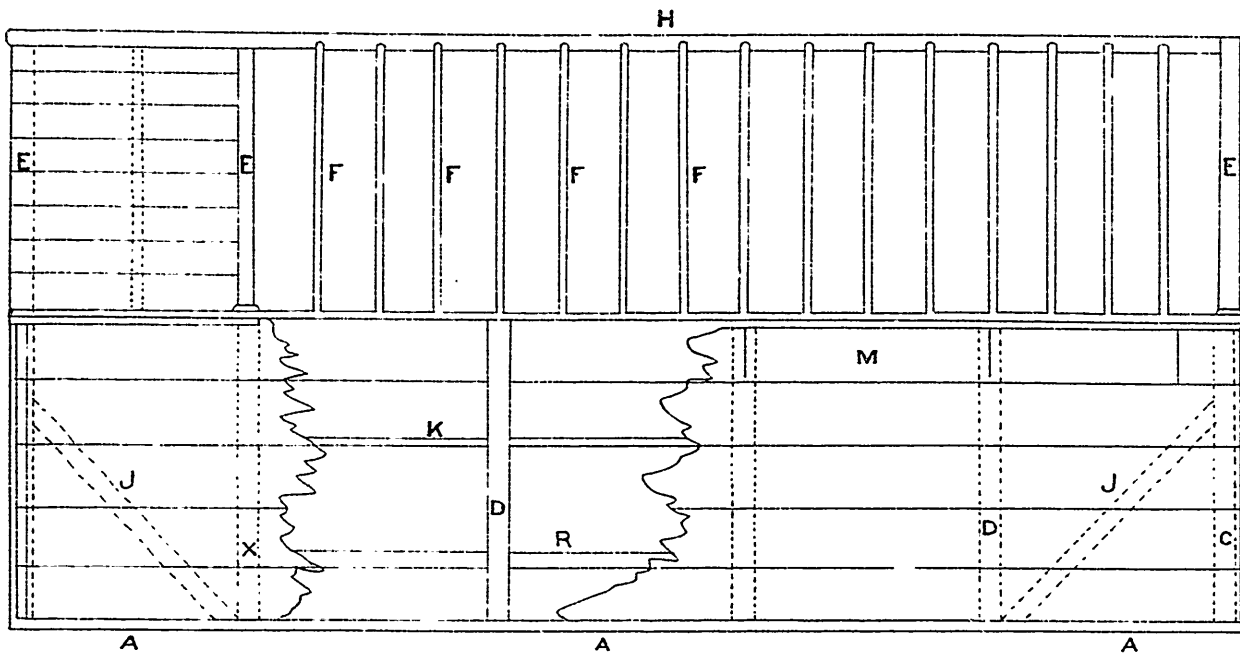


FIG. 2. FRONT ELEVATION.

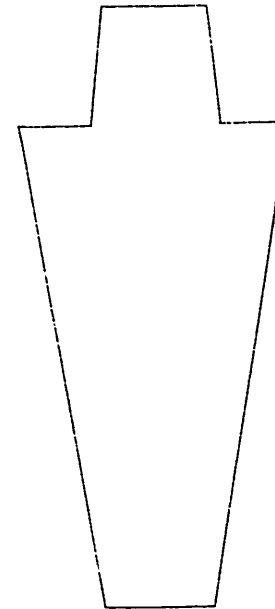


FIG. 7. TRANSVERSE SECTION OF RAFTER OR SASH BAR. FULL SIZE.

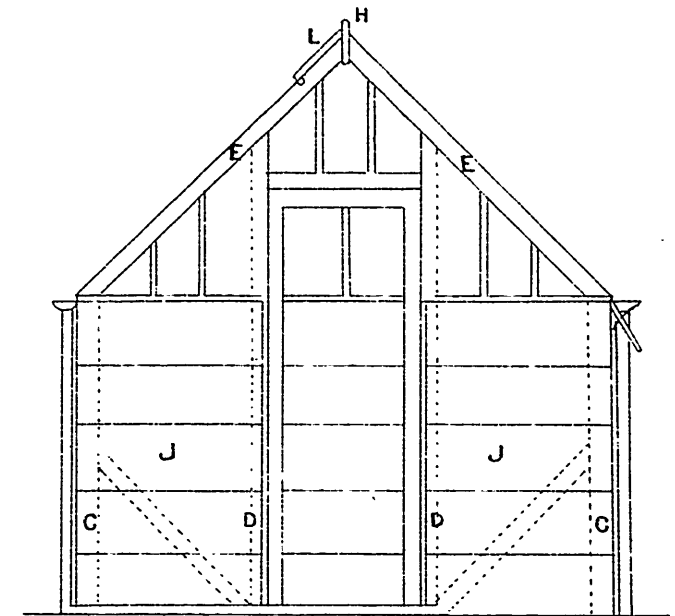


FIG. 3. END ELEVATION - DOOR OF GREENHOUSE.

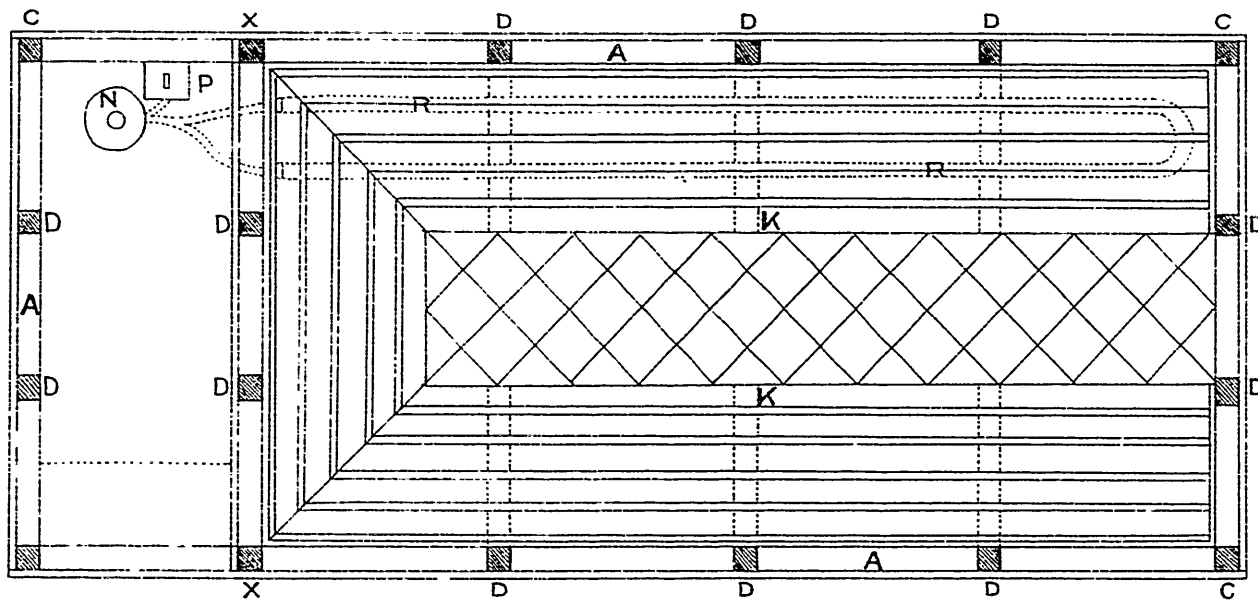


FIG. 5. PLAN OF HOUSE SHOWING STAGE, APPARATUS FOR HEATING Etc.

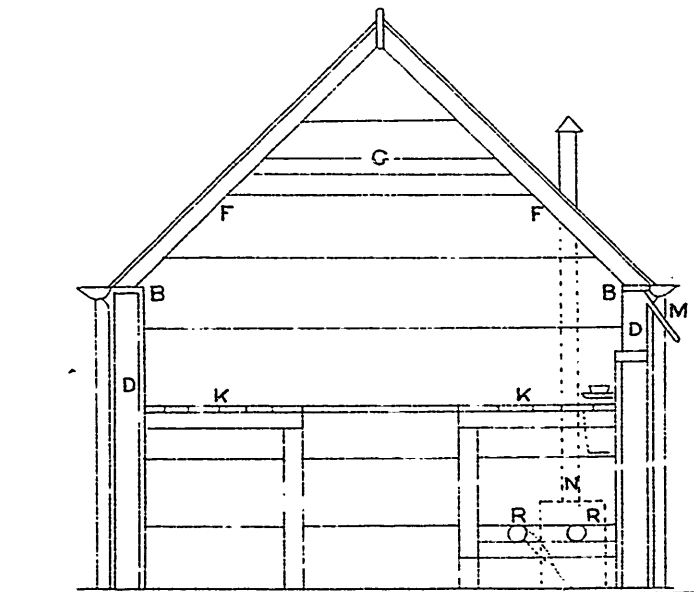
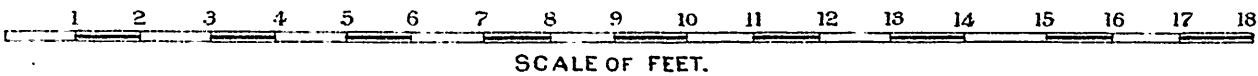


FIG. 6. SECTION OF HOUSE SHOWING STAGE Etc.



WORKING DRAWINGS OF A SMALL GREENHOUSE, SPECIALLY DESIGNED AND CONTRIVED TO MEET THE REQUIREMENTS OF AMATEUR GARDENERS.

Scale one third of an Inch to the foot.

the house. The stage, marked K, is 2 feet 5 inches wide, and 2 feet 9 inches or 3 feet high, as will be seen in the drawings.

T. A. H.

Muskoka.

THE ENGLISH SPARROW.

It is very gratifying to see from time to time some honest evidence in favor of that plucky little emigrant from my native country—the English Sparrow. Mr. Roy, of Berlin, is the last witness, and his evidence is published in the February number of the *Canadian Horticulturist*, present volume. The evidence given by that gentleman is of that character which should commend itself to future witnesses who have due regard for their good name in the future. Mr. Roy freely admits the evil propensities of the poor little stranger, which, no doubt, is the result of the improper training of his progenitors; but at the same time boldly and fearlessly gives him credit for his good qualities, not even forgetting his musical talents. Mr. Roy is a model witness. Many persons when giving evidence allow their partizanship to outrun their veracity. They think they make a good point at the time, but do not receive much credit for their truthfulness when the published report of that evidence turns up for review on some future occasion. A good example of this kind of evidence will be seen in the following excellent story copied from the last volume of the *Country Gentleman's Magazine*, under the heading of "Agricultural Arithmetic."

"Referring to the Nairnshire Farmers' Association for the destruction of Rooks, which gives a penny a head for every Rook slaughtered, a writer in the *West Cumberland Times* opportunely recalls a conversation which took place in the House of Commons Committee on the Game Laws in 1845, between Mr. John Bright and Mr.

Grantley Berkeley. Mr. Berkeley stated that in districts unfrequented by Rooks, boys were employed as a substitute to hunt for that destructive foe of the farmer, the wire-worm. The boys, said Mr. Berkeley in reply to Mr. Bright, were paid at the rate of three-half-pence per hundred for the number of wire-worms they destroyed. On being asked how much a boy could earn at this rate of payment, he said 'ninepence per day.' Questioned as to the number of worms a boy would destroy per day in earning the ninepence, Mr. Berkeley found himself in a quandary, and judged that the best way to get out of it was to get into a rage, which he accordingly did. 'I am not here,' he said, 'to answer intricate arithmetical questions.' 'If a boy makes 9d. per day in destroying wire-worms at the rate of 1½d. per hundred, how many must he destroy per day? If you find that problem too intricate for you,' continued Mr. Bright, 'will you tell us whether a boy can do the work as well as a crow?' 'A crow is worth fifty boys at such work,' replied Mr. Berkeley. This was rather startling information. The matter was getting to be more interesting as the inquiry proceeded. So Mr. Bright appeared to think, as he pursued the witness with a further question. 'If a boy is worth ninepence per day in destroying wire-worms, and a crow is worth fifty boys at the work, how much is the crow worth in sterling money?' Again Mr. Berkeley was disposed to reply by getting into a rage. But his inquisitor was not to be outdone. Paper, pen and ink were supplied, and Mr. Berkeley was assisted in his calculations, when it was discovered that the crow was worth to the farmer nearly £2 per day. 'The bird being worth nearly £2 per day, what may be its yearly value?' was the next query. 'About £700,' answered Mr. Berkeley.

He had before said that fifty would be a low average number of crows for each farm in some districts, and he was now finally asked, 'What is the aggregate value per year to the farmer of his proper quota of these useful birds?' This, we are told in the narrative, evolved the most startling conclusion of all, for it appeared that the farmer was a gainer of £35,000 per year by his fifty crows!"

What the verdict of the public *opinion* the Sparrow in this country may be, after hearing all the evidence which may be produced is, of course, difficult to foresee at present. For my own part I have nothing against him. He has never disbudded *my* cherry trees, nor any other of my fruit trees or bushes; and I am free to acknowledge that I entertain for him a good deal of affection, especially when I see what a comfortable living the poor little exile obtains by his great energy and perseverance, under adverse circumstances, during our long cold winters. I never yet heard him making any complaints about our climate, nor wish himself "back home again;" and I must say I fully appreciate his musical talents, although not of a high order.

In England, however, I regret to hear that he has been convicted, after mature deliberation, of wholesale robbery of crops, and that the decree for his destruction, countersigned by Miss Ormerod, the Entomologist of the Royal Agricultural Society, has been promulgated. They may find it difficult to execute the warrant.

THOS. BEALL.

Lindsay, February, 1885.

BLACK KNOT.

In your February number we notice an article having the above heading, written by R., from Berlin. I presume Ontario. He traces the cause of the Black Knot to fungoid epidemic. Scientists differ widely in opinion in regard to

the origin of this infection of the plum tree. It is only of late years we have had anything to do with this infection, or, indeed, knew anything about it. After giving it close attention since its first appearance up to the present time, we fail to fall in with the idea that it is a fungus formed on the bark of the plum tree, or even the common red cherry tree, which was so badly affected with it the past year.

Fungi formed on vegetables, either in a healthy state, or in a state of decay, will not produce the effect that we find resulting from the Black Knot. The fungoid excrescences formed on plants and fruits arising as an aerial epidemic, or from the nature of different soils, either natural or cultivated, in order to produce the fungi, such as the mushrooms and toad stools, have no resemblance whatever to this so-called "fungoid epidemic" (Black Knot). The Black Knot will take all varieties of plums, if you only give it time to do its work completely. This only needs time, and our neighbors to let it alone and not interfere with its ravages; but it seems to be especially fond of the blue plum, next the common red cherry tree. I hear in some sections of country that a similar knot is appearing on the apple tree, but we cannot vouch for the truth of this statement. We will wait for a further development of this.

The insect (and an insect it is) which causes the Black Knot makes its appearance in June. If you should examine the limb affected closely, you will find a small puncture which has the effect of poisoning the bark; and around this puncture, this substance begins to grow, and continues until the egg deposited there hatches and begins to live on this growth. When this grub becomes nearly full grown, this ceases to spread, dries up and turns black, hence the term Black Knot.

This knot should be removed immediately on being found. If it should make its appearance on a part of the tree you would not like to take off, cut the knot closely, and cover the wound with wax, the tree will sustain no serious injury. There is no need of burning the affected part when removed, if the insect has not arrived at its chrysalis stage; if it has, be sure and destroy the knot. When you find the knot turning black on the tree, cut it open, and you will find these grubs in full blast. If we would conquer this pest, every man must set to its destruction and not leave a single insect, as one insect on wings can produce hundreds of knots.

Yours respectfully,

W. C. WEBSTER.

Stoney Creek, Ont.

Will Mr. Webster please send a specimen of the insect that makes the puncture and lays the egg, which, in his opinion, causes the Black Knot, to the Editor, or to Mr. W. Saunders, London, as soon as they appear next season. By so doing he will contribute largely to the settlement of a much vexed question.

CERTAIN ROSES, AS I FIND THEM.

MR. EDITOR,—I purpose, in response to your invitation, to send you a series of short papers or notes on flowers and their culture, most suitable varieties to grow, etc. And I wish to state to the readers of the *Horticulturist* once and for all, that any opinions I may advance will be based on my own practical experience *alone*, and although my opinions may not always coincide with those of others as regards certain plants or varieties, I wish at the outset to impress the idea that I am only stating

things as I have found them in my purely amateur experience.

I will devote this paper, and perhaps the following one, to roses best suited to the amateur, or those who grow roses for pleasure alone.

The greatest number of roses suitable for this that should be the greatest class of rose growers, is to be found among the hybrid perpetuals, and among these I would perhaps give the very first place to that grand red rose,

ALFRED COLOMB.

It seems to have more good points than any other rose of its class; it is moderately hardy, very large, of perfect form and color, is very fragrant, and a good and fairly constant bloomer. Marie Bauman, another beautiful red rose, very nearly resembles Alfred Colomb in form, color, and fragrance; but it is not so desirable because it is not as good a grower, and appears to be quite tender, mine having died out altogether. Marie Rady, a very fine red rose, also somewhat resembles Alfred Colomb, but the color is not quite as good, nor do I think that it is as constant a bloomer. There is no other among the red roses so constant in blooming perhaps as

GENERAL WASHINGTON,

and it is worthy of a place on this account, although it has many grave defects, the worst one being that so many of the flowers are misshapen or mutilated. The flowers being so very double they are often torn to pieces in opening; it is void of scent; the shape is rather too flat even when perfect, and the color is somewhat variable, sometimes (in unfavorable conditions of weather) being a deep, dull red, while under more favorable conditions it is a most beautiful bright red. It is also a dwarf grower; but in spite of its many defects it is worth growing on account of its constant

blooming qualities alone, and although not nearly so good a rose as Marie Bauman or Marie Rady, yet it should be grown in collections where they might be left out, as it fills a place by itself, while the place of the others named can be so well filled by Alfred Colomb. Of course in even a small collection of roses it would not do to leave out the well known old favorite.

GENERAL JACQUEMINOT.

Although by no means a perfect rose, it has much to commend it. It is hardy, a good grower, of a very good bright red color, and it knows so well how to make the best of itself, bearing its flowers so gaily on its tall shoots above all the rest of the roses, that really at a little distance it looks the finest rose in the garden. Fisher Holmes is, however, a rose of more perfect form, and is apparently equal and similar to General Jacqueminot in all other respects.

If I were forced to make a small selection of pink or rose-colored roses I think I would choose La France, Paul Neyron, and Marquise de Castellane.

LA FRANCE

has become such an established favorite that it could not be left out—the garden would seem imperfect without it. It is large, a most constant bloomer, highly and sweetly scented, and of a beautiful clear color; and its form, although not so perfect and compact as most outdoor roses, I think could not be improved upon, being a sort of a regular irregularity (if I can use such an expression), thus in this matter filling a place entirely by itself. Its worst defect is that in hot and dry weather many of the buds fail to open. It is also rather tender for outdoor culture, but yet it can be very successfully grown by protecting the bushes somewhat in the winter.

As a rose for the conservatory I have found it to be almost unequalled.

PAUL NEYRON'S

one grand point is its great size. It is without doubt the largest rose that we can grow in this country. In form, fullness, fragrance, purity of color and hardiness it is a fair medium. No collection, however small, should be without this great rose.

MARQUISE DE CASTELLANE,

the other rose mentioned, fills a place by itself. There is something cactus-like about the flowers, which is seen in no other rose. It is of a deep bright rose color, and the petals are clearly cut and somewhat pointed, and stand up stiffly like the petals of a cactus or water lily. It is unique and beautiful, and although scentless, is a particularly valuable rose. Francois Michelin I have found to be a very valuable rose, and although not filling a particular place, the same as the others named, is nearly as beautiful, and has a greater number of fairly good points than either of them. It is well worthy of a trial.

I have not found Baroness Rothschild as valuable a rose as it is generally represented to be. It seems to be unsuited to our climate. The flower (not the bush) is altogether too delicate for our harsh winds and scorching sun.

In white roses I have found

MADAM NOMAN

to be by far the best. In fact it is the only really *white* perpetual blooming outdoor rose that I have as yet found. It is, I believe, a hybrid noisette. The only defects it has are that it is rather a poor grower, and that it is somewhat tender, but in other respects it is perfection itself. It is of most perfect form, very full, and a most constant bloomer. With me it is *the par excellence* of white roses.

I would here like to warn all innocent would-be rosarians to be on their guard as to how much they should believe the descriptions given of (to them) untried roses. Here is an example, and, among others, one to which I fell a victim myself. This that I am about to quote, I have seen in many descriptive catalogues of roses:—"Perfection des Blanches, *pure snowy white, free bloomer, flowers large and very fragrant.*" Is there not in this description everything that is desirable in a rose (?) I had never met with this particular rose, and when I first read of it I sent for a couple of plants at once, and nursed and petted them for two years. They grew finely and at last I coaxed them into bloom, and I then found that the color was anything *but pure and snowy*, being really a sort of a combination of bad yellow and muddy pink. The flowers only opened at rare epochs (most of the buds never did open), and the flowers were no larger than dandelions and not nearly so well formed. As to being fragrant, I cannot tell much about it, as after I had once seen the flowers I was so disgusted that I didn't pry into things any further, but took it for granted this was a sell the same as some of the rest. This, however, *may* be a good rose in some other very remote part of the world, but it cannot be too severely sat upon here. I merely mention this circumstance, however, as a warning to others not to believe quite all they may see in print about roses.

The next best rose to Madam Noman that I have tried, and which is called white, is

ELIZA BOELLE.

It is somewhat similar to Madam Noman, but is not nearly so pure in color. I have not grown the white Baroness, but I have seen it. It is not quite white, and I think will not prove itself as valuable a rose as

Madam Noman, although it is a better grower. And now I must end this somewhat protracted paper by briefly mentioning that among the very dark roses the old Louis Van Houtte should still be accorded the very front place. It is certainly somewhat tender, and is scarcely as large as Jean Liabaud, another fine dark rose, but it is much purer in its coloring. I will, however, discuss the dark roses more fully another time.

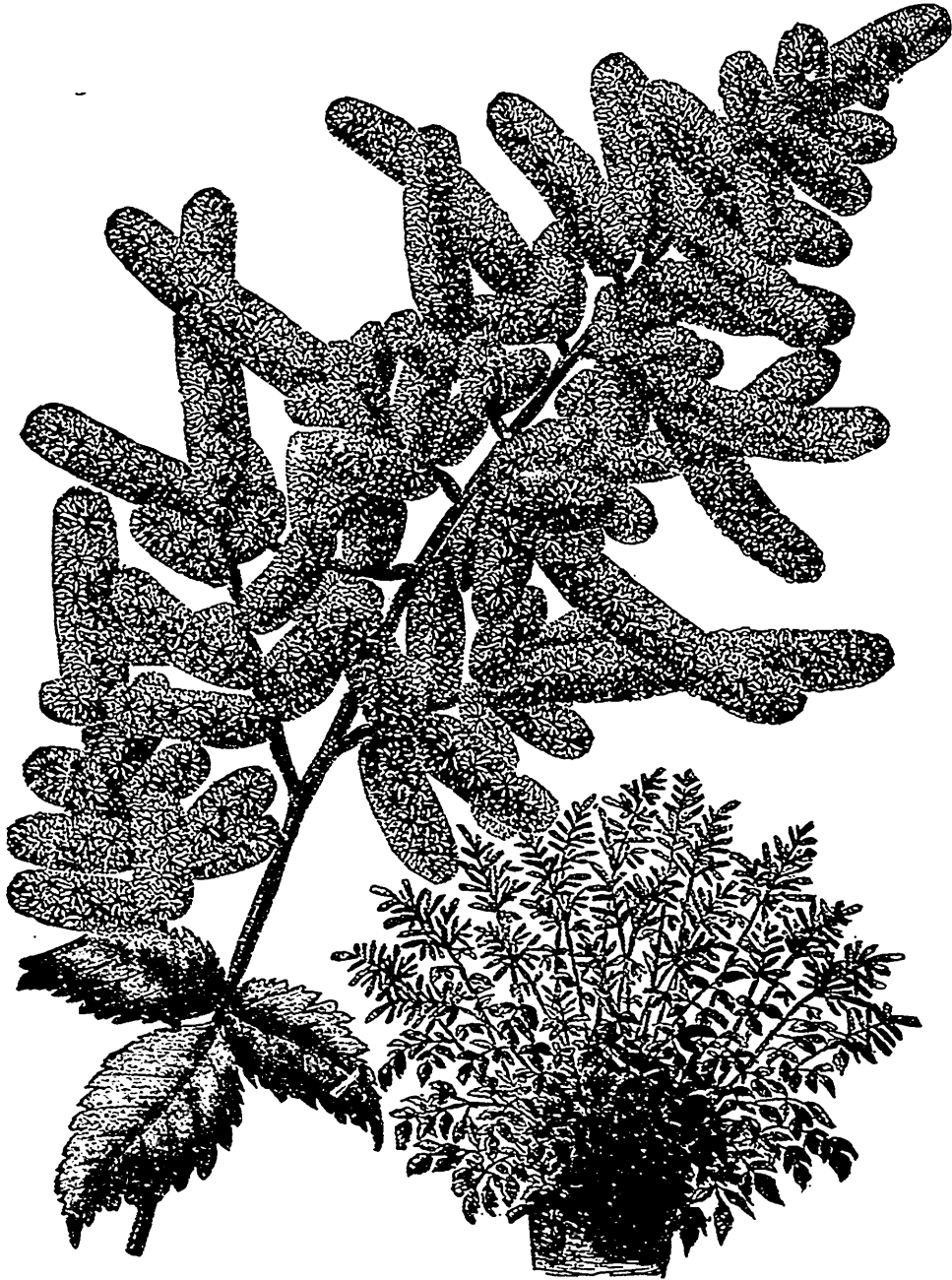
FREDERICK MITCHELL.

Inverkip, Feb. 23rd, 1885.

SPIRÆA ASTILBOIDES.

The genus *Spiræa* is an extensive one, and furnishes many species, both shrubby and herbaceous. Among the latter class are several which are almost indispensable to every collection of hardy plants for the herbaceous border. The above species is of recent introduction, and has the indorsement of the leading horticultural societies of the Old World. We have not seen it in flower, but from the illustration and the kindly mention of it by foreign journals, we are of the opinion that it is a decided acquisition. The *Garden* says of it: "So seldom does a *Spiræa* occur among the multitudinous new plants that appear every year, that this one is of special interest, especially as it belongs to the *Aruncus*, or Goat's Beard section, and is said to be hardy. At flowering time the branches are furnished with myriads of white blossoms in plummy clusters, as shown in the annexed illustration. It may be forced into flower as early as March; hence it is an invaluable plant for pot culture for conservatories. It has been introduced by Mr. Bull, of Chelsea (England), from whose new plant catalogue the accompanying wood-cut is taken. It has been certificated, both by the Royal

SPIRÆA ASTILBOIDES.



Horticultural and Royal Botanic Societies, and wherever it has been exhibited it has been much admired. It will

doubtless prove to be a plant of the easiest culture, both in pots and in the open ground."—*Ladies' Floral Cabinet*.

BEGONIA SCEPTRUM.



BEGONIA SCEPTRUM.

Among the new plants of recent introduction, we notice the *Begonia Sceptrum*, a very handsome and distinct species, a native of Brazil. Its leaves are obliquely ovate in outline, deeply lobed on one side, the lobes oblong obtuse, the veins sunk, and the raised spaces between marked with large silvery blotches, and numerous smaller dots of silvery gray. The leaf stalks are red, this color passing up the ribs of the under surface.

This species is a desirable addition to our list of ornamental plants for the conservatory. The popularity the tuberous-rooted species has justly at-

tained, has had a tendency to detract from the ornamental-leaved sorts, although they occupy entirely different grounds. We are quite apt to neglect the old in our chase for the new; this has been particularly so in regard to the *Begonia*. We now rarely see a good collection of the old *Rex* section, notwithstanding the plant possesses far more of interest than many of those now extensively cultivated for the sake of their flowers. There is, or at least should be, room for all, and we trust the *Begonia Sceptrum* will have a tendency to encourage the more general cultivation of all the species of this truly beautiful class of plants.—*Ladies' Floral Cabinet*.

MY TREASURES.

Homely and humble, these my cottage rooms ;
 No fine upholstery or gilded walls,
 No wove threads from Persia's costly looms,
 No fair, arched entrance into stately halls ;

No marble Clytie, with its frozen veins,
 All bloodless, wandering over snowy breast ;
 But, one sweet Cupid, touched with richer stains
 Of rosy life on lip and cheek and crest ;

With shining curls whose spirals catch the glow
 Of every sunbeam—this my kingly boy,
 And my one window, wisely made for show
 Of greenest foliage—these insure me joy.

And yet another—look the vista through—
 See yonder, with the red upon his cheek,
 And sleeping laughter in his eyes of blue,
 And strength that dreams no honest effort weak.

The sturdy keeper of this garnered bliss,
 Who lives for those he loves, who made this wild
 A garden spot, well paid by wifely kiss,
 Or the sweet chatter of a happy child.

He made my cottage window, framed in vines,
 Where gladness laughs in every lusty leaf,
 Where Fuchsias hang their bells, and Pansies shine.
 Like violet eyes touched with some tender grief.

Here blooms the Rose, and there the spicy Pink,
 Here lifts the Calla, grand and pure and fair,
 And here sit I, to read or work or think,
 Or twine bright flowers in baby's golden hair.

Call me not poor, such treasure-trove is mine !
 With flowers and fruits in loving likeness blent ;
 My child, my husband and my household shrine,
 The wealth of boundless love and sweet content.

MARY A. DENISON.

Vick's Magazine, February.

CELERY.—The *R. N. Y.* has tried every kind of celery and it prefers for a late kind the Golden Heartwell. It is a half-dwarf, healthy and hardy. It is a good keeper and the quality is excellent. It gives more tender stalks to a plant than any other variety we know of.

MAD. SALLEROI GERANIUM.—This new geranium is a good addition to our variegated-leaved kinds. It was sent out by that fertile geranium raiser, Mons. Lenoire of France. It is a perfect gem for summer bedding, enduring well the bright sun, which cannot be said of any of the other silver-leaved sorts. Growing only about six inches high, and about the same across. As an edge plant, it should be used in the flower garden. Some of the dark, bright-colored leaved alternantheras will make suitable plants for contrasting with the variegated foliage of this gera-

nium. It has one advantage over all other beautiful-leaved geraniums, being easily propagated from cuttings.—*Country Gentleman.*

BEECH TREES AND BEECH-NUTS.—The Beech is one of the most valuable and celebrated trees indigenous to the Northern Hemisphere. It is true that the American Beech has not been so widely celebrated in story and song as its European namesake, still, it is in no way inferior, or less worthy of all the praise that has been bestowed in centuries past upon its near relative of the old world. Our American Beech (*Fagus ferruginea*), as found in nearly all of our Northern forests, is a noble tree with an exceedingly graceful habit ; for while the main branches are very strong and sturdy, they are always furnished with an abundance of small branchlets, that give to the tree a graceful outline, no matter how large or old the specimens may be. The bark of the tree is also somewhat peculiar, it being smooth, with no cracks, fissures, or corrugations, to hold dust or afford lodgement for mosses and lichens. The stem of a beech tree is a solid, firm and smooth column, almost as rigid as marble, and far more valuable than stone. This smoothness of bark extends to the minutest twigs, and even the buds in winter ; and the expanded leaves in summer are smooth and glossy. To call the beech a "clean tree" is but faint praise ; for, in addition to its neatness in appearance, it is peculiarly free from insect enemies and is seldom injured by these pests. Even the dead-trees are not very attractive to the wood destroyers of the insect kingdom. The beech is also a very hardy tree, thriving in very cold regions far to the northward, and its flexible and tough branches withstand high winds well, when planted in exposed situations. It will also thrive in very thin soils, rocky or otherwise, the roots keeping near the surface, and are so numerous that they will penetrate the smallest interstices among the rocks, and seek every spot where nutriment can be found. Any one who has had experience in clearing a beech forest will bear me out in saying that beech roots will fully occupy all the land within their reach.—A. S. FULLER in *American Agriculturist for March.*



SEED Warranted to Grow.

or order refilled gratis. I have sold vegetable and flower seed to over a million farmers and gardeners in the United States, perhaps some are your neighbors. If so ask them whether they are reliable. Mr. Thomas Henshall of Troy, Kansas, writes me: "For 26 years I have dealt with you. I have lived in Iowa, Missouri, Colorado, and Kansas, and no matter what the soil or climate, the result was always the same, to wit:—religiously honest and good." This is the kind of seed I raise and sell. The Hubbard and Marblehead Squash, Marblehead Corn, Marblehead Cabbages, Ohio Potato, Eclipse Beet, are some of the vegetables of which I was the original introducer. A Fair with \$500 in premiums. See my catalogue, free to all.

JAMES J. H. GREGORY, (Seed Grower), Marblehead, Mass

IMPORTANT TO FRUIT GROWERS.

It is of the greatest importance to those who are planting Fruits of any kind to get them true to name, and to get their Trees and Plants in good order; and the surest way to do this is to get them direct from the grower. Trees bought from travelling agents who represent no responsible Nursery are liable to turn out very unsatisfactory; and sometimes agents who do represent responsible Nurseries carry the right of substituting so far that the result is not much better. During the last three or four years I have discontinued the agency business altogether, excepting that I supply a few local agents to sell in their own immediate neighborhood, and farmers and others who club together. And I find that in thus dealing directly with planters, I give them much better satisfaction; besides, I can supply them cheaper as I have no agents to pay. I have sent out many thousand Plants and Vines by mail, which have given general satisfaction, besides many more by express to all parts of the Provinces; and I take this method of thanking the many patrons I have who are readers of the *Horticulturist* for their liberal support in the past, and of soliciting further favors.

I am the only propagator of the *Niagara Grape* for the Company in Canada, and all of my customers will be supplied with Vines of my own growing, *Free of Duty*; and planters can judge for themselves whether it would be better to buy from me or from agents who are working for parties in the States.

The Vines can not be got without restriction from any one for less than \$2 each; and I will mail them to any part of Ontario or Quebec, and guarantee them to come in good order for that. I will also give special rates to any one wanting to plant large quantities in vineyards (and will take all but 10 per cent. of pay in proceeds of the fruit) on application.

My *Catalogue and Price List* for the Spring of 1885 is now ready, and will be mailed free to all applicants.

Parties intending to plant largely are invited to send in their lists, and I will give special rates for large orders. Neighbors clubbing together and buying by the 100 or 1,000 will get **Lowest Rates**.

Order Early to Secure the Best Stock.

Special Offers will be made from time to time in the *Horticulturist*. Below is one.

For \$5 I will mail, and guarantee to come in good order, one each of the following:—

The best 5 varieties of White Grapes, good 2 years old Vines, *Niagara, Jessica, Prentiss, Pocklington, Duchess*.

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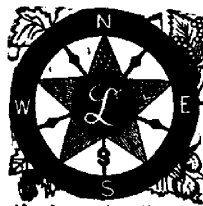
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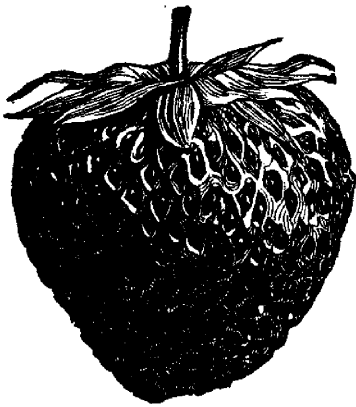
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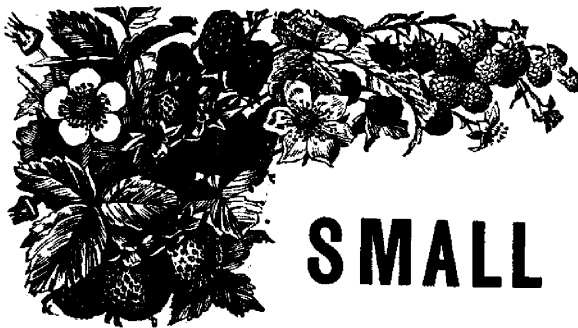
Arrangements have been made with Mr. W. H. Eckhardt, of St. Catharines, Agent for Heintzman's celebrated Pianos, whereby I am able to make the following offers, namely :—

- I.—To any one sending to the Editor, at any time between the first day of March, 1885, and the first day of March, 1886, the names of twelve hundred and fifty NEW subscribers to the *Canadian Horticulturist*, and twelve hundred and fifty dollars, I will send one of Heintzman & Co.'s New Square Pianos in Ebony Case, the catalogue price of which is four hundred and fifty dollars.
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D. W. BEADLE, Editor,

St. Catharines, Ont.



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The Canadian Horticulturist.

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