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HAYES HARDY.

*Hayes & Hardy, NY*

THE  
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No. 10.



THE CROSBY PEACH.



Uncertain is the peach crop in Ontario that very few plant orchards with confidence. The venture compares well with gold mining; here and there one makes a fortune, while some meet only with failure. Mr. Tyehurst, with his seventy-five acres, gets a crop worth \$10,000 in a single season, while many have either a small crop or a complete failure. The disease known as the Yellows has cleared out many orchards before they have given any returns, and climatic influences are often destructive to the fruit buds, even in places where other conditions are favorable.

The Crosby comes highly commended from the Eastern States. It is an attractive looking peach, but its great merit consists in the hardiness of its fruit buds, an important consideration with us. During the last decade it has been on trial in Massachusetts and Connecticut, and has given ten consecutive crops of fruit, when the standard varieties, during the same term, gave only two or three crops.

The Crosby resembles the Wager in tree and fruit, but the Wager cannot be compared with it in hardiness of its fruit buds.

Our colored plate of this peach shows a very large sample, quite above the average, such as would only be produced under special conditions. The fruit averages only medium in size, from two to two-and-a-half inches in diameter.

This peach was first sent out in 1876 by a Mr. Crosby, a nurseryman of Massachusetts. It was distributed by the Massachusetts Agricultural College,

under the name of *Excelsior*, and has also been called *Hale's Hardy*, because Mr. Hale, a very prominent peach grower in Connecticut, first grew it extensively. The name *Excelsior*, however, was found to be confusing, because there was also a peach cultivated under the name *Prince's Excelsior*. The United States Division of Pomology decided to give it the name of its original introducer, Mr. Crosby.

Mr. VanDeman, of the United States Division of Pomology, describes it as follows: Size, medium, about two inches in diameter; shape, round or oblate, sometimes being compressed towards the apex; cavity, medium; suture, moderately deep, and extending from the base to beyond the apex, often causing the tip to be sunken; color, bright yellow with crimson splashes and stripes, very attractive; skin, moderately thick, with short pubescence; flesh, bright yellow, red at the stone, juicy; stone, small, blunt, parting readily from the flesh; flavor, mild sub-acid, rich; quality, above medium; season, the last week in September in Massachusetts, ripening just before Crawford's Late.

We wrote Mr. J. H. Hale, the famous peach grower of South Glastonbury, Conn., regarding this peach, asking his opinion with reference to the correctness of the colored plate we are using. He writes as follows: "Your plate of the Crosby peach was made from extra selected specimens grown on young trees, in a high state of cultivation, and so represents the greatest possibilities of this variety, while the plate shown by Mr. VanDeman in his report was made from average specimens, grown in sod on trees twelve or thirteen years old. Both these specimens were grown in Northern Massachusetts, just on the border of New Hampshire. The Crosby is an abundant bearer, and most of the trees I have seen fruiting for some years past have been overloaded. The fruit runs of a good even size, averaging about two to two-and-a-quarter inches in diameter. It is the most attractive yellow peach I have ever seen, with small pit, and of excellent quality; still, it is not so large as the Crawford, and I do not think that it would sell so well in the market as that variety when abundant. But, in my opinion, the Crosby, on account of the hardiness of its fruit buds, will produce full crops many years when there are no Crawfords or other peaches of that class. I have a three-year-old orchard here of Mountain Rose, Crawford, Old Mixon, Stump, not bearing this year or last, but two hundred trees of Crosby, in the same lot, are full of fruit, as they were also last year, and they are only in their second summer. We, who know the Crosby best in New England, think that in it we have a variety which can be depended upon to fruit at least four years out of five. In fact, the trees in the States of Massachusetts and New Hampshire are now loaded with their tenth successive crop. Old orchards of assorted varieties are fruiting well this season, and we expect to harvest ten or twelve thousand bushels. The prices are high, as there is little to come from the south to us."

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**November and December Numbers free** to all persons subscribing during the month of October for the year 1893.

## GRADING FRUIT.



THE importance of carefully grading our fruit for market can hardly be over-estimated. One shipper, sending his pears without grading, got low prices, and on inquiring the reason, he was told that they were all seconds, and the price returned was good for that class. The fact was, he had sent his firsts and seconds mixed together, in the same package, and the whole lot sold as second class.

The writer has for years made a practice of carefully grading nearly every kind of fruit. Pears he puts up in three classes; No. 2 are the best of the blemished, and go in barrels; No. 1 are all clean, well-formed samples, and go either in kegs or 12-quart baskets; extras are very fine large samples, and these are put up in 6-quart baskets, with pretty fancy cover, cut one-eighth of an inch thick, with a large elliptical opening cut out of the middle, over which cardinal

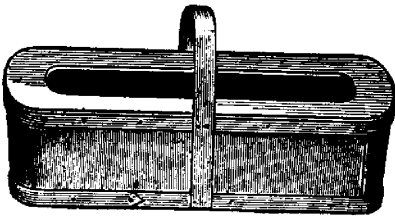


FIG. 67.

CARPENTER'S COVER FOR FRUIT BASKET.

leno is stretched, see Fig. 67. This is a handsome package, showing the fruit, and at the same time completely protecting it from injury, when packed basket upon basket in the car. The grade and the sender's name is marked on the handle, while the address is branded upon the cover, or written on a card and placed inside of the cover.

While it is a great advantage to ship No. 1 and 2 in separate packages instead of being mixed together, yet, if the latter class could be kept entirely out of the market, except as evaporated or dried fruit, it would be a great relief all around. Every one hates to handle second-class fruit; the grower won't put his name on the packages containing it; the salesmen hate to offer it for sale, and the buyer grumbles, no matter how cheap he gets it, and so nobody is satisfied.

In packing apples, equal care in grading is needed, whether for home or for foreign markets. Mr. W. White, of Ottawa, encloses us the following clipping from an English paper, advocating the use of small packages for choice apples:

"Why don't Canadians take a leaf out of the Australians' book in supplying British apple-markets?" said a well-known Canadian man of business the other day. "I know that the Canadian fruit comes in at a different season, and is of not quite the same class, but I believe that were Canadian exporters to send their choice apples here in smaller boxes or barrels, they would do a large trade. You may see the Australian apples at Covent Garden in 40 lb. boxes, and upon each box about 10s. is realized. A barrel of Canadian apples of the weight of 196 lbs. goes for about the same money. A man will often buy a small lot of 40 lbs. for his family use, and I fancy the Canadians would do well to consider the possibilities of meeting the demand for smaller lots which the Australian trade has shown to exist."

Mr. White adds,—“The suggestion is an excellent one. Purchasers, particularly in large cities, don't keep articles of domestic consumption in large quantities—they have no convenience for so doing. When fruit especially is wanted, they prefer to purchase just what is required, and are quite willing to pay a high price if they get just what they want.”

We scarcely see where the advantage would be in using the 40 lb. boxes. Surely the keg or the half barrel is much better. We have for some time practised putting up apples in three grades. No. 2 is understood to mean the second class apples, which, on account of some blemish or imperfection, is unfit for export. These are packed in ventilated barrels, as they are cheaper than the ordinary closed barrel, and any fungus spots are less apt to grow than when shut up tight. Sale can usually be found for this class of apples for cooking purposes, in our own markets, toward the end of November, and usually bring all they are worth. If the fruit-grower has an evaporator on his place, he can use them in it to still better advantage. No. 1 is understood to mean first-class fruit, that is, the samples are fairly perfect, clean and well-colored, besides being uniform in size. In favorable seasons the great bulk of the crop comes in this class, but, unfortunately, in a year like this, nearly one-half must go as No. 2. Extras, are very choice selected fruit, nearly uniform in size, and of high color, suitable for table apples, and these go in half barrels for special markets.

In packing grapes, it is well to observe similar care in the selection. No. 2 are second class, and should go for the wine vat or vinegar. They will consist of such bunches as are very straggling, or contain either unripe or imperfect berries. No. 1, which includes all first-class bunches, well ripened, and of good size, may be packed in the 10-lb. basket, see Fig. 67, with the same cover as shown in Fig. 68, only using that color of leno which best corresponds with the color of the grapes in each package. For very fancy grapes, or extra assorted, special packages are sometimes used, such as are shown in Fig. 69, made with a sliding top, and packed from the bottom in such a way that on opening an even surface of choice grapes is shown,

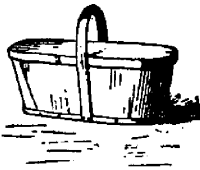


FIG. 68.

the stems being concealed beneath. The use of a little pinked out paper, of suitable color, under the top of the cover, to pack against, will add to the fancy appearance of the packages.

The use of small packages for fancy fruit is not to be commended in general, but only in cases where the fancy grade is carefully kept up, and an appreciative market for such goods can be found.

*American Gardening* has been making inquiries among various correspond

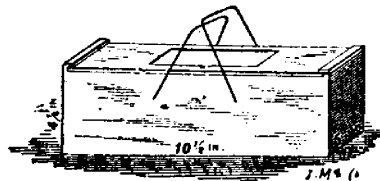


FIG. 69.

ents regarding grape growing. The general opinion of the growers seems to be that the markets are opening up quite as fast as vineyards are being planted, and that no fear need be entertained that in the very near future, our markets will be so over-stocked as to make the business unprofitable. One writer says the great need is improvement in quality, cheaper and quicker transportation, and the season of maturity such, that every northern market may be supplied with fine grapes from June until January, in abundance.

### JUDGING MELONS.



IN view of the importance of establishing correct principles in judging fruit, we give place to the following remarks by E. Williams in the *Rural New Yorker*: The judging of melons as generally practised as a farce, as they are almost invariably judged by appearance, size being the ruling factor, and oftentimes by persons unacquainted with the varieties. Musk melons are often evidently wrongly named, and so mixed by crossing as to seriously impair the quality, but they are seldom tasted, and taste should be the deciding factor as to quality, as it often would be of identity. If there is anything more disappointing in the fruit business than, after cutting a large, handsome melon, to find it no better than a pumpkin inside, I do not know what it is. The absurdity of the indefiniteness governing these exhibits and awards must be apparent to all who have ever had any thing to do with them. The judges should be experts and know the tastes and characteristics of the fruits they are to judge well enough to recognize any departure from the normal condition, and the schedule of instructions should specify and define what is meant by *best*—size, appearance or quality. If the former, the Hackensack, and other pumpkin-hybrids, will invariably secure the prizes, and the delicious Jenny Linds, Christianas and Golden Gems may as well stay at home. The nomenclature of these exhibits needs correcting, and the judges should be able, and it should be their duty to do it. Our societies should secure at least one expert on each committee and pay his expenses; or, better still, reduce the duty to one person in each class; let him be an expert and pay for his services. It would be cheaper for the society, and more satisfactory to all concerned, and more expeditious in the bargain.

**KEEPING GRAPES FRESH.**—The following recipes were given at a fruit-growers meeting in Ohio: (1) Dip the stems of the bunches, where broken off, into melted red sealing-wax and pack them in cotton in large pasteboard boxes. They must be kept where it is dry and cool. (2) Toward the end of October cut the shoots with the cluster attached, sharpen the lower ends to a point and stick them into potatoes. Spread the bunches out on straw or dry hay, so that they shall not touch each other. The grapes must be placed where it is dry and cool.

## INSPECTION OF APPLES.



E have just received a copy of the "Act to Further Amend the General Inspection Act," to which has been added a section providing for the *inspection of apples*. This, of course, was in response to the request of our Association, made through a committee to the House of Commons at Ottawa. Unfortunately, the wording of this amendment has been done without consultation with the members of our committee, or with any apple grower; and the standards have been made so absurdly exacting that it will be absolutely impossible for our packers to come up to the requirements. In consequence, no one will be likely to attempt to comply, and the Act will become a dead letter.

The following are the sections referred to :

109. (1.) In the inspection of closed packages of apples, the inspector shall open not less than one package in every five; and, if the manner of packing is found to be fraudulent, or unfair, then he shall open all the packages put up by the shipper of such package.

(2.) Every brand found to be fairly and properly packed he shall brand as No. 1 Inspected Canadian Apples, or, No. 2 Inspected Canadian Apples, as the case may be, if fit to be so branded.

(3.) The inspector shall also examine the varieties of apples submitted for inspection, and shall correct the nomenclature if incorrectly marked, or, if the name of the variety is not marked, he shall cause it to be marked on the package.

(4.) The inspector may charge a fee of ten cents for each package inspected by him, and such charge shall cover the cost of opening and closing the package.

110. (1.) No. 1 Inspected Canadian Apples shall consist of perfect specimens of one variety, of uniform size, and, in the case of a colored variety, of fairly uniform color, and shall be free from scab, worm holes, knots and blemishes of any kind.

(2.) No. 2 Inspected Canadian Apples shall consist of specimens of one variety, free from scab, worm holes, knots and blemishes of any kind, but not of uniform size or color.

Now let us look into the matter. To open one barrel in five may be necessary in the case of shippers that are known to be somewhat careless, but we are of the opinion that, where the inspector has become acquainted with the character of a certain packer, it is not at all necessary that he should open more than one barrel in ten, taken at random. To open one barrel in five would mean at least thirty barrels in a car-load. Now this would cause too great a delay of a shipment of apples, at Montreal, or at whatever port they were inspected and transferred to the steamer. The inspector should not be obliged by the Act to open more than one barrel in ten.

It is all right to correct the nomenclature, if incorrectly marked; but to make it compulsory that every unnamed lot should be named by the inspector might frequently give him a task which no human being could satisfactorily accomplish.

The fee of ten cents a barrel is too high, at least while the benefits of inspection are as yet unproved. The Dominion Government should provide for the larger part of the work; a small fee of two or three cents would be enough for the shipper to pay, and, if found necessary, after the benefits are fully appreciated, the fee might be raised.



In section 110 we read that No. 1 shall consist of perfect specimens. Now perfection is a lofty word and is a state not easily reached either by apples or men. Had there been a modifying adverb it would have been all right, but no packer would be able to submit his apples to inspection, with any confidence, if the inspector is to apply this word in its strict sense. It provides that the apples are to be of a uniform size. "Nearly uniform" would have been a more suitable phrase. How would it be possible to put up a barrel of apples of *exactly* one size? Perhaps it is well enough, in the case of No. 1, to say that they shall be free from blemishes of any kind, but, in the case of No. 2, the same provisions are made, making scarcely enough distinction between the two grades.

That a properly arranged system of inspection, for Canadian apples which are going forward to Great Britain, would result in immense benefit to apple growers in Canada, seems well assured. We have lately received a communication from an extensive dealer in apples in Liverpool, England, who says that he is pleased with the prospect of such an Act being in operation, and that a reliable Canadian brand would much encourage our export trade. What a pity that the whole thing is inoperative, for this season, on account of such stupid legislation. It will be necessary that this whole matter be carefully discussed at our next meeting, at Brantford, and the secretary authorized to make representations to Ottawa concerning these egregious faults, in order that they may be remedied before another fruit season.

Our own views on this subject may be seen on pages 128 and 129, where the grades were thus described :

Grade No. 1 shall consist of well-grown samples of the variety named, nearly uniform in size, well shaped, of normal color, free from scab, worm holes, curculio knots, etc.

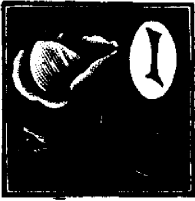
Grade No. 2 shall consist of apples free from scab, worm holes, but which for lack of uniformity in size, deficiency in color, abnormal shape, or any other reason, are considered by the inspector unfit to be graded No. 1.

POSSIBILITIES OF SMALL FRUIT CULTURE.—The figures given in the last report of the Seneca, N. Y., Experiment Station, of yield of strawberries, seems rather startling. The Burt, in matted rows, four feet wide and twenty-four long, yielded at the rate of 11,344 quarts per acre; Beder Wood, 10,890; Parker Earle, 8,168. These, says the Horticulturist, were grown precisely as they should be grown by the small fruit grower.

The Shaffer raspberry gave a grower near the Station 6,839 quarts from 2,550 bushes, occupying one-and-a-half acres. The crop was sold to a canning factory for six cents a quart, and amounted to \$340. The Gregg produced for the same grower, from 2,400 plants, three feet by six, occupying one acre, 2,440 quarts, which sold to a canning factory for six cents a quart.

We often hear of large crops of strawberries from small areas, and count what a prodigious yield per acre the same rate of yield per square foot would give; but, alas! we sadly fail when we try to get the same results in field culture. The possibility of it remains, however, and why can't we?

SCALE OF NUMBERS FOR SIZES OF APPLES.



It would be a great aid to uniformity in the descriptions of new varieties of apples if we could adopt some scale of sizes, so that when we spoke of a variety as being small, medium, or large, it would have a more definite meaning. At the present, the term medium size might convey to one person an entirely different meaning from what it would to another.

We notice in the last report of the Minnesota State Horticultural Society, an excellent suggestion by the Committee on Nomenclature. Speaking of the indefiniteness of the terms small, medium, large, and very large, they recommend

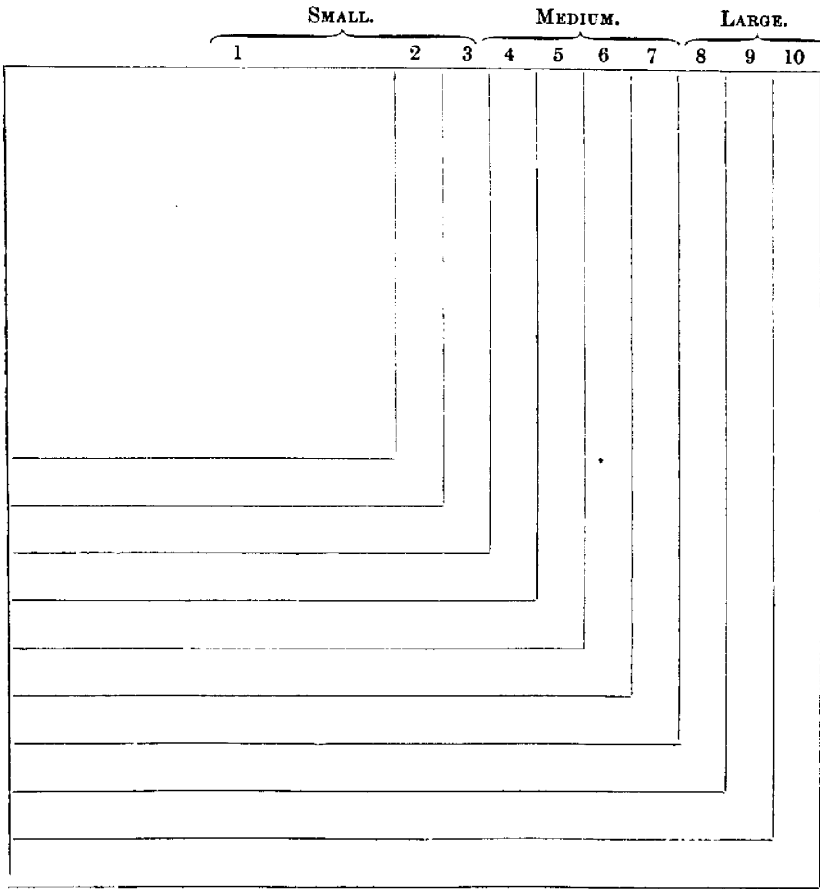


FIG. 70.—SCALE OF NUMBERS FOR SIZE OF APPLES.

a system of designating the size by a number from one to ten, starting at two inches in diameter, and adding one-quarter of an inch for each number. Numbers 1, 2 and 3 will then represent all under medium; 4, 5, 6 and 7, medium; and 8, 9 and 10, large. Any varieties exceeding the diameter represented by these numbers would be designated as very large.

We have made a copy of this scale, and would suggest its adoption by our Association, for use in Canada.

Since writing the above we have corresponded with Mr. J. S. Harris, of La Crescent, Minn., who is the author of the table. He writes :

The square No. 1 should be exactly two inches, and each succeeding one one-fourth inch larger, which will make the outside one, numbered 10, measure  $4\frac{1}{4}$  inches, which is the size of the largest specimens of apples grown in this State that have come under my notice. In describing by this method, the numbers are to stand for full average size of typical specimens of the variety. In numbering by this plan, I class all fruit measuring 2 inches or  $\frac{1}{4}$  inch less, as size 1; from 2 to  $2\frac{1}{4}$  inch, size 2, etc.

FIVE BEST STRAWBERRIES.—A member: Name the five best varieties for market purposes?

Mr. Thayer: Well, to start with, I will tell you that you are asking a good deal. Situated as I am in Wisconsin, with no home market, my aim is to select the berry which is nice looking and firm. That is the berry that gets there in good condition, and takes the public eye. That is why I believe in the Warfield as being the best berry for shipping to a far market. I have used the Jessie as a pollenizer, but its shipping qualities are not so good, unless it is shipped before it turns red very much. For near markets there are the Bubach and Haverland. The Crescent is an old standard for near market, and I have found it a good berry. If I were to select for myself I would take the Warfield, Jessie, Bubach and Haverland, and like everybody else I am skirmishing around to find a good pollenizer. We have a fine pollenizer in Michel's Early. I have found it hard to get a staminate variety that is as prolific as the pistillate.—Minn. Hort. Soc.

CUTTING out the old canes of raspberries, as soon as the fruit is gathered, seems to be of great benefit to the new canes. Pinching the new canes as soon as they are three feet high seems to produce better results than allowing them to grow unchecked. Red raspberry plants from new plantations give better results than those from the older ones. The Houghton Seedling gooseberry seems to lead all others and is productive on a larger variety of soils and under more varied conditions than any other sort. The Red Dutch currant, kept free from weeds and grass, with old wood cut out and plenty of manure on top of the ground, seems to be good enough for the average planter.—Minn. Hort. Soc.

## SOME PROMINENT CANADIAN HORTICULTURISTS.—XVIII.

MR. T. H. RACE, OF MITCHELL, ONT.



T is a source of strength to the Ontario Fruit Growers' Association that it numbers among its directors men occupying so many different positions. We are thus able to come in touch with horticultural life in its various phases, and reach the sympathies of a very wide circle of readers. In the composition of our directorate, we have had, in addition to practical fruit growers, ministers, merchants, lawyers, judges, professors, farmers, florists, nurserymen, Civil Service employees, etc., all, of course, practically engaged in some line of horticulture, to such an extent that it amounted almost to a hobby.

With this number of our journal, we have pleasure in introducing to our readers another member of our directorate, who by vocation is an editor, but, at the same time, an ardent lover of the garden and a successful grower of hybrid remontant roses.

Mr. T. H. Race is editor of the *Mitchell Recorder*, a weekly paper, standing well with the general public in Western Ontario, because so ably conducted. A native of Northern England, he was born in 1846; and when a mere boy came to Canada with his parents, who had purchased a farm in the vicinity of Port Hope. He was educated in the excellent high school of that place; and it was while living on a farm in the neighborhood of that romantic town, in full view of Lake Ontario, that he became enamored with the beauties of nature and first

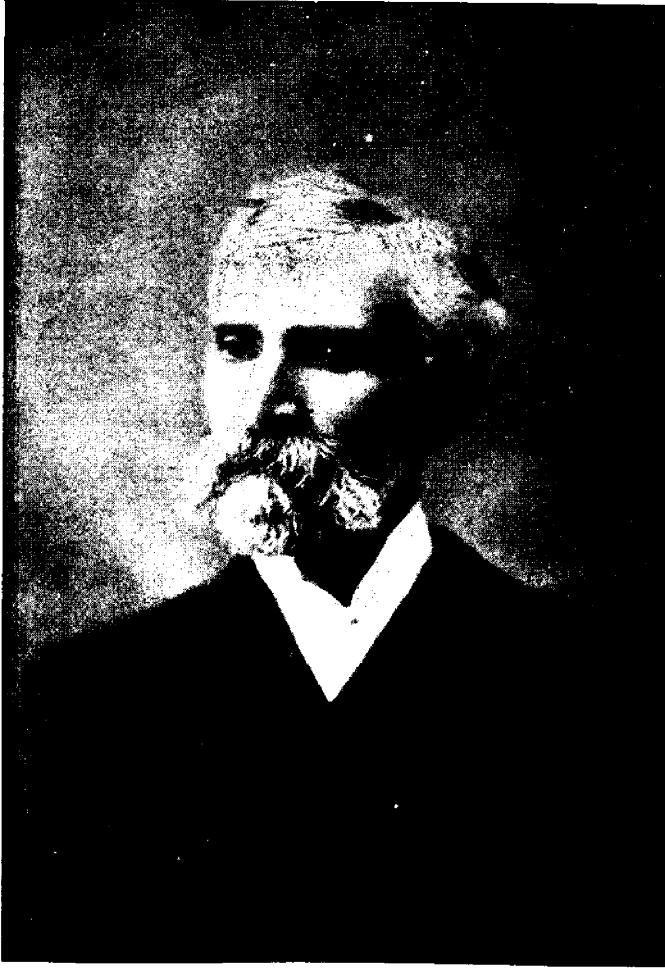
“Held communion with her visible forms.”

There, while yet a boy, he was wont to revel with those poets of nature, Byron, Bryant and Emerson, in the solitude of the beach and the adjacent ravines.

His first lessons in the propagation and cultivation of fruit trees were learned among the fruit growers and nurserymen of Rochester, about the time of the Civil War.

Mr. Race continued farming until he was twenty-six years of age, when he entered upon business life. During the years he was thus occupied, he never lost his fondness for the cultivation of fruit and flowers; but it was not until he went to Mitchell and engaged in the newspaper profession in 1880, that he became an enthusiast in fruit culture. His particular hobby is hybrid remontant roses, of which he grows some fifty or sixty varieties.

For many years he has been a reader of the *CANADIAN HORTICULTURIST* and of the reports of our Association, but he first attended one of our meetings at Hamilton in 1889, and gave a paper on “The Garden.” The following year he was elected director for the counties of Perth and Middlesex, and the City of London. In December, 1891, on the election of Mr. A. H. Pettit, as President, Mr. Race was elected Vice-President, a position of honor which his previous literary training and practical experience has well qualified him to fill.



T. H. RACE, ESQ.

## EXPERIENCE WITH GOOSEBERRIES IN SOUTH SIMCOE.



THE enlargement of our journal, and the kind invitation to all members, to take hold, should certainly have the effect of bringing out a good deal of practical experience, and it may be discussion; which in their turn should furnish material for the meetings of the Association. It seems to me that some of the things I want to know about are:

- 1st. Pruning.
- 2nd. Fertilizers; quantity, kind and results.
- 3rd. Varieties grown, and results.
- 4th. Novelties tried, and have they proved to be improvements.

Time, which is more important than the mere price, is often lost with these for the want of a little information from those who know.

With your permission, I will give a few notes out of my experience with some of the different varieties of gooseberries:

*Downing* stands first, all things considered, it averaged three quarts per bush, every year, for four years.

*Smith's Improved*, I have dug up. Fruit fine, but no yield in four years' trial. [It yields abundantly at "Maplehurst."—ED.]

*Industry*, ditto. I have tried boards, laid tightly underneath, for mildew, but the result was failure.

In new varieties,

*Autocrat* gave a large crop, of very large fruit, less mildew than any other variety.

*Pearl*, apparently no larger than *Downing* and nowhere in crop, but I still hope for better things in future.

All these were heavily dressed with stable manure and ashes. With me, the tips of the new growth, on even *Downing*, are affected with mildew, at this season of the year. *Autocrat* seems to be exempt from this.

Trimming, with me, consists in cleaning out underneath, and thinning out head; not too thin, or fruit scalds. No cutting back; any stem that is cut at all is cut clean out.

*Nantye*, Aug. 17, 1892.

STANLEY SPILLET.

TILE DRAINING AN ORCHARD.—To drain an orchard, the soil of which is hard pan with a foot of muck on top, the drains should be not more than 50 feet apart and, if the land is very wet and cold, two rods to 40 feet would be better. Run them parallel and lay them 3 to 3½ feet deep. Round tile are best and, if they have to run only 200 or 300 feet, 2 inch tile will do, if they are to carry nothing but rain and surface water. If the land is quite wet, an occasional line of a larger size of tile should be put in from the most springy parts of the field.—Farm and Home.

## THE RASPBERRY GALL FLY—(DASTROPHUS TURGIDUS).



ASSET gives a brief description of this gall fly and its producer in the *Canadian Entomologist*, Vol. 2, p. 100. His specimens were collected in the State of Connecticut, and, although found in Ontario from Essex to Ottawa, very few notices of it have been published in Canada.

This gall has been more or less common on the stems of the wild raspberry, *Rubus Strigosus*, and on the cultivated varieties in the County of York during the last thirty years; and during this period it has occasionally increased so as to do noticeable injury to raspberry gardens. In one instance, near Toronto, the gardener took the galls to be knots, and when trimming cut them out and threw them into a fence corner. Of course, this did no good, and it was not until he was advised to burn them that he was able to rid his garden of the pest. The producers, as is the case with many gall producers, increase with astonishing rapidity, and were it not for the opportune—though gruesome—services of three species of parasites, raspberry culture in Ontario would soon come to an end.

But, as it is according to the order of nature that plant-eating insects are held in check by parasitic species, we generally find this check sufficient; unless natural relations are disarranged, usually by artificial means, such as the clearing of forests, the draining and cultivation of land, the introduction of foreign plants, and in various other ways. And so it is when conditions are unfavorable to the due increase of parasitic species, the leaf-eating species increase, and farm and garden crops are devoured, unless by some artificial means the balance of parasitic to phytophagous species is re-established.

It has been estimated that in the Province of Ontario there is an annual loss of over \$500,000 from the attacks of plant-eating insects, and many think that our mildly paternal Government might do a good deal more in preventing this controllable waste; for, indeed, to an intelligent and thinking community, as fruit growers and farmers, it is a very culpable waste.

And it should be considered an important duty by all who are engaged in garden or farm culture, to be able to recognize plant-eating and parasitic species at sight, and to keep a strict watch over them, carefully noting their respective increase or decrease. All this is very easy, especially to school boys and school girls, who should be carefully instructed not to destroy nor injure beneficial insects; for, indeed, the protection of these is of greater importance than the protection of insectivorous birds. To carry out these suggestions in the case of the raspberry gall, is especially easy. In the first place, the gall is usually large and easily seen—often over two inches long and three-quarters of an inch in diameter—covered with short prickles and of the same color as the bark of the cane. They may be readily recognized from Fig. 71.



FIG. 71.  
RASPBERRY GALL.

Although the galls are full-grown towards the end of June, they should not be gathered until the following spring. When collected, the galls should be placed in a glass jar—a candy jar having a mouth about  $1\frac{1}{2}$  inches wide will do very well—and the mouth should be loosely stopped with a plug of cotton batting. The producers begin to come out about the middle of May, and may be seen walking on the side of the jar next the light. They are “short and chunky.” The head and thorax are black and the abdomen is reddish-brown, flattened laterally and rounded. They may be readily recognized from Fig. 72.

They are easily transferred from the large jar to a small bottle, say, a 4 or 6 oz., wide mouth, by placing the mouths together and laying them horizontally, with the small bottle towards the light, and, as insects always move towards light, they will soon pass from the large jar to the small bottle, when, if they be all producers, a few drops of chloroform will soon finish them; but, if there be any parasites among them, they should not be chloroformed, but all allowed to escape on a window which is open above, when the producers can be killed as they crawl over the glass, and the parasites will escape at the open space above.

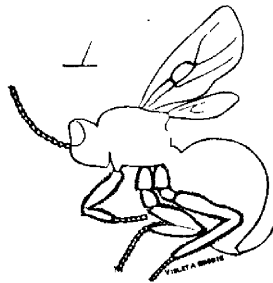


FIG. 72.—THE GALL PRODUCER  
(*Diastrophus Turgidus*).



FIG. 73.  
PARASITE OF THE GALL FLY.

Usually the most numerous parasite is a *Torymus*, of a coppery, brown-greenish color, with a long ovipositor—“a tail”—which is slightly turned upwards, and they walk about with a staid and majestic step. Fig. 73 is a very good outline. Of course, none of these should be killed.

The next most numerous parasite is an *Ichneumon*. The head and thorax are black, the abdomen reddish-blackish towards the end. They run about with a quick, nervous, weasel-like gait. They may be readily recognized from Fig. 74. None of these should be killed.

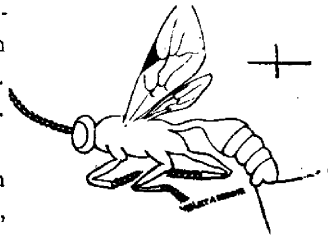


FIG. 74.—ICHNEUMON FLY,  
Parasite of the Gall Fly.

The next in order is an *Ormyrus*; of a uniform black color, the thorax punctured and rough, the abdomen smooth, shining and pointed. Fig. 75. Of course, they should not be killed.



Such is a brief outline of a plan which I have practised for many years, and know it to be easily worked, cheap, and very efficacious.

Simply stated, it is to destroy injurious insects only in such a way as not to destroy nor injure their natural insect parasites, and to preserve parasitic species in every possible way.

Toronto, Ont.

WM. BRODIE.

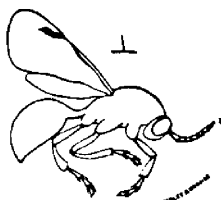


FIG. 75.  
A SPECIES OF ORMYRUS

### THE PITHY GALL OF THE BLACKBERRY.

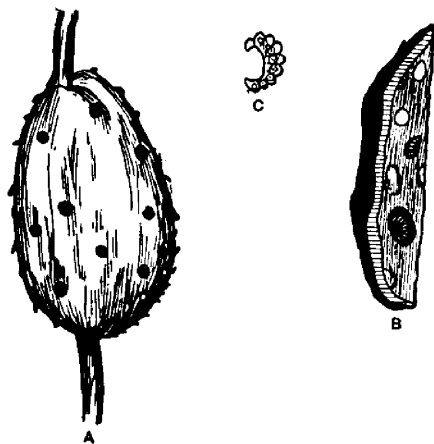


FIG. 76.

In connection with Dr. Brodie's valuable article regarding the raspberry gall-fly, it may be interesting to call attention to another species of the same genus, *Diastrophus nebulosus*, which sometimes causes a curious gall on the blackberry canes, such as is shown in Fig. 76. If cut open transversely, it will be found to contain a number of oblong cells, about one-eighth of an inch long, each containing a single larva. The latter remains in this state till toward spring, when it pupates, and the perfect insect appears. The fly is described by Prof. Saunders as about  $1\frac{1}{2}$  of an inch long, black,

with transparent wings, and red feet and antennæ. Parasitic insects also prey on this as well as on the raspberry gall-fly.

THE SOUVENIR DE CONGRES is a beautiful pear, and "takes" with the market, but the quality, according to a writer in the *Rural New Yorker*, is "so miserable that it ought to have some distinguishing mark, warning uninformed people against it." This pear is among the varieties recently being shipped to London, England, from California.

FOR STREET SHADE TREES, the same writer condemns the soft maple as being very brittle, and easily broken down by ice storms or heavy winds. The elm, hard maple, tulip and white ash are considered more desirable. In our opinion the elm is the finest of all.

## EVERY FARMER'S NAME UPON HIS FRONT GATE.

The tree is known by the fruit it bears,  
The lord or peasant by the garb he wears.



AND so the principle obtains throughout the whole economy of human life and existence. The Jews of old looked for a sign, and so has the world ever since. In trade and commerce much depends upon the sign; hence we find tradesmen vieing one with another in the striking and attractive features of the trade-mark or inscription that indicates or suggests the kind of business in which they are engaged. But with the tradesman the trade-mark or sign is not enough. He always has associated with it, in very conspicuous letters, his own name. John Smith may keep a place of business, and carry on a trade in drugs, dry goods, or what not, and he lets the public know this by a trade-mark, or sign, and a display of his wares. But he wants the public to know that John Smith is the man who keeps and sells these wares, so he places his name over his front door, or somewhere conspicuously upon his premises. In what sense does John Smith, the tradesman, differ from John Smith, the farmer, in their relations to the public? Both alike have to depend respectively on the public for the consumption of the commodities they produce or deal in. Why should not John Smith, the farmer, have his name upon his front gate as well as his namesake, the tradesman, his name upon, or over his front door?

A few years ago a bank manager was moved from one to another of the many pretty towns that are to be found scattered throughout this rich and highly-favored province. What could be more natural than that this banker should desire to know something of the country immediately surrounding the commercial centre in which his bank agency was situated? On the first convenient day Mr. Walker (for such we will call him), having secured a span of horses, double carriage and a driver, started out with his family for a pleasure drive—with an eye to business as well—through the adjacent country. Just how frequently the driver was plied, during the trip with the query, "Who lives there?" we will not venture to say. But it is safe to hazard the assertion that the inquiry was never made except when the attractiveness of the home and its environments prompted or awakened an impulse complimentary to the owner of the premises inquired about. On the return journey, a course was taken along one of the leading concession lines of the township of Woodhouse, when the question came for the twentieth time, "Who lives there?" This time the query was not left for the driver to answer, for on approaching the road gate there, upon the upper frame, was the name in bold letters, J. H. Smith. Could Mr. Smith have heard the remarks that the new idea called forth from the occupants of the passing carriage he would have felt amply paid for the cost and trouble of

his new and commendable departure. But his hour of triumph was yet to come. Passing by Mr. Smith's farm, and on the opposite side of the road was the home of Mr. W. Johnston. Mr. Johnston's farm of many broad acres of waving grain and pasture lands, would have been passed by in silence, except for the marked contrast between the adjacent places, in their home surroundings.

On the following Saturday afternoon the bank manager was upon the street in company with one of the old and prominent citizens. Coming to one of the busiest thoroughfares his companion accosted a number of very respectably dressed farmers, and turning to the bank manager he said, "Mr. Walker, Mr. J. H. Smith, one of our farmers from Woodhouse township." "Pleased to meet you, Mr. Smith! By the way, I drove past your farm a few days ago and noticed your name over the gate. It struck me as a capital idea, and my wife and family remarked at the time that Mr. Smith had no reason to be ashamed to have the public know that he lived there, and owned and worked that place. You have a magnificent farm there, Mr. Smith, and my wife and daughters were delighted with the attractiveness of your surroundings and the tempting fruit that hung upon the trees. Maybe I could get a few barrels of those apples from you in the fall, and my wife thought she would like to get an occasional crock of butter, or anything that you have to dispose of from the dairy, orchard and poultry yard."

While these remarks were passing, the banker's companion was waiting an opportunity to extend the introductions. The opportunity coming he proceeded: "Mr. Walker. Mr. W. Johnston, a neighbor of Mr. Smith's." "Pleased to meet you, Mr. Johnston; I think I remember passing your place when out the other day."

"Likely you do," responded Mr. Johnston, in a somewhat subdued tone. How different the emotions that animated the two neighboring farmers! Mr. Johnston had heard all the complimentary remarks that had been applied to his neighbor's home and farm, and he never before had the contrast between the two places, equal in quality and soil, and every other natural feature, brought home to him so practically. Then in his own mind he contrasted his own tree, less surroundings and uncut grass, with his neighbor's neatly-trimmed shrubbery and closely mown lawn, he inwardly felt it to his advantage that his name was not on his front gate; and inwardly felt at the same time that it was his naked and unkept surroundings; his neglected orchard and fruit-garden, and his slovenly methods of farming generally, in contrast with his neighbor's, that provoked the inquiry in his case, "Who lives there?"

*(To be continued.)*

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#### CABLE FROM WOODALL & CO.

6.10 P.M., LIVERPOOL, SEPT. 26, 1892.

At to-day's sale market continued active at following quotations: Red Varieties 14/ to 17/3; Green Varieties 10/ to 13/ Estimated shipments for this week not yet reported.

"O. & L."

## NOTES FROM A STRAWBERRY EXPERIMENT STATION, WITHOUT GOVERNMENT SUPPORT.



AS I test more new varieties each year than any other strawberry grower in Canada, not excepting the Experiment Stations, I think I may claim the above credit. In noticing varieties, I shall not mention the old well-known standard varieties, but some of recent introduction, that have done well here, in matted rows, with ordinary care. My soil is clay loam.

## WELL-TESTED VARIETIES :

*Woolverton*—This has been well-tested in the United States. It was introduced there by Mr. Crawford. The Woolverton and Saunders are better known there than in Canada, and are well spoken of by all who have tested them. I would refer all, who might doubt the praise given the Woolverton, in this notice, to the editor of the CANADIAN HORTICULTURIST, who saw them in fruit.

My object in testing so many varieties, has been to get profitable and improved varieties, to grow for market, and help those who grow and love the strawberry, to the same desirable end.

*Saunders*—Dark scarlet ; large ; good quality ; productive ; late ; profitable for market.

*Bederwood*—I cannot pass this and Bessie by ; they are not of the large class, but are so productive ; good size, good color ; early ; profitable for market.

*Princess*—I have fruited this once. I believe it to be a valuable kind, large plant ; large berries, and productive.

*Lovett's Early*—(It is not early). It is medium in season ; good in plant and fruit at any rate. Those who grow berries for market, will do well to plant it.

*Parker Earle*—Large, quality good ; late ; some speak well of it. It has not done well here, this season ; I will give it another trial.

*Gillespie* and *Auburn*—I have fruited these once ; these are from the same originator, and are up to the standard claimed for them. The seedlings from the Haverland and Sharpless are superior to it.

*Barton's Eclipse*—Dark scarlet ; quality good ; productive ; plant hardy and vigorous ; good for family garden, or market.

*Martha*—Dark red ; large ; productive ; a promising market berry.

*Middlefield*—Berries large ; suitable for a market that appreciate large berries. Bright glossy red ; fairly productive ; plant healthy and vigorous.

The following are of

THIS SEASON'S INTRODUCTION :

*Philip Seedling No. 1*—Notes taken at Geneva (N. Y.) Experiment Station. Stems unable to hold up the enormous fruits, which are produced in large quantities. Berries showy, scarlet, firm, good flavor.

*Beverly*—The color is dark and rich ; large size. All reports are favorable so far, and the variety is one of great promise.

*Muskingum* —This has succeeded well everywhere ; with an ordinary chance it bears a heavy crop of large, fine looking berries.

*Dayton, Iowa Beauty, Beebe, Jefferson, Clark's No. 14,* and one or two more will be reported on in due time, if spared.

JOHN LITTLE.

*Granton, Aug. 15, 1892.*

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THE STRAWBERRY.



R. WM. SAUNDERS, Superintendent of the Gardens and Grounds of the Agricultural Department at Washington, submitted, with some other papers on horticultural subjects, the following to the Secretary of Agriculture :

The principal points involved in the successful culture of the strawberry are :

1. Prepare the ground by deep plowing and subsoiling ; apply a dressing of rotted manure, equal to twenty cords per acre ; spread it over the surface, and mix it with the soil by repeated disintegration with a harrow. The best crops are produced on strong, loamy soils ; if somewhat clayey it will be all the better, provided it is drained.
2. Allow the plants plenty of space ; the rows thirty inches apart and the plants about half that distance between each other in the rows.
3. Remove all runners as they appear, and keep the surface pulverized and clean. If young plants are wanted, keep a portion of the plantation for that purpose.
4. Cover the plants in winter in all localities where the thermometer may run down to 10 degrees Fahrenheit ; this to be done after the first frost, using straw, leaves or other similar material as a partial protection.
5. Do not disturb the roots by any process of cultivation from the month of September until after crop has been gathered the following summer.
6. Destroy the plantation after it has produced its second crop, new ones being planted to succeed those that are abandoned.

## ✦ New and Little Known Fruits ✦

### EARLY FAVORITE.

SIR,—I send you a sample of a chance seedling of the Damson plum, which I have named the Early Favorite. It was in good condition for using on the 25th of August, which is very early for this section. This is the first year of bearing. The tree is a rapid grower; strong, straight limbs, with small leaves.

W. A. BROWNLEE, *Mount Forest, Ont.*

The samples are small, roundish, about an inch in diameter; skin, dark purple, covered with thick blue bloom; flesh, melting, juicy, not very tart; free stone. Ripens last of August, in advance of the ordinary Damson.

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### PLUMS FOR NAME.

SIR,—I send you by parcel post three samples of plums grown in my father's garden (Thos. Wilson, one of your subscribers). Could you give me the names in your next issue? No. 1 we consider our best plum; two trees gave us twenty pounds this week. The trees have been growing here for twelve years, and were purchased as Green Gage. No. 2 is not quite ripe. It will, I think, give us twenty pounds. No. 3 is, I think, the Yellow Egg, and three trees will have about forty pounds. No. 2 and 3 were brought from Lachine twenty years ago.

A. E. WILSON, *Clarence, Ont.*

No. 3 is, as you suppose, the Yellow egg. On consultation with our neighbor, Mr. G. W. Cline, we conclude that No. 1. is Bingham, and No. 2. Denison's Superb.

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### FOREIGN PEARS.

SIR,—Some time ago I wrote you I had imported some French pear, apple and plum trees. Some of them are now bearing, and I send you three varieties of pears, viz., (1) Marguerite Marillat; (2) Chaumontal; (3) Triumph de Vienne. My garden of three-quarters of an acre is half a mile from my house, so that I lose much of my fruit. A year ago I imported Laxton's Noble strawberry. It is a grand fruit; four, picked at one time, weighed one-quarter of a pound. The flower is perfect, the plant is very productive, and the fruit of good flavor.

J. D. ROBERTS, *Cobourg.*

It is certainly astonishing what interest may become centered in a small garden. Our former President, Rev. R. Burnet, became an authority on pear nomenclature, by the great number of varieties he grew on dwarf trees in his garden. Mr. Roberts once sent us a fine collection of foreign varieties of apples grown in his small garden. The results of his experiments will be interesting to our Association. No. 1 above named is a beautiful pear, not mature enough to pass judgment on its quality; No. 2 lacks in quality, and is not juicy enough. No. 3 has already been noticed in these pages.



## The Garden and Lawn.

### PREPARATION FOR PLANTING FALL BULBS.



**D**HAT more desirable ornament can be suggested for the border of a well-dressed lawn, than a few beds of spring flowering bulbs? They are so delightful to the eye in early spring, after gazing so long at the monotonous white snow and defoliated trees. The month of October is the very time for planting hardy bulbs, and, if they have not been already ordered, no time should be lost in securing them. The mere mention of tulips, hyacinths, crocuses, narcissi and snowdrops is surely enough to enthuse the flower lover with ardor in the preparation of the ground and the selection of varieties for planting.

The soil should be well drained, and before planting, spaded deeply and well enriched with old cow manure. Then plant each kind of bulb by itself, and, if contrast of color is needed, it can be secured by using different varieties of the same kind. The following cut, which has already appeared in this journal, well shows the proper depth for planting the various bulbs. Crocuses and snowdrops should be planted two or three inches apart, tulips five inches and hyacinths seven.

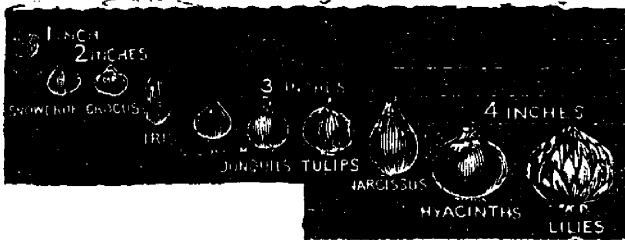


FIG. 77.—SCALE OF DEPTH FOR BULB PLANTING.

Mr. E. E. Rexford, a well-known American florist, writing about tulips in the *American Agriculturist*, says: "Among the tulips can be had scarlets and yellows, and other light colors in sufficient variety to afford charming and strong contrast. In the hyacinths; reds, whites and blues, afford ample chance for contrast. But do not plant double and single varieties promiscuously, because they happen to be of the color desired. Better keep each kind by itself. The same will apply to tulips, which show better in masses."

## THE TULIP.



**O**f all the bulbs for spring flowering there is none more charming than the well-arranged bed of tulips of contrasting colors. There are now hundreds of varieties which can be purchased for very little money—quite a different state of affairs from that which existed some years ago, when there was a wide-spread tulip mania and the prices rose so high that none but the rich could afford to purchase bulbs. The following account of that mania is given by Lindley & Moore: “In

the middle of the seventeenth century, tulips became a large trade, such as is not to be met with again in the history of commerce, and by which their prices rose above that of the most precious metals. It is a mistake, however, to suppose,

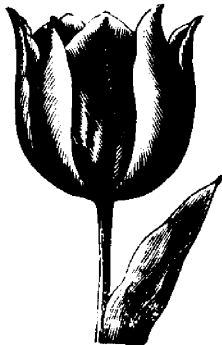


FIG. 78.  
SINGLE TULIP.

that the high prices paid for bulbs, amounting in some instances, to 2500 and 4600 florins, represented the estimated value of the root, since these large sums often changed hands without any transfer of property. Bulbs were sold, often without being seen. In fact, they were the subject of a speculation not unlike that of railway scrip in this country, at no very distant date. Tulips should be planted in the month of Octo-

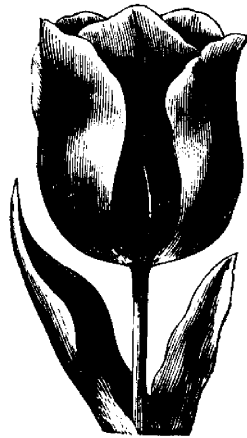


FIG. 79.  
DUC VON THOL TULIP.

ber, about three or four inches deep and about six inches apart. In buying, it would be wise to select varieties which will afford a succession of bloom and those which flower at the same time, should be planted together. Single and double tulips are both desirable, but, of the two, the single is preferred as most beautiful. Fig. 78. One of the best early, single varieties is Duc VanThol, (Fig. 79.) which may be had in a variety of colors, and has a neat dwarf



FIG. 80.—PARROT TULIP.

habit of growth. Of double varieties which succeed, Van-Thol, La Candeur, White and Yellow Rose are varieties highly recommended by Mr. Rexford. The Parrot tulips (Fig. 80) are very effective if planted in groups with shrubbery, or along the border of walks. The flowers are large, brilliantly colored and often they are fringed or twisted in an interesting manner.



## A TWO-ACRE CEMETERY.

SIR,—A number of us here—including all the subscribers of the CANADIAN HORTICULTURIST in the village—purpose making a new burying ground of, say two acres. We wish to lay it out in an orderly and ornamental manner, before it is occupied. Please give us a rough sketch, and oblige,  
 GEO. S. WASON, *Hawkesbury, Ont.*

*Reply by Mr. D. Nichol, Superintendent Cataragui Cemetery, Kingston, Ont.*



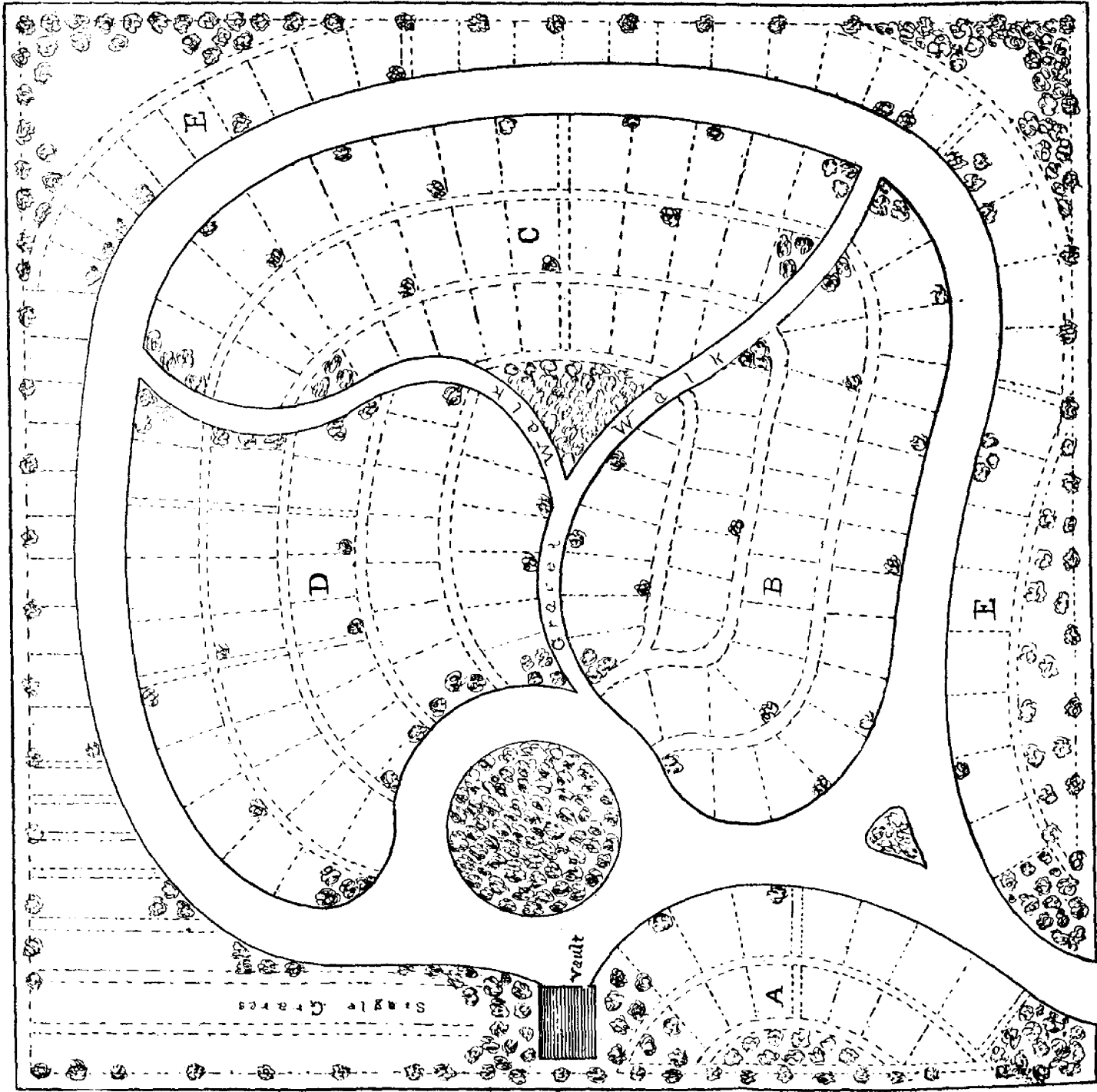
ACCORDING to request, I send you a design for laying out, on the garden and lawn plan, a cemetery, on a square two-acre lot, such as is required at Hawkesbury, Ontario. In regard to future management of a cemetery, be it small or large, I would here take the liberty of offering some suggestions, which from experience and observation I have been led to consider of great importance.

In the first place, an imperative rule should be established, that railings, copings, hedges, and fences of any kind, around cemetery lots be strictly prohibited. They are not only utterly useless, but they seriously detract from the natural beauty of the landscape. They render the tidy keeping of the ground almost impossible, and as they become dilapidated with age they are offensive to refined taste. It is a traditional notion which originated many hundreds of years ago, when church-yards, improperly fenced, were the only burial grounds. In the modern cemetery, the boundaries of lots should be marked by small corner posts, sunk in the ground so that the tops are level with the sod, in order that the lawn-mower may be worked without hindrance.

Any one who has been accustomed to see only old style cemeteries, with lots fenced like sheep-pens in a show yard, will take the trouble to see an improved cemetery, where all enclosures have been abolished, will readily become convinced of the folly of expending millions of dollars on useless railings.

Secondly. The height of headstones should be limited to two feet, or less. Few old style, tall, slab headstones are erected anywhere now, because of the difficulty of keeping them erect, their liability to be broken when leaning over, the certainty of their becoming moss-covered, and their altogether unpleasing appearance. In a cemetery which is to be beautified they should be strictly prohibited. A chaste monument, with space for several inscriptions, erected on a good foundation in the centre of the family lot, answers a better purpose than a number of headstones, and may be cheaper. Only one monument should be erected in a family lot. The initials should be cut on the top of all footstones, which should be level with the surface of the ground, permitting the lawn-mower to pass over them.

Thirdly. Such a thing as a raised lot, or terrace, must never be permitted, because it mars the beauty of surrounding lots, which are kept even with the



R o a d

DESIGN FOR CEMETERY ON SQUARE TWO ACRE LOT.

Scale: 40 feet to the Inch.

natural slope of the ground. The desire on the part of some lot-owners, entirely devoid of taste for landscape gardening, to have their lots raised to a dead level without regard to surroundings, is one of the greatest difficulties which cemetery managers have to contend against. Hence it is actually necessary that a rule be established prohibiting the raising of any lots more than four inches above the standard grade of the ground.

Fourthly. There can be but few well-kept gravel walks in a cemetery. They should be made only where there is likely to be so much travel that turf would be worn out. There is nothing so pleasant to walk upon as closely mowed turf; there is no walk more beautiful than one of nature's green carpet, therefore, the gravelling of paths or aisles between or around lots should not be allowed. Badly-kept gravel walks are nearly as objectionable as rusty railings.

Fifthly. Many lot-holders make a practice of planting flowers on and about the graves of their deceased relatives. The sentiment is praiseworthy, and should be encouraged to some extent, but it is quite possible to have too much of a good thing. Some kinds of flowers are short lived, and their dying foliage gives a shabby appearance. I have often seen cemetery lots turned into flower gardens, which did not look nearly so well as other lots kept in neatly cut grass, with only a small bed of flowering plants at the foot of the graves. A monthly journal, entitled *The Modern Cemetery*, is published by R. I. Haight, 243 State Street, Chicago. Everyone interested in the management of cemeteries should read it; costs only one dollar a year. Publication commenced March, 1891. I would recommend getting it from the beginning if it can be got.

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ASHES FOR ROSE INSECTS.—In *La Nature* the statement is made that if wood ashes are sifted when dry over the heads of rose bushes, after they have been syringed with water, the ashes will adhere to the leaves, and, on account of their alkaline nature, will soon make it very uncomfortable for any insect pest that may infest them. The ashes in moderate quantities will not injure the plants, but, on the other hand, will be rather beneficial as a fertilizer when washed off into the soil.

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LARGE, LUSCIOUS AND HANDSOME.—Pears should be picked before they are ripe enough to eat and stored in a cool, dry place. They have better flavor and longer keeping qualities if ripened off of the tree. They will do to pick to ship as soon as the seeds are dark brown or when the stem parts easily from the twig. If they are wanted for family use only, they had better be left a few days longer. The last few days on the tree is when they grow the fastest. Always pick pears, and all fruit in fact, by hand. Place carefully in shallow baskets or ventilated boxes and store away where the air can have free circulation around them. They will keep longest in a cold, dry, dark place.

## A MECHANIC'S GREENHOUSE.



BEING a mechanic with a very moderate income, but desiring more flowers than my slender means would allow me to buy, I determined to build a small greenhouse, believing that I could grow not only my own flowers but enough more to help pay for the expense of building such a house. The house is a three-quarter span, 24 feet long and 11 feet wide, extending east and west. It has a shed on the west end. The south wall is 4 feet high; the north wall 6 feet. The roof is made of sashes, the long span 7 feet, the short span  $4\frac{1}{2}$  feet. I used 10-inch glass, and there are three rows of glass in the sashes, as I found that wider sash, 7 feet long, would be too heavy to handle. I am a renter, and the greenhouse must necessarily be a movable one. The house is heated with a common brick

furnace, built under the west end of the south bench, with the door opening in the shed. Five or six feet of the flue, next the furnace, is made of brick; the remainder is made of 6-inch sewer pipe. The upward turn of the flue, at the eastern end of the greenhouse, is made with a T pipe (see A in illustration). By means of a swab thrust in at B, I can soon clean the flue. The south bench is built 2 inches back from the wall to allow the warm air to strike the glass at

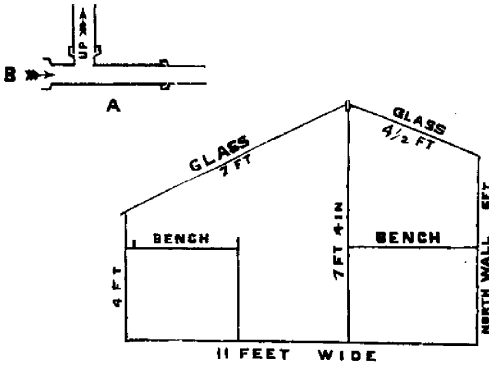


FIG. 81.—A MECHANIC'S GREENHOUSE.

the lowest point and thus keep the frost off all the way down. I built most of the house myself, and do not think it cost more than \$25 or \$30. A bushel of coal will heat this house for 24 hours.

I can grow many kinds of plants, and every year I sell more than enough to pay for all the expense of running the house. On very warm days, while I am away at work, my wife ventilates the building. I try to do all the watering before I go to work, or after I come home. The work required to keep the house in order is but a pleasant way of spending some of my leisure moments, and the little greenhouse gives much pleasure to my family and friends.—A Mechanic in American Gardening.

## ✧ The Kitchen Garden. ✧

### THE COTTAGE GARDEN.



IT is a pleasure, but, unfortunately, a very rare one, to see your vegetables or fruits as fine and large, and of such beautiful glowing colors as many of the spring catalogues depicted. Experience has taught us, or will sooner or later, that many of these novelties are gotten up for the occasion, and to induce the unwary to spend money foolishly. Henry Ward Beecher used to say that he took as much pleasure conning the pages of a spring catalogue, as he would in those of a work of fiction; and most enthusiasts in gardening will agree with him, for when these visitors come along during the snows of January or February, the old fever comes on us, and we find ourselves wondering again, if it is possible for anything to be so beautiful, and we invest once more in another novelty, very often to find that the catalogue is "vanity and vexation of spirit." But it is a real solid pleasure, when you look over your garden, to call to mind the many good things you have enjoyed in the shape of peas, beans, tomatoes, etc., not forgetting that best of all small fruits, the strawberry, and other things too numerous to mention. It thus serves a double purpose, reducing the butcher's bill, and also giving fitting nutriment to the body during the hot months of summer. You will also call to mind the surplus of good things you have in the cellar, in the way of preserved fruits and vegetables of different kinds, and last, but not least, is the pleasure you experience in knowing that (provided you are a good gardener) your garden is clean; that there are no weeds gone to seed, to commence their work as soon as the warm days of spring come. And then there is a satisfaction in having made a deposit in the bank, in the shape of a goodly pile of well-rotted manure in the corner of your garden.

Some of the duties are included in the pleasures, for instance: It is your duty to acquire this same pile of *old* manure, because many weed seeds are killed during the process of fermentation and decomposition, thus saving labor during the following season. In any case enough weeds will spring up to keep you busy, and it is a wise provision of nature, for, if we had no weeds we should not cultivate so much, and cultivation is necessary for growth, and also for the admission of the life-giving sun and air.

There are two classes of weeds against which I would particularly warn the amateur, and they both spring up late in the summer; I refer to purslane and

chickweed. It is almost impossible to get entirely rid of either. Purslane is very tenacious of life, for, if you pull it up and shake the earth from the roots, you shake the seed out, as it sheds its seed freely while still green, while the plant will take root again at the first shower of rain, in fact, there is no resource but carrying it out of the garden altogether. One writer has said, that if you hoe it up when but an inch high, you will get rid of it. That is not my experience, and I have tried many ways, finger and thumb weeding, and I find that putting it where it can do no more mischief is the most effective.

Chickweed is another insidious weed, for you will have a thick carpet of it almost before you know it is there, especially if the season be at all wet. Its seed also will shake out very easily; the only resource is, watch for it, hoe in time, and do not let it seed at all; if you do, you will repent when too late.

Another duty is, to clean all tools not in use, grease them, and put them away for the winter. If you wish to take time by the forelock, lay out your plans for the following season, and try if you can grow some specimens of fine and beautiful fruit for the Ontario exhibit at the World's Fair, Chicago. It will be a credit to you and to your country, and will let the world see that this is not the land of snow and ice, so many suppose it to be.

In conclusion, I will give a few rules which a cottage gardener would do well to learn off by heart, as they would be both money and pleasure to him.

1. Do not let any weeds go to seed.
2. If there are any seeded, burn them.
3. Rake up all rubbish, and what is not fit for the compost heap, burn.
4. Dig in old manure as soon as the leaves fall.
5. Prune grape vines when the leaves have fallen, and cover them with soil six inches deep later on.
6. Lay down raspberry canes, especially in exposed places.
7. Mulch strawberries with meadow hay, leaves, wheat straw, or straw manure, and cover the plants lightly when the ground begins to freeze.
8. Clean all garden tools, and wipe over with an old cloth or piece of cotton-waste, well soaked with coal oil.

Having complied with the above rules you may take a rest till those delusive visitors, the spring catalogues, begin to wake you up in the new year.

*Cornwall, Ont.*

W. S. TURNER.

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THE NATIVE HORNBEAN.—Our native carpinus, or hornbean, is one of the most ornamental of our small trees. Its clean, birch-like foliage in summer, its furrowed bark in winter, and its trim appearance at all times, bespeak for it more general use. In spring, its catkins push suddenly forward before the leaves, covering the tree with a mist of soft green that is a special feature of the landscape on the borders of swamps and streams.—Garden and Forest.

## HOW TO WINTER CABBAGE.

When cabbage are wanted in the spring only, they may be taken up, roots and all and laid on the ground, roots up, as close together as they will lie, the cabbage part just covered with soil. Where they are wanted for market or use during winter, a very good way is shown in the illustration, and is described in the *Rural New Yorker*, as follows :

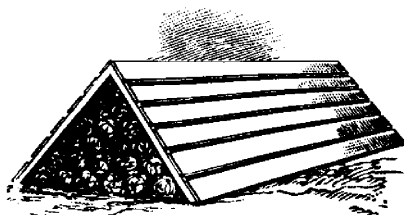


FIG. 82.—DEVICE FOR WINTERING CABBAGE

shown. Frames of 2x4-inch scantling are made and placed upright in the pit. For a pit 15 feet long, three of these are needed. Fence-boards are nailed to these frames, thus forming a complete crate. This is covered lightly with straw, and then with about four inches of dirt. The ends are stuffed with straw, which can be removed whenever cabbage-heads are desired.

CELLAR FOR STORING ROOTS.—Fourteen hundred bushels of roots will require between 2150 and 2200 cubic feet of storage-room. The main object in storing roots is to keep them at a uniform temperature as little above the freezing point as practicable. One of the best ways to do this is simply to pile them in long narrow piles on well-drained ground, convenient to the place where they are to be fed. An excavation about a foot deep should be made and a layer of clean straw placed beneath the roots. When the pile of roots has been made it should be covered thickly with straw and then with a foot of earth. At distances of six or eight feet along the apex of the pile, a drain-tile should be inserted to give ventilation. For a permanent cellar, in many cases, the most convenient arrangement is simply to partition off a corner of the barn basement by setting up 10 or 12-inch studs, boarding on both sides and stuffing the interstices with chaff or cut straw. Often a very convenient root cellar may be made in a gravelly or sandy bank adjoining the barn cellar. This arrangement is especially convenient where the root-cellar can be so built that it can be filled from the driveway in the second floor of the barn. Where a cellar is built in this way, grout walls, cemented on the inside, should be used, both as a protection from cold and against rats. The relative advantages and cost of these various ways of storing roots will, of course, depend entirely upon individual circumstances and surroundings.—Am. Gardening.

## HOW TO PACK APPLES.

Messrs. Pancoast & North, commission merchants of Philadelphia, speak favorably concerning the prospect for the sale of apples this fall. As soon as the markets are clear of peaches and pears, and stock of firmer quality comes forward, high prices are expected. Even now desirable apples, carefully packed, range from \$2.50 to \$3.25 per barrel for such varieties as Duchess of Oldenburg, Alexander, Gravenstein, Maiden's Blush, 20 Oz., Black Detroit and King. They also give the following suggestions and directions for packing apples, which, just at this season, will be of especial interest to our readers :

Two barrels of apples of the first grade sell quicker and for more money than a three barrel mixture of these two barrels with another barrel of the second grade. It pays better to market only the finest fruit in the best possible shape.

Apples for marketing should be picked from the tree by hand and handled gently ; all that fall should be discarded, even if they do not show any bruise at the time. Discard everything specked, or in any way faulty or imperfect. Pack in the best new barrels ; don't use poor barrels. Marketable apples will bring higher prices enough in neat, first-class barrels to more than pay the difference in cost. See that the barrels are made of well-seasoned wood, both heads and staves, so that they will not warp and the heads come out in transportation.

Remove one head of the barrel ; select uniform, fair average apples (not the largest) and hand pack them, stem down around the edge of the barrel ; then another row inside the first, and so on until the head is nicely covered close and tight, so they will not shift ; then put in about a half bushel more and shake the barrel carefully, so as not to disturb the facing, then add another half bushel and shake as before, and so on until the barrel is filled. It is important to shake the barrel five or six times while being filled to settle the apples into the closest space, to prevent further settling in shipment. Let the apples come up to the top of the chime, lay the head on, lean over the barrel, bear your weight on the head and shake until every apple is fixed into a shiftless place ; then use the press to gently crowd the head down to its place, and nail securely.

Turn the barrel over and mark the kind of apples, the growers name and initials, and brand Extra, Choice, Prime or Xs, to suit the grade.

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GOOSEBERRIES —The great drawback to the successful raising of gooseberries in this country is mildew. It is quite possible, however, to furnish conditions under which the plant may flourish equally as well as in more favorable localities. For instance, we know that the gooseberry delights in a moist, rich and cool soil, which we are able to furnish by deep plowing, heavy manuring, and mulching the soil thoroughly. To afford protection from the sun, partial shade and a northern location may be chosen ; the northern side of a barn or other building, or even of a board fence, is a great advantage in location. The center of the bush may be kept open by careful pruning, so that light and air can be admitted freely. Whilst it is not always possible to avoid mildew, especially in seasons when the weather is so favorable to its development, there are many painstaking gardeners who are very successful in growing English varieties which, it is almost impossible to raise, under ordinary circumstances, in this trying climate. The best fertilizing material that we have yet found for the gooseberry, is well-rotted cow manure, applied liberally and well mixed with the soil.—Orchard and Garden.



## ↔ Forestry. ↔

### PLANTING THE ROADSIDE AND ABOUT THE HOME.



As students and admirers of nature, we are unable to name a single native tree or shrub that is not interesting, and, in some important respects, beautiful and worthy of consideration in making a list for ornamental planting, especially on a large estate. For certain places each kind of tree is "just the thing." With a more extended knowledge of these trees, one is usually much less liable to be hampered by fashion. He will not make the same selections as his neighbors, and will thereby exhibit more originality in his designs.

In most species there is considerable variation in the modes of growth of different individuals. The student of botany and horticulture is learning never to express surprise at finding or hearing of specimens of any species of our trees or shrubs which have a weeping habit. In like manner, time is almost sure to produce dwarf specimens of every plant, and those with variegated or cut leaves, as well as those with white or double flowers. Testimony regarding variations of this sort is all the time coming in from different sources.

For shade trees along the roadside, or in the front yard, in country or city, among our deciduous-leaved trees, the sugar maple (including the black maple) is a general favorite, and the one most extensively planted. It is a fashionable tree, producing a dense, clean top, much the shape of a well-built hay stack. Too many trees of this sort, however beautiful they may be, give a monotonous appearance to a yard or roadside.

The American elm, when well grown, is the queen of the deciduous-leaved trees of northern temperate regions, and is often planted. Our numerous species of oaks are too much neglected as ornamental trees, partially, perhaps, because they often hold their dead leaves during winter.

Among evergreens, for general planting, the white pine, arbor vitæ, hemlock, red cedar, and Norway pine, can scarcely be equalled by any species in temperate climates. Well-grown hemlocks have been considered by competent judges to be the finest evergreens in cultivation, while, in many respects, the white pine cannot be excelled.

It should not be forgotten that a very large proportion of foreign trees and shrubs have not proved hardy, or, after a few years, in some respects fail and become unsightly. In this regard, if we try natives of our own region there is scarcely any risk.

Doubtless, the time will come, when the officers of at least some of our

rural highways will learn that it is next to vandalism to remove the last vestige of every shrub or small tree along the roadside. They often leave a tree here and there, but these are frequently damaged by the trimming. Groups or thickets of native shrubbery, including vines, untouched by ax or bush-hook, are a great source of delight to a well-trained person, as he views them while passing along the road. As a rule, at present, all bushes and shrubs are considered by the average pathmaster as entirely out of place, and not to be tolerated in any well-regulated neighborhood. There never was a greater mistake, and the more we talk about it, the sooner we may look for much-needed reforms. Mr. C. W. Garfield writes in *Garden and Forest* as follows :

“ Many of the most attractive highways in the State owe their beauty to the shiftlessness of the pioneers, who allowed a mass of bushes to grow up in the corners of the old worm fences undisturbed for a generation ; afterward to be utilized by more thrifty successors in the embellishment of the roadsides. No plantations formed by man are equal in beauty to these irregular masses of trees that are of Nature’s planting.

“ Occasionally I note an example of the workings of some man’s mathematical mind, who has tried to clear out one of these rows, leaving a tree once in so many feet, and thus ruining the effect for all time.” And again, in the same journal we read : “ The thorns and dogwoods and viburnums, the thickets of elder and hazel, the bitter-sweet and clematis and moonseed climbing over all—the flora of the world has no more beautiful plants than these and a hundred more which spring up of themselves and flourish until some one with a zeal for ‘ trimming up ’ attacks them with grubbing-hoe and brush-hook. And when the vines are stripped from the fences, and the brush all cut, gathered and burned, the roadsides are thoroughly cleared, it is true, but a desolation of rocks and ashes is all that is left in exchange for the fragrance of flowers, the beauty and coolness of green leaves, and the melody of the birds among them.

“ It is a comfort to note that road borders of native shrubs are being used more and more in the best park work. Every one of these shrubs would grace a palace garden, and yet, when they modestly appear along a rural highway they are mowed down, to ‘ improve the appearance ’ of the country.”—Flora of Michigan.

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THOSE of our readers who may have more or less celery in their gardens that is imperfectly blanched, or not blanched at all, may easily blanch it perfectly after it is taken up. Lift the plants from the ground, leaving a little soil adhering to the roots. Take common barrels, or the cases in which boots are shipped, put about two inches of sand in the bottom, and on this place your celery in an upright position. Pack the barrel, or case, full, of course putting only one layer. Sprinkle the sand before you put the celery in. Then put the barrel or case in a cool cellar, and cover with boards loosely, so that light is kept out, and in six weeks your celery will be blanched to the tips. Look at it occasionally, and if seems too dry and shows signs of wilting, sprinkle it with water. Care must be taken not to wet it too much, as it is apt to produce rust.—Floral Instructor.

## » The Apiary «

### THE BEE FOR THE BEGINNER, AND THE METHOD.



ABOVE other considerations the beginner in bee-keeping ought to have a bee which is amiable and docile, so as to be easily handled, without danger of much punishment from stings, else there will likely be premature discouragement, and the enthusiasm so necessary to success, will be nipped in the bud. Another consideration of much importance to the beginner, is to have bees whose queen may be readily distinguished and found among her offspring. To fulfil both essential requisites I know of no bees to surpass, if equal to, the Italians. We have the Carniolans, very amiable, but not so well tested, and the Albinos, less tried among Canadian apiarists ; but the character of the Italian for docility and manageability is well established and well-known.

I would, therefore, advise the beginner to commence with the pure Italian ; and, as experience and skill increase, try other desirable races, and choose the best for himself, or at any rate that bee which, to his peculiar personality and circumstances, is best for *him*. It is a fact, and not at all strange, that the very best apiarists, after ample experience in testing and handling, differ widely as to which is, for all purposes, the best bee. This is, of course, owing to the different circumstances ; and the different make up, mental and physical, of the manipulators themselves ; as well as the differences in the bees of the same race.

As to the best method or methods for beginners, circumstances must, to some extent, determine. Having got the best bees the next thing is the hive to put them in, and the hive which to him (the beginner) will be the easiest to manipulate and work to the best purpose (profit). With so many good hives before us, and so many "best" ones, it would be a rather dangerous, as well as presumptuous, business to attempt to name *the* very best. I shall not attempt it ; but allow the novice to find out by experience (as I did myself) which is best for *him*.

I shall, however, describe the hive which I now make for myself, and which suits me better than any of the many hives I have tried. It takes eight Langstroth frames crowded closely together for spring brooding and seven for after part of season and winter. The top-bars of frames are about an inch wide and double with bee-space between. The bottoms are both fast and movable to suit taste. There is an inch and a half hole in about the centre of the back end of hive, for ventilation, winter and summer—during the hot weather of the latter, and in the cellar in winter. The hole is of course covered by a button outside and a wire gauge inside ; zinc adjustable entrance.

For comb honey I use a super, holding seven brood section frames with ten separators, each frame holding four sections. For extracted honey, I use a second story, same size as brood chamber, with zinc queen excluder between it and brood chamber. Excluder also between section super and brood chamber. This hive can be used with equal facility for comb or extracted honey, or for both; and is the hive I prefer for myself.

The beginner ought to produce only comb honey at first, till experience familiarizes him with the manipulation necessary for extracting. Of course, the invention of the "bee-escape," has materially lessened the work and worry of extracting as well as of taking off the section honey. The "escapes" are in the form of honey boards and are placed between the supers of sections and the brood chambers, or between the extracting story and the brood chambers, when it is wished to remove either; the bees will then, in the course of a few hours, pass through the escape below into the brood chamber. The escape is so constructed that they can pass out but cannot return. It is certainly one of the best and most useful of recent apiarian inventions. With the valuable aid of the "escape," in extracting, the beginner may go into extracted honey, say the second year. Every apiarist worthy the name, ought to produce both comb and extracted honey, instead of either kind exclusively, except under very exceptional circumstances. If his market is local he will find a demand for both, and ought, of course, to be able to supply both. In the out market he will also find a demand for both kinds.

*Selby, Ont.*

ALLEN PRINGLE.

**CURRENTS.**—The best currant to grow for home use is the White Grape. Its fruit is sweetest and best for dessert use, its jelly has the best flavor, and it is superior to all others in quality for canning. If a late red berry is wanted, the Victoria is not excelled for northern culture. The Fay is larger but it is more sprawling and delicate in habit and the fruit is poorer in quality. If you want first-class currants in size and quality, set in rows in the open sunshine, cultivate thoroughly, and manure heavily. In pruning, permit the new wood to come on and cut out the wood that is four years old or upward. The Black Naples currant has a value not realized, except by our settlers from England. By scalding the fruit for a few moments in boiling water, and then putting into fresh water for cooking, the peculiar flavor of the skin is removed, and when canned for winter use it is much like the cranberry sauce in flavor and color. In growing the black currant, it must be kept in mind that it is borne on wood of the preceding year's growth, and to secure a succession of new wood it is necessary to cut back the points of growth each fall. The Crandall has no relative value for any use.—Orchard and Garden.

**November and December Numbers free** to all persons subscribing during the month of October for the year 1893.

## AMATEUR BEE-KEEPING.



I HAVE selected the above topic as the basis of a few remarks on the honey industry of Ontario. If an amateur be one who takes up and prosecutes the study of his subject, because his tastes lead him in that direction, regardless of the substantial profits he may reap from it, then I fear there are but few true amateurs in bee-keeping. Exaggerated notions of the profits derived from bees, and the erroneous opinions entertained by many, that bees "work for nothing and board themselves," lead more men to engage in bee-keeping than does the desire to cultivate a closer acquaintance with the life and habits of the bee. Still, the interior economy of a bee-hive is so wonderful, the instinctive powers and social habits of the insect so remarkable, that ordinary people become enamoured of the calling, and, in a measure, prosecute it for the pleasure and information it affords. Most practical bee-keepers are more or less amateurs, and like their calling for the pleasure it brings with it, which goes far to compensate them for hopes occasionally deferred, or a stinging resentment of their untimely interference with the domestic concerns of their pets.

A dozen years ago bee-keeping was in its infancy here and but few understood the subject. To-day there are hundreds of people throughout the province who have little to learn of the life history of bees, or of the theory and practice of their management. A dozen years ago honey was considered a luxury and could only be bought in drug stores. To-day it finds a place in every well regulated grocery, and is with many people a daily article of food. A dozen years ago a few hundred pounds of honey was considered a large gathering. To-day there are hundreds of men throughout the country, who annually harvest tons of it. A dozen years ago its price precluded its common use. To-day it may be bought for a little more than the cost of good syrup. Such has been the increase in apicultural knowledge, and what that knowledge has produced in the last decade, that we sometimes wonder what it will result in twenty years hence, for people are constantly joining the ranks of those engaged in the honey industry, whose possibilities can only be known when the necessary force to fully develop it is employed.

R. MCKNIGHT,

*Owen Sound, Aug. 11th.*

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THE PRINCE ALBERT is reported from the Geneva Experiment Station as an excellent red currant, with distinct dark green foliage. The fruit stems are extra long, and the fruit is of fair size. The fruit ripens about three weeks later than either Fay's Prolific or Cherry, thus lengthening the season about six weeks, as the berries hang a long time on the bushes before they become unfit for use.



## The Canadian Horticulturist

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

REMITTANCES by Registered Letter are at our risk. Receipts will be acknowledged upon the address label.

### NOTES AND COMMENTS.

SPECIAL ATTENTION is called to the proposed enlargement of this journal for the year 1893, which is set forth by this number. The editor, with the advice of the directors, is anxious to spend every available cent the treasury will permit, to increase the prosperity of Canadian fruit-growers. To accomplish this end the latest and most reliable information on horticulture will be published in this journal. The editor will unite with his own practical experience at Maplehurst, the results of the work of the horticulturists of the various Experiment Stations of Canada and the United States, and the gist of the information contained in the leading horticultural magazines of Europe and the United States. In view of this, we ask all our friends to second our efforts by sending in long lists of new subscribers, or names of persons to whom circulars, concerning our work, may be sent from this office.

Whether we continue the additional eight pages during November and December will depend upon the response in new subscriptions ; but the purpose is to continue the enlargement through the year 1893, if properly supported.

FALL WORK.—There is plenty to do at all seasons in the fruit garden. Where it is the intention to enlarge the small fruit plantation, it is well to make a beginning this month, if possible, completing the work in early spring. Raspberries, blackberries and currants begin to grow very early in the spring and are checked in growth by a late removal. Fall planting should be done as early as possible after the fall of the leaf, in order that the plants may become well settled before the very cold weather. Currants are very easily propagated from cuttings, and nurserymen say that those which are set in the fall make much stronger plants than the spring-set ones. They are cut six or seven inches in length and inserted in the soil, with the exception of the top bud, at a distance

of four or five inches apart in the rows. As cold weather approaches it is well to throw up the soil towards the cuttings and when the ground freezes cover the ground with strawy manure, thus preventing heaving of the ground.

OUR APPLE CROP.—From the news received, both through the public press and private correspondence, it would appear that the prospects for the sale of our winter apples this season, are very bright. We have just received a letter from Messrs. James Lindsay & Son, Edinburgh, Scotland, in which they speak as follows:—

“Judging from the appearance all around, we think the season will be a fairly good one for the consumption of American and Canadian fruit of good quality, green fruit, free from scab, and well packed. The European crop is fairly good and large, but the fruit is of very small size, hence such will not interfere with American and Canadian shipments. We hear that the States are about an average crop, so there will not be an excessive supply from that district. These are our reasons for thinking that the outlet is very good for Canadian stock. Your fruit should go forward carefully packed in full sized barrels, all of one weight. When they come in different sizes it is a difficult matter to sell satisfactorily. The kinds that sell best here are Baldwins, Spy, Spitzenburg, Canada Red, Greening, Rox and Golden Russets and Snow.”

Messrs. Otis & Lawrence, Montreal, agents for Woodall & Co., Liverpool, England, write :

“The English market is still in good condition. We think that if the market is seriously affected, it will be because of the poor quality, but, if the quality is all right, quantity need not be feared much. There will, no doubt, be a large quantity of apples sent to England this year, and, to be on the safe side, shippers ought to send only their best and soundest fruit. Montreal will ship about 2,000 barrels to Liverpool this week, and Nova Scotia will ship about 10,000 barrels to London.”

THE COLLECTION OF BOTTLED FRUIT for the World's Fair is making excellent progress. Mr. Pettit and his assistant are giving their whole time to this work, and our directors and others are donating liberal supplies of their finest fruits. Magnificent peaches from Essex and Lincoln, plums from Wentworth and Essex, grapes and apples from every quarter come to the office of the superintendent in succession and need constant vigilance to care for them properly. He has some 1,700 glass jars of all shapes and sizes, many of them very ornamental, and in these the fruit mentioned shows to the very best advantage. They will be stored in a cellar until next spring and then conveyed to Chicago. Too much cannot be said in honor of our President for his able superintendence of the work, but, as the Ontario Fruit Growers' Association are the chief donators and are always ready to further the work in every way, it will be manifestly unfair unless their assistance in the work is duly recognized by our Government.

CURRENT GROWING.—*Orchard and Garden* gives the following as the essential elements for successful currant growing: deep, rich, moist soil; ample top dressing of manure in the fall; mulching applied to the soil about the bushes immediately after the spring rains; regular annual pruning, cutting back old wood about one quarter, trimming out the old and useless wood and keeping the bush open and airy.

THE FRUIT AT THE INDUSTRIAL was about equal to its usual standard of excellence. There was to be seen at this fair a large number of exhibits of the very finest fruit which our fair province is able to produce; and the quality this year in this department was exceedingly good, considering the unfavorable season. The pins for supporting the names of prize cards, which were commended in our September number, were used at our suggestion and gave great satisfaction, both to exhibitors and to visitors. Everyone was able to see at a glance the names of the various fruits, as well as the prizes conferred, which is one of the great objects in making a good exhibit.

GROWING BLACK CURRANTS would be profitable, providing we could secure varieties that would be more fruitful than those commonly cultivated. On some soils it is a waste of time to grow black currants. They seem to succeed best on rich sandy loam, not too dry, and even then they need the best of cultivation. At the Geneva Experimental Station, the Prince of Wales, a new variety, has been tested and found to be productive and healthy. The horticulturist there, also recommends the Champion Black, Lee's Prolific, and Baldwin's Black. At our own Experimental Farm at Ottawa, a large number of seedling black currants have been raised by Professor Saunders, many of which are exceedingly promising. Among them we may find some even surpassing those named above.

THE FRUIT EXHIBIT of the Western Fair was a creditable one, but the number of exhibits was not as great as was anticipated. Grapes, apples and pears were especially good, notwithstanding that the season has been unfavorable. Peaches and plums were quite limited. The greater number of prizes were carried away by Hamilton growers, the names of Marshall, Bambfylde, Wilds and Burner appearing frequently.

A SHORTAGE IN THE ONION CROP for the season of 1892, is reported by *Farm and Home*. The information has been gained by careful inquiries from many correspondents. This is contrary to the estimate made early in the season, based on the amount of seed sold by the seedsmen to growers. The extremely wet season has very much injured the quality of the crop, and, in consequence, first-class stock will be scarce, notwithstanding the extensive sowing.

WOODALL'S DIAGRAM of the weekly fluctuations of the Liverpool Market in apples, is of interest, because it enables one to see at a glance the various changes which the prices have undergone. Last year Baldwins opened in Liverpool at 19/6 on the 30th of October, was at the lowest on the 20th of November; rose to 18/6 on the 1st January, 20/6 on the 5th of February, and to 33/ in the week ending 22nd of April. Total number of barrels imported into Great Britain last season was 1,450,000. There were nearly as many imported in 1888-9, the number reaching 1,435,222. The smallest was in 1890-91, when the total was only 451,000 barrels.





THE LATE P. C. DEMPSEY.

**I**n the Death of our dear old friend, MR. P. C. DEMPSEY, of Albury, on the 27th of August last, the Ontario Fruit Growers' Association loses an honored director and a faithful supporter. For nearly twenty years he has kept his place on our Board, and ever shown the deepest interest in our work, a fact which was recognized by the Society in making him president for two years in succession. His work as a hybridist is well known, resulting in the production of several fruits of value, among which may be especially noticed the Trenton Apple and the Dempsey Pear. A sketch of Mr. Dempsey's life appeared in Volume XI, p. 242, therefore we need not repeat it here. Suffice it to say that the officers and members of our Association unite in expressing their sympathy with the bereaved ones, and in testifying to the worth of the departed.

## ↗ Question Drawer. ↖

### SHOT HOLE FUNGUS.

**494.** SIR,—My plum trees made a rapid growth during the first part of the season and were heavily laden with fruit, but, about the latter end, 6th July, the leaves appeared as if scorched and have since dropped, leaving the trees almost bare. The fruit, however, still remains on the trees, but has grown very slowly. Can you tell me the cause and cure?

R. TROTTER, *Owen Sound, Ont.*

The leaves enclosed by our correspondent are riddled with small, round holes, as if made with small shot, for which reason this disease has been called the shot hole fungus. It is known to scientists as *Septoria Cerasina*. It attacks the foliage of both the plum and the cherry, and, though not usually so serious as in the case before us, inflicts considerable injury by interfering with the proper function of the leaves, or by causing them to drop prematurely. The leaves attacked first show dark purple spots, visible on both sides, from one

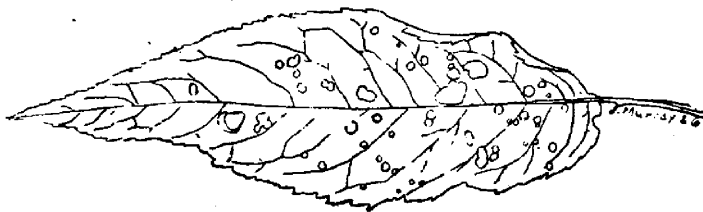


FIG. 83 —SHOT HOLE FUNGUS.

twenty-fourth to one-eighth of an inch in diameter. The tissue covering these spots soon becomes dead brown in color and finally drops off from the leaf entirely, leaving numerous clear-cut, round holes, such as are well shown in Fig. 83.

Under the microscope we may detect, upon the under surface, very minute black spots. These spots are the fruit of the fungus-like capsules in which the spores of the fungus are produced in great abundance. These are very slender, many times longer than broad, and quite transparent. Each spore is divided by cross walls into two or more cells, each of which is capable of producing a new parasite. The spores live through the winter on the old leaves, and thus serve to propagate the fungus in early spring.

In Vol. XIII, p. 316, may be seen an illustration of an highly magnified section through the leaf, including one of the spore capsules above described, and at *a* above are shown some spores still more highly magnified.

Nothing can be done at this season beyond destroying in some way, if possible, the old leaves. The best treatment, however, will be a preventive one.

Spraying in the early spring with copper sulphate compounds for the purpose of preventing the plum rot, or *Monilia*, of the fruit, may also prevent the development of the shot hole fungus.

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### ROOT PRUNING.

**493.** SIR,—Will you kindly tell me in the next issue how far from the trunk of apple trees should I prune the roots. The trees are twenty years old, Kings, and very large.  
O. F. BURCHARD, *Kings Court, Ont.*

This is very little practised by horticulturists in Ontario, and the operation is one that should be attempted with considerable caution. The danger lies in too much lessening the vigor of the trees by cutting off those roots by which supplies are taken in for its growth and development. If the roots are over-pruned, the life of the tree will be shortened. The benefit consists in checking the over-luxuriant wood growth, in order that the elements of nourishment, which are stored up in the tree, may be diverted to the formation of fruit buds. The same end is accomplished by grafting the trees on dwarf stock, as when a pear tree is grafted on the quince, or an apple tree on Paradise stock, and by summer pruning of the top. In England, where gardening is a higher art than here, root pruning has been much practised.

Root pruning should be done in the autumn or early winter. A trench is dug around the tree, at a distance from the trunk proportioned to the size of the tree. If begun when young, the tree may be so dwarfed that it will never become large; but, in the case of our correspondent, where the trees have grown twenty years and must be very large, the trench should be at least 10 or 15 feet from the trunk. The exact distance in each case will need to be left to the judgment of the operator. The roots should thus be laid bare, and, if found to be destitute of fibres, the leaders should be cut off in order to produce fibrous growth.

Mr. Rivers, an English nurseryman, who practises this root pruning yearly, with his apple and pear trees, sometimes makes them prolific dwarfs, growing only six feet apart, and producing abundantly. But Mr. Downing is of the opinion that, in this country, a single pruning is all that will be required to bring over-luxuriant trees into a fruitful condition.

Should our correspondent be successful in bringing his King apple trees into a state of productiveness, by giving them a thorough root pruning, the result will be worth making public through our journal. The great objection to this variety is its unproductiveness. Some say that, if top-grafted upon the Talman Sweet, the King becomes productive; but very few of the orchards of this variety have been so grafted, and, consequently, we will be glad if root pruning will accomplish the desired end.

## \* Our Book Table. \*

**NEW YORK AGRICULTURAL EXPERIMENT STATION TENTH ANNUAL REPORT, 1891.** Mr. Peter Collier, director. This report of 554 pages, bound in cloth, is full of the results of experiments in agricultural lines. The report of the horticulturist at the end is interesting, and we have made a few notes from it which may be interesting to our readers.

**FIRST REPORT OF THE DEPARTMENT OF AGRICULTURE OF THE PROVINCE OF BRITISH COLUMBIA, 1891** This contains sections upon diseases and pests; imports and exports; hard woods, culture and value; sugar beet; fruit trees and fruit, etc. From this report it appears that about 5000 people in the Province of British Columbia are engaged in agriculture, stock raising, fruit culture, etc., and the report is compiled from correspondence with them all.

**ACCIDENTS AND EMERGENCIES; what to do till the doctor comes,** by D. J. Groff, M.D. A thirty page pamphlet published by the Rural Publishing Co., New York, price 20 cents. This is an exceedingly useful hand-book to have within reach, giving information much needed in emergencies.

**CANNING AND PRESERVING AND PREPARING FRUIT PASTES AND SYRUP,** by Ermentine Young. A thirty-page pamphlet published by the Rural Publishing Co., price 20 cents.



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**BUT IS TROUBLED A GOOD DEAL WITH FOULTRY.**



**HE SETS UP A SCARE-CROW. HE IS ALL RIGHT AS FAR AS CROWS ARE CONCERNED.**



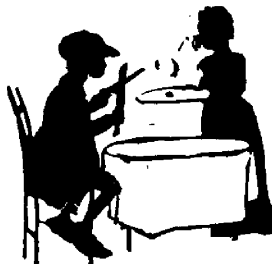
**HE PUTS MORE FAITH IN WATCHING IT HIMSELF.**



**THE CROP BEGINS TO SPROUT. HE MAKES AN INSPECTION.**



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