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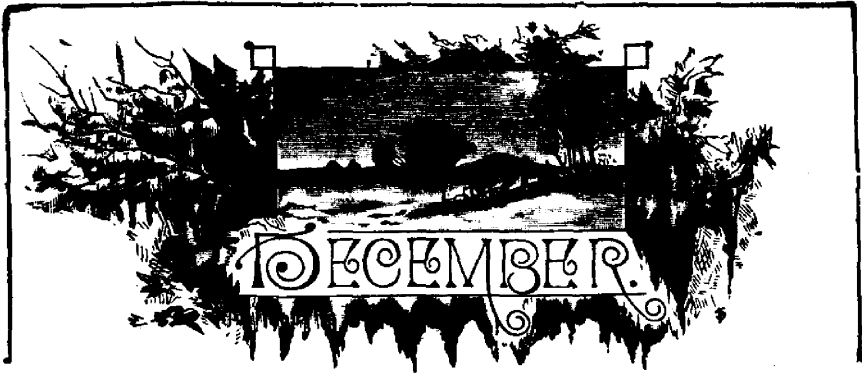
HOWELL.

THE
Canadian Horticulturist

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No. 12.



THE HOWELL PEAR.



FOR cultivation in the southern part of our Province we know of no variety of pear of its season superior to the Howell. We have grown it for the past thirty years at "Maplehurst," and the tree has proved itself healthy, vigorous, and productive. Nor is it of less importance to the planter to know that it is an early and regular bearer. The variety originated with Thos. Howell, New Haven, Conn., and bears the name of the originator. The large size, smooth, and clear skin, make a favorite for selling in the markets, at a time when it has few competitors.

The following is the description of this pear, as we have given it in the Report of the Ontario Fruit Experiment Stations.

Fruit—Large, obovate, pyriform; skin yellowish, waxen, reddish dots on sunny side, russet dots in the shade; stem $1\frac{3}{4}$ inches long; no cavity, point of insertion sometimes lipped; calyx partly open, in a deep russeted basin; core small; seeds few, small.

Flesh—Creamy-white, juicy, melting, granular near the core; flavor vinous, agreeable; a little tart.

Season—Middle of September till middle of October.

OUR COUNTRY ROADS.



OW that wheeling is such a popular and convenient mode of locomotion, the rough condition of our country roads becomes the more conspicuous, and if the agitation of the wheelmen for an improvement results in improved roads, they will have the lasting thanks of the farmers and fruit-growers of Ontario.

We are pleased to notice the interest now taken in road improvement by the Ontario Department of Agriculture which has appointed Mr. A. W. Alexander, Civil Engineer, Provincial instructor in road making. Road Bulletin No. 2 is just to hand and we have pleasure in giving our readers the following paragraphs and illustrations from it.

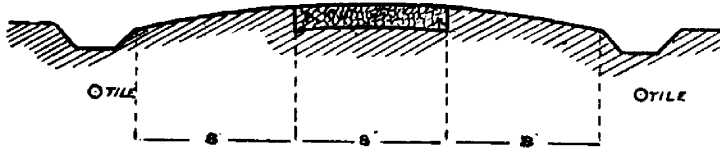


FIG. 1018.—CROSS SECTION OF COUNTRY ROAD.

Common field tile underneath open ditches. Gravel or broken-stone roadbed, eight ft. wide.

FORMING A ROADBED.

In making a road the grading and draining should be carried on during the same season, first the draining, then the grading. A road which is graded only, and then subjected to the traffic of fall and spring before draining is undertaken, is generally a shapeless mass by the ensuing summer, and a large amount of grading must necessarily be repeated. A road should also be drained and brought to the grade which it is to retain permanently before the road metal (gravel or crushed stone) is placed on it. Metal placed on an undrained roadway is so mixed with mud in the spring and fall as to be almost wasted. The natural soil under the gravel must be sufficiently firm to sustain not only the gravel, but the weight of traffic upon the gravel. No soil will do this unless it is sufficiently drained.

The roadway must be crowned, or rounded up towards the centre, to shed the water from the surface; the surface must be kept smooth and free from tracks, and it is as much the duty of gravel or crushed stone placed on a road to form a smooth, hard surface that will permit the water to flow readily off from it, as it is to form a durable covering to resist the wear of wheels.

The Centre of the road should be excavated to receive the gravel or crushed stone. Where this care cannot be taken the metal may be placed on the centre and the sides graded up. The crown of the road should be obtained chiefly by rounding up the natural soil, but the metal should be several inches deeper in the centre than at the sides. On country roads, a crown of one inch rise to one foot of width from the side to the centre is generally sufficient; on hills it may be greater so as to prevent the water following the wheel tracks and deepening them to ruts.

As an illustration of the advantages of permanent work along this line, the bulletin gives several engravings, some of which by kindness of the Minister of Agriculture, we give in connection with this extract.



FIG. 1019.—METCALFE STREET, ST. THOMAS.

The roadway twenty-two feet wide and curbed with 3 x 10 cedar, is made with a five inch rough flake-stone foundation and covered with clean coursed gravel, seven inches in depth after being consolidated with a heavy roller. It was built in 1892, and the photograph taken May, 1896.

The width of a roadway to be metalled depends upon the amount of traffic it will be required to accommodate. Eight feet will be ample for the majority of roads in rural districts. Roads forming the approach to towns may sometimes be metalled to a width of sixteen feet. The depth of metalling need never exceed after consolidation twelve inches, if of a good quality and clean, and eight inches is the least which should ever be employed, the thickness varying with the amount of traffic. It should be placed on in layers, and each layer thoroughly rolled, the subsoil having first been well consolidated.

After the work of forming the roadbed has been completed, a great deal may be done toward levelling the sides, seeding, planting trees, etc., and not until the road allowance between the fences is brought to a right condition, should the road be considered finished. No investment offers better returns than the building of good roads.

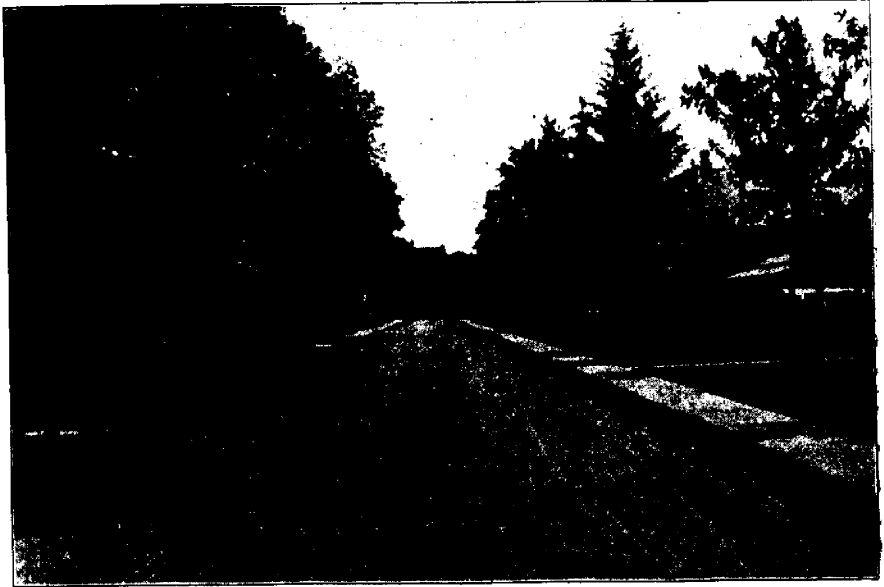


FIG. 1020.—EAST STREET, ST. THOMAS.

The roadway is twenty-two feet wide, curbed with 3 x 10 cedar and made of crushed stone ten inches in depth at the centre and seven at the curb after consolidation with a heavy road roller. The sidewalks are four feet wide of pine. The street was improved in 1895, and the above photograph taken May, 1896.

RESIDENTIAL STREETS OF TOWNS.

The principles of roadmaking which have been discussed, draining, rolling, metalling, etc., are all applicable to town and city streets, but in carrying them into effect they must be modified so as to add to the appearance of the finished roadway in a greater degree. The value of well-built roads in adding to the desirability of a town as a place of residence and thereby increasing the value of property, is greatly underestimated. So much is this the case that, while most country roads are not what they should be the streets of towns and cities are very much worse in proportion to the shorter road mileage and the ability of the citizens to pay for suitable pavements. In every town are to be found streets bordered on each side by handsome private residences and beautiful

lawns, while the streets between them is overgrown with weeds and at times almost impassable. To properly boulevard the streets, curb and macadamize the driveway, is not a costly undertaking, while the benefits in giving a park-like appearance to a street are of a nature not to be overlooked. Wherever street improvement is commenced it becomes very popular.

One of the first considerations is the width of the carriage way. The narrower this can be made, the better is the opportunity to have wide boulevards and handsome shade trees. An unnecessarily wide carriageway entails extra cost of construction and maintenance. A width of from twenty to twenty-six feet is found ample to accommodate the traffic of nearly all residential streets, even of the larger cities.



FIG. 1021.—FOREST AVENUE, ST. THOMAS.

The above photo shows the street in process of construction, May, 1896.

In forming the roadbed it should be excavated to the required width to receive the metalling, and the excavated earth used in making boulevards or for filling in low lots to bring them to the grade of the street. The centre of the street should not be higher than the lawns on either side.

To confine the macadam in place and protect the boulevard and gutters it is advisable to place on each side of the roadbed a line of curbing. Where flagstone is easily obtainable it is the most durable curb, but a good substitute is three by ten inch cedar plank, spiked to six inch in diameter cedar posts. The

posts should be two and a half feet in length placed in the ground at intervals of eight feet, and bevelled at the top so as to slope the curve slightly toward the boulevard.

The following illustration is from a photo of a street of one of the most progressive towns in Ontario. This street was laid in 1895, and its condition in 1896 needs no comment, the picture tells the whole story. It will be seen that there are fine residences on this street, open to full view, the sidewalks are excellent, there are good boulevards, the kerbing is good—but the roadway! The material, evidently, has not been compacted by a roller and one is in doubt whether a gang-plow has not been used by mistake. With a good heavy roller this could be made an ideal town or city street.

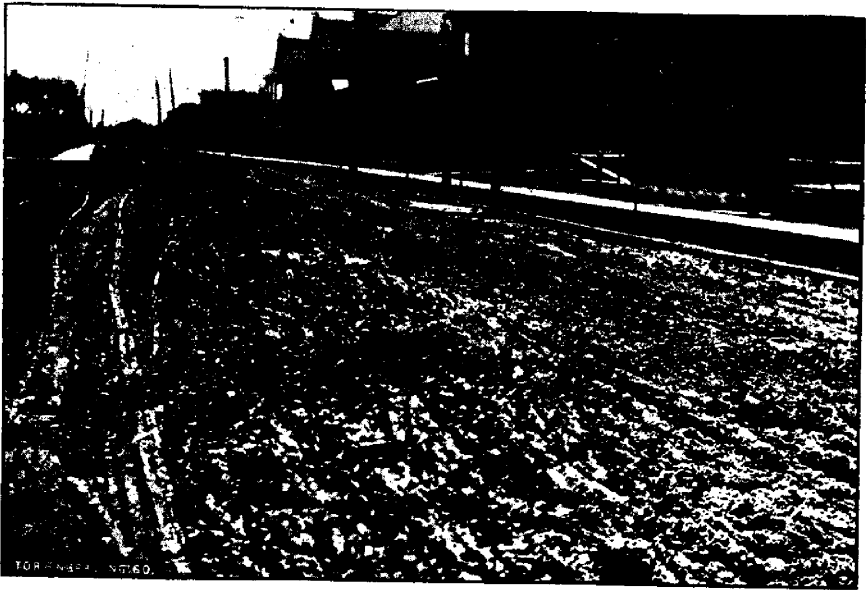


FIG. 1022.—AHREN'S ST. BERLIN, APRIL 20TH, 1896.

In obtaining drainage, a line of common tile should be laid under each gutter, below frost, and should be covered if possible with a porous material. The surface water may usually be led to the tile drains by catch basins placed where the grade of the road renders them most serviceable. If a system of sewers exists, it materially simplifies the question of obtaining outlets for surface and tile drains.

Grades should be reduced as far as practicable, having due regard to the draining of surface water and having regard to the elevation of the adjoining property. In fixing the grade it is rarely necessary to injure adjoining property by excess of cuts or fills in front of it.

True economy in expenditure for street improvement is seldom understood in towns, and still more rarely is it put in practice. Streets are constructed and maintained by large amounts annually appropriated from the general funds, but the appropriations are sub-divided and scattered over the street area in such small sums that the work performed, lacking the uniformity and unity so necessary to strong and durable results, is quickly absorbed by the mud. Fifty dollars is spent in an endeavor to cover water with gravel, with the result that the money is lost sight of within a year; whereas a proper amount spent in underdraining and carrying the water away would accomplish results that would be of benefit for a quarter of century.

GOOD ROADS IDEAS.



DAKE the tire wider and the road better. Many farmers' clubs are expressing themselves in favor of broad tires and convict labor on highways. Produce don't produce until it is marketed. The report of Prof. H. L. Waters, dean of the State Agricultural College, on the result of tests made by the difference in draft of wide and narrow-tired wheels, states that "by using the wide tires an average of 53 pounds of draft is saved. A horse is computed to exert a pull of 150 pounds for ten hours per day, travelling at the rate of $2\frac{1}{4}$ miles per hour. On this basis the wide tires save slightly more than one-third of the exertion of the horse."

An Illinois farmer who has paid \$1,200 road tax on the highways adjoining his farm, says they are no better now than they were years ago. It's the same way most everywhere. Real progress and not temporary tinkering is what we should demand. Roads are the veins and arteries of commerce. The better they are the better the trade circulation.

In Holland, where they have the best roads in the world, it is said that a farmer will haul, with a team of large dogs, as heavy a load as can be drawn over a bad road with a team of horses. This reminds us how dog-gone bad our roads are.

This country has 1,300,000 miles of common roads. This would encircle the globe fifty times, or go to the moon more than five times. But if most of them would go there just once and not come back, earth would be just about as happy.—New York Farmer.

A French gardener accomplished the unprecedented feat of raising asparagus in October. The Czar had a bunch of it for his dinner on October 6, and the price of it was 90 francs, or 60 cents for each stalk.

THE EARLY VICTOR.

The Early Victor has fruited at "Maplehurst" for two years past and commends itself as an excellent early black grape. It ripens nearly as early as Champion, and has a very pleasant, sweet flavor, without foxiness. To reach its best condition for use it should be left hanging a week or so after it begins

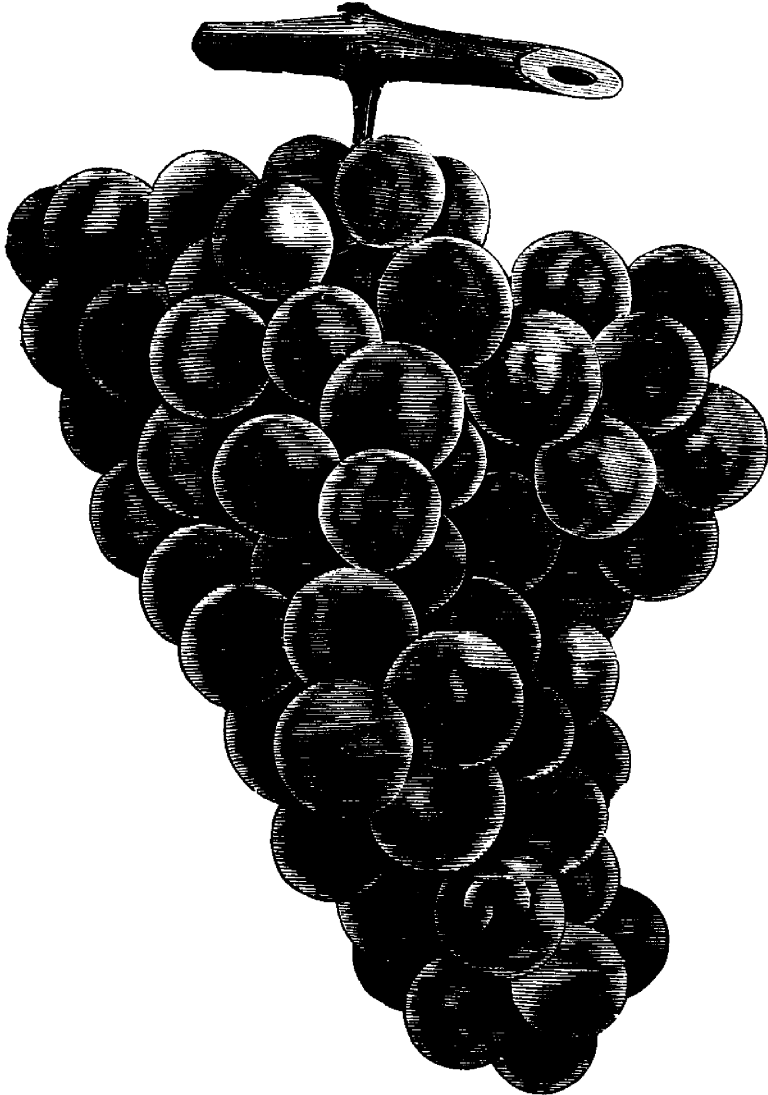


FIG. 1023.—EARLY VICTOR.

coloring. This grape originated with John Burr, of Leavenworth, Kansas, about 1870, from seed of Delaware, fertilized with some variety Lobrusca class. The vine is vigorous, and productive; and the berry medium size, with heavy blue bloom.

THAWING FROZEN FRUIT.



EXPERIMENTS have been conducted by Professor Muller-Thurgau, with the view of learning the least destructive or injurious method of thawing vegetables and fruits when in a frozen state. Taking fruits of the same kind and quality, and as nearly as possible of the same size, he froze them and then placed a portion of them in lukewarm water and another portion in water at zero, or 32 degrees Fahrenheit. A third portion he hung up in a room at about 68 degrees Fahr., and a fourth in a place at zero, Fahr. The result, in each case, was as follows:—At a temperature of from 23 to 19 degrees Fahr., the hardest kind of fruits remained uninjured, whether the thawing was slow or quick. Of those which were somewhat over ripe, only the ones which were thawed in warm or cold water were injured, and those thawed in warm or cold air showed little or no evil effects. Of those still more over-ripe, the fruits thawed in water were completely killed, while those thawed in the air were only partially injured. From the above it is deduced that the freezing of fruit is not always fatal; as if the cold be not too intense, it can be again thawed, and still remain sound. Should the cold be very severe, however, frozen fruit is quite spoiled, and cannot be saved by any means whatever. As soon as it is perceived that the fruit is frozen, it should be warmed, just sufficient to prevent any further freezing; for the more the ice forms in the fruits, the greater the damage. The warming should be as slow as possible. To immerse them in cold water, or to handle them with warm hands, would effect nothing but injury. Frozen fruit is very susceptible to pressure, which is another reason for not handling it. If it is possible to warm the room where it is lying, it had better be done, and leave the fruit alone. If experiment shows the fruit cannot be kept after slow thawing, it should be kept in the frozen state until eaten. Frozen apples thrown into water and boiled at once, cook as if they were sound, and are not impaired in flavor. If allowed to stand after thawing, chemical decomposition takes place, giving them a flavor characteristic thereof. Frozen apples can best be utilized, however, for cider making, as the flavor of the cider is not impaired, if care is taken to see that the actual work of fermentation begins at once. The same process is pursued in thawing vegetables.—Cal. Fruit Grower.

Bildad Jones : “ Father, kin I go down cellar an’ git some apples ter eat ? ” Farmer Jones : “ Yes, Bildad ; but see ye sort ‘em all over fust, an’ don’t pick out none but th’ bad ones.” Bildad : “ But s’pose thar ain’t no bad ones, dad ? ” Farmer Jones : “ Then ye’ll hev ter wait till they gits bad, Bildad. We can’t afford ter be eatin’ good, sound apples thet’s wurth a dollar a bushel.”—*Judge*.

OUR APPLE MARKETS.



HERE is no doubt that apple growing has received a severe set back in Ontario on account of the low prices which have prevailed during 1896. Many growers who have land in orchard that is adapted to peaches or other desirable fruits, or even to vegetable gardening, are digging out the apple trees to make room for more paying crops. Certainly the time has passed when apple orchards of ordinary varieties, without cultivation, manure or pruning, will pay the owner, as they have done in the past; and the time has come when such orchards should either be dug out, or top-grafted to the very finest varieties.

Any one who studies the foreign apple reports, as well as those from Chicago and the South, will find that the finest varieties are worth growing, if the owner is prepared to give them the proper care. Canadian apples take the lead in foreign markets because of their keeping qualities, their beauty of color, and high flavor. As an example in proof we quote from a report by James Adam, Son & Co., Liverpool, dated the 24th October, 1896:

"Arrivals this week show the enormous total of 107,782 barrels, a quantity never previously recorded, even at the height of the heaviest season. Of these, about half were catalogued on Wednesday, and, the quality of Boston and New York stock being mostly of a rather low standard, price, unfortunately, experienced a further decline.

"Canadian stock, however, has maintained a steady tone throughout, anything really choice being eagerly competed for, thus proving that a good outlet exists for fruit of this class. Unfortunately, there is yet plenty of room for improvement in values, if senders are to find the business a profitable one, as, after deducting the heavy freight charges, results, in many instances, barely cover packing expenses, much less cost of fruit, etc. All the same, we can hardly think that proper care is being given to the selecting of fruit for export, so many samples shown this week being anything but good. This, perhaps, applies more particularly to Greenings than to other varieties, many of them being badly spotted, though Baldwins, as a whole, are somewhat of a disappointment thus far, the stock running small in size, and, as before pointed out, being unattractive in appearance. Kings maintain a high standard of quality, and the trade is not failing to appreciate them. Snows, too, considering the quantity, command a fair share of attention, and, although prices were hardly so firm on Wednesday, they picked up again yesterday, when some very satisfactory sales were made of this variety."

In Messrs. Woodall & Co.'s report of Nov. 7th, over 85,000 barrels were reported as receipts of the week, and prices promising to advance. Newtown Pippins were arriving and selling from 14/ to 22/ for medium to good; while Baldwins and Greenings were bringing 9/ to 10; Blenheims 10/ to 12/3, and King 11/ to 13/.

On the 18th of November the following encouraging reports came to hand:

Liverpool.—Messrs. Simons, Shuttleworth & Co., cable:—"Baldwins, Greenings, 10/ to 12/; G. Russets, 11/ to 13/; R. Russets, Spies, Spitz, Seeks, C. Reds, T. Sweets, 9/ to

11/; Kings, Cranberry Pippins, Snowe, 13/ to 15/. Only choicest fruit brought the highest quotations. The market opened strong, but declined during the day and closed weaker. We have had to force sales to get stocks out of the way of the large incoming receipts."

Glasgow.—Messrs. Simons, Jacobs & Co., cabled 17th :—"Baldwins, Greenings, Spies, Cranberry Pippins, Ribston Pippins, 10/ to 12/; G. Russets, R. Russets, Spitz, Seeks, C. Rods, 9/ to 11/; Kings, 13/ to 15/; Snows, 11/ to 13/. Some fancy fruit brought even higher than our highest quotations. The market opened firm and closed the same, demand good."

London.—Messrs. Garcia, Jacobs & Co., cable to-day :—"Baldwins, Kings, 10/ to 12/; Greenings, Spies, 9/ to 11/; G. Russets, 12/ to 14/; Spitz, Seeks, C. Reds, 8/ to 10/. Prices to-day rule about midway between our highest and lowest quotations. The market opened firm and gradually improved, closing with 6p. to 1/ advance. The demand is genuine and good stock advancing."

Leith.—Messrs. Michael, Simons & Co., cabled 17th :—"Baldwins, 11/ to 13/; Greenings, 10/ to 12/; Kings, 13/ to 15/."

On the whole it would appear that the best varieties of apples properly selected and packed, have not been unprofitable even this year, and that those who are prepared to make the business a study and follow the best methods of cultivation and packing, as laid down by our Association, may still hope for good success.

FEEDING APPLES TO STOCK.



SOME twenty years ago I remember having had a very large crop of apples one year, and in order to dispose of the culls, having fed them freely to horses and cows. The experience was so satisfactory that it has induced me to dispose of surplus apples in the same way whenever I had such to feed. Many farmers are prejudiced against apples for feeding milch-cows. I do not see any reason why they should be. Experience is rather in favor of apples if fed judiciously. Any good thing can be overdone. Grain is good for horses, and yet you can injure them by overfeeding. So with apples. I fully agree with my friend Mr. J. S. Woodward, when he says, in the last issue of "Rural New Yorker :"

"The proper way to feed apples to cows is to have them ripe and sound. Green or rotten apples are not good food for anything. The cows should never be given a full feed of them at first, or given them on an empty stomach. At the first the cow should have no more than two or three quarts once a day, but this may be increased so that in ten days she may be safely fed one peck twice a day, and if a very large cow, twice this quantity. In all cases the cow should have some dry food when eating apples, and as apples are quite rich in nutritive ratio—1 to 8—she should have something like clover hay or wheat bran to balance the ration. Cotton-seed meal is a capital food to add to apples for cows, as its effects is constipating, while the apples are rather laxative. Still I would prefer to feed a mixture of cotton seed meal and wheat-bran. If, when

feeding liberally on apples, the hay should happen to be largely clover, then it would be well to add a little corn-meal to the provender; say, make it one-third each, corn-meal, cotton-seed meal and wheat-bran."

HOW TO FEED APPLES TO COWS.

The cow that has her own way in eating apples, or potatoes, namely, picking them up at leisure from the ground or low manger, unmolested, will seldom choke. I often feed apples, especially large ones, whole, and am not in great fear of accidents resulting from the practice. Yet, ordinarily I have the apples ground through the root-cutter, which undoubtedly is the better way. Thus the ground apples, the cut hay or straw and the grain ration can all be mixed, and eaten together. If I had no root-cutter I think I would chop the apples coarsely in a large plank box, using a sharp spade to chop them with, or arrange the manger somewhat on Mr. Woodward's plan here illustrated. He says: "If a pair of posts or stakes be firmly set in the ground, or made fast to the floor like a pair of stanchions, just far enough apart to admit a cow's neck, and a hole be bored just high enough so that a pin put through will prevent the animal raising her head quite level, it will be impossible for the apples to roll down into the throat and choke her. (Fig. 1024.) The same apparatus will prevent animals choking when eating potatoes or any other food. What makes the animal

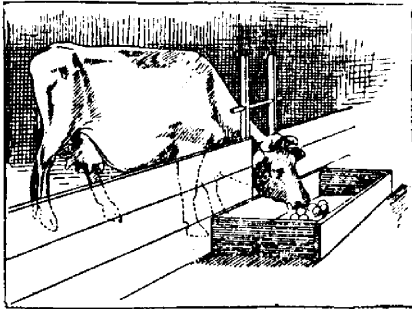


FIG. 1024.

choke is raising the head so high that the pieces slip, by their own weight, into the gullet." I think that the instructions and information, as here given, should induce those among our apple-producing friends who have yet been in doubt as to the advisability of feeding apples, to relieve the country of the otherwise undesirable surplus by turning it into milk, butter and meat. Now, in its great wealth, it is really a source of annoyance and loss. It can be made a source of income.—Farm and Forest.

Apples for Cows.—We consider apples as a cow food, well worth the cost of picking up. We feed about a peck per cow twice a day just before or after their grain ration. An increase of milk immediately follows such feeding, ceases when the apples give out. For grain with apples, we like wheat-bran, corn-meal and cotton-seed meal, 200 pounds bran, 100 pounds each corn-meal and cotton-seed meal. Apples are a nuisance in a pasture where cows are,

as the cows chase from one tree to another, and use up too much of what ough to be turning into milk; besides, they will get thin in flesh. If a cow get a chance, she will eat enough to make her drunk in short order, unless immediate attention is given her. If we can get them soon after their excessive eating, or when they will not refuse grain, we give them from two to four quarts of corn-meal, and thus prevent any injurious effect. The oil of the meal counteracts the acid of the apple, and fermentation is not caused in the stomach. The corn-meal remedy has been worth much to us. There are now in our barn three cows that got away yesterday, and had about seven hours of all the apples they wanted. They were too full to eat the grain, and are now lordly drunk. They look sorry, but they have ceased to give milk, neither will they, this season, give their full former flow.

R. N. Y.

THE ELBERTA PEACH.



AMONG the whole list of peaches, both old and new, there is no variety that has attained a higher place in public estimation than the Elberta. It is liked equally well by the grower and consumer. About twenty-five years ago Dr. Samuel H. Rumph, of Georgia, raised about 12,000 seedling peach trees saved from the very choicest named varieties, and in the whole lot there was but one that he deemed worthy enough to be preserved. This was the product of a cross between the Chinese Cling and Crawford Early. He bestowed upon it the name Elberta, in honor of his wife, and it has in turn been an honor to its namesake. Knowing something, and hoping more of its good qualities, he planted extensive orchards of it, from which he shipped large quantities of choice fruit, and realized profitable returns. It was not long before other peach growers learned of the good qualities of the Elberta, and began to plant it; first in the Southern States, where it had already proved its value beyond question, and then in the northern peach-growing sections. It has proved to be one of the standards in all regions, from Georgia to Michigan, and from Connecticut to California. The tree is vigorous enough to make a good orchard tree, spreading in habit, and has large leaves, somewhat like its parent, and is as hardy in tree and bud as the average of varieties. It ripens its fruit a little before mid-season, or about with Old Mixon Free. The fruit is above the average in size and oval in shape, with a suture on one side. The color is lemon yellow, a blush on the sunny side. The flesh is rather pale yellow, tender and juicy, yet, firm enough to ship well. In flavor there is nothing lacking. Altogether, there is, perhaps, at the present time no peach, for all sections and all purposes, quite so valuable as the Elberta.—H. E. Van Deman, in *Horticulture*.

KEIFFER PEARS FOR THE ENGLISH MARKET.

We note a question and answer in the Rural New York, regarding the Keiffer pear, and as this pear is being widely planted in Ontario, the reply will be of general interest, the question is :—

Would it be advisable to ship Keiffer pears to England? Would they carry across the ocean all right if packed and shipped as soon as picked? Could they be packed better than to wrap each in paper and put them in bushel boxes? I can get boxes for about 12 or 13 cents bound with hoop iron. Or would barrels be best? What would it cost to send them? For how much would they, probably sell? Can you recommend any reliable merchants in England? Is there any other market that would be better?

Reply by Otto G. Mayer & Co., New York.

Some of the questions which G. W. F. asks are impossible to answer. If he can ship Keiffer pears in boxes he describes, they will undoubtedly sell in Liverpool, London and Glasgow; but in view of the immense quantity of apples now being sold in these markets, it would be only guess-work to name a probable price. The freight would not be heavy for one of those boxes. The freight across the water would not be over 30 or 40 cents at present rates; maybe less. Of course, everything depends upon the condition in which the fruit arrives. If it should arrive sound, it would meet with a ready sale; but if ripe when shipped it would arrive in bad order without doubt, and there would be losses. Barrels would be undesirable packages, as they are too large for the small dealers abroad to handle. Later in the season there is a large business done in exporting California pears in such boxes.

Reply by Keugon, Parsons & Co., New York.

Last season, as there was a heavy crop of pears and a poor market for them here, I sent over some thirty odd lots from different shippers in various parts of New York State, with the object of learning what could be done to relieve the market here. These were chiefly Bartletts. My advice then was to pack the pears green in kegs, and those shippers who followed that advice, and packed green, did pretty well. The merchant to whom I sent them wrote me, suggesting that, in the future, they should be packed in boxes similar to the California boxes, which can be seen anywhere. I do not quite agree with this, as some years previous I sent over some Clairgeau pears, and took a lot of trouble as regards boxes, without any better result. The best package, to my mind, is a bushel keg, and the pears should be packed green. As regards packing in paper, I don't think that it makes any difference. I sent over, last October, about fifty kegs of the Keiffer pears, and I received after deducting all expenses, \$1.20 per keg. The reason that I suggest kegs is that they are easier to get, the fruit can be more easily packed in them, and they stand the handling better. This year it is difficult to say what could be done with pears; there have been shipped 603,000 barrels of apples this season, as against 35,000 last season, with the result that apples are selling very cheaply, which will of course reduce the price of pears.

A DOMINION JOURNAL.

SIR,—Your kind offer to allow me an opportunity of occasionally ventilating myself on some kindred horticultural subject, is highly appreciated by me, as I dabble a little in nearly every department of its many divisions, and by our exchange of ideas we may profit. If you will bear with me now I will try and lay before you in a roughly hewn out manner an idea which has been cropping up in my mind at intervals, and which if practicable, would benefit the CANADIAN HORTICULTURIST and all the Canadian horticulturists as well.

The scheme is to make the CANADIAN HORTICULTURIST Canadian in its broadest sense, and to extend its circulation all over the length and breadth of our fair land. This, I think, might be accomplished by something like the following arrangement: We have in Quebec, as you have in Ontario, a Fruit Growers' Association; but we have no organ such as the CANADIAN HORTICULTURIST. There is, as you are aware, a Fruit Growers' Association in Nova Scotia. Now wherein would lie the objections to all the Provinces joining interests with the CANADIAN HORTICULTURIST in making it in reality, as in name, the CANADIAN HORTICULTURIST. In a word, let us have the provincial departments under the charge of the different "Fruit Growers' Associations," or of some one well qualified in the several Provinces to supply interesting matter to the amount of two or three pages each week, with power to increase the space as occasion required or the importance of the subject demanded. With the above co-operative arrangement, and a weekly circulation, in my opinion, a great advance would be achieved all along the line. I am sure I am justified in stating that a weekly edition of the CANADIAN HORTICULTURIST would be considered a great boon, and would be very highly appreciated in this part of our province as well as all over our country. The time too seems opportune to advance the CANADIAN HORTICULTURIST plea as an educating medium, and by its appearance *weekly* instead of monthly, its usefulness in that particular line would be certainly more than quadrupled. I think it would most probably follow the established principle in many scientific instances, and become sixteen times more beneficial, and surely that would be something worth striving for. In submitting the above to you, I hope you will give it your consideration, and bring the object foreshadowed into workable shape, because union and co-operation in horticulture, as in all other affairs, is conducive to strength.

Another point of importance in a *weekly* edition would be its value as an advertising medium.

With some such federation of our horticultural forces, our possibilities in the future can only be guessed.

Hoping you can see your way to mature some such advantageous scheme is the desire of

FRANK ROY,

*Corresponding Secretary of the Montreal Horticultural Society
and Fruit Growers' Association of the Province of Quebec.*

MANITOBA FRUITS.

A correspondent residing at Morden, Man., has furnished the Horticulturist of the Central Experimental Farm with the following list of fruits exhibited at the Rockwood Fair a short time ago. This exhibition of fruits was brought about by the efforts of Mr. T. Frankland, of Stonewall, Man., one of the pioneer fruit growers of the province.

Apples.—Wealthy, Anisim (Russian), Whitney, October, Duchess, Sweet Russet (Russian), Tonka, Excelsior, Recumbent (Russian).

The list of Crabs is quite extended:—Hyslop, Transcendent, Virginia, General Grant, Montreal Beauty, Yellow Siberian, Red Siberian.

Plums include native and American varieties, among the latter DeSoto and Luedloff.

Of grapes, fruit of native seedlings and Moore's Early were shown.

The principal exhibitors were A. P. Stevenson, Nelson, Man. ; W. B. Hall, Headingly, Man. ; Nelson Bedford, Glencross, Man. ; J. O. Graham, Portage la Prairie, Man. ; J. J. Routledge, Miami ; Jos. Tottle, Stonewall, Man. ; W. Saunderson, Souris, Man.

JOHN CRAIG, *Ottawa.*

NEW FRUITS.

The Rochelle.—On the 18th of November we received from Mr. R. W. Shepherd, of Montreal, a sample of a beautiful winter apple which may prove of much value, especially for cold sections, having originated so far north. Mr. Shepherd writes :

The original tree is growing on my farm at Como, Que., on the Ottawa River, 40 miles west of Montreal. The tree is about 18 years old. It grew up in the nursery from the seedling root instead of from the graft. We noticed that the tree was growing from the stock, and because it was a fine looking tree we allowed it to grow, and it has never been transplanted since. When the tree first began to bear, we saw at once that the fruit was very good, and we have since cut off scions for grafting heavily every year. In 1880 the nursery was removed to another part of the farm, and now the Rochelle tree stands between the rows on my wealthy orchard. The tree is quite hardy, in fact appears very hardy and productive. The fruit is very handsome and keeps till midwinter, quality very fine.

The Fitzgerald Peach is a chance seedling of Canadian origin, found at Oakville, Ontario, and valued for its hardiness, as well as for its excellent quality. It is being tested at our South Western Station, whence samples were shown at the Industrial, last year.

Flower Garden and Lawn. ❀

BUDDING ROSES.



NE of the easiest and best ways to propagate roses is by budding. I have the Hermosa, and desiring to make more plants of the same kind, thought I would try budding it on the wild rose: having one near by, I inserted two buds of the Hermosa about the middle of July, and in about three weeks they measured ten inches in height, and had buds almost ready to expand; since then I have given them but little care and attention, but they still continue to bloom, and are in good condition for winter. Although I had then never heard of any one budding the rose, my experiment proved a grand success.

The process of budding is the same as that of the peach, pear, apple, etc., which was explained through the columns of this paper March 1, 1896, but for the benefit of new subscribers, or those who perhaps did not observe closely the process, I will give an explanation with illustrations.

Select a bud from the rose you wish to propagate, and cut about one-fourth of an inch above and below the bud, taking out an elliptical piece with a little wood beneath it, as shown in Fig. *a*.

For the stock, take any hardy or wild rose, cut a T-shaped incision through the bark near the roots (Fig. *b*), carefully raise the ends or bark of the incision and insert the bud (Fig. *c*); then wrap firmly above and below the bud with a strip of cloth about one-fourth of an inch in width, commencing at the bottom and passing above the bud, returning again and tying just below, covering all out the bud, as shown in Fig. *d*.

In about ten days after budding, if done in spring or early summer, unwrap it, and if the operation has been successful, which it is most sure to be if properly done, cut the old stock off about two inches above the bud; and when it has made a new shoot, tie it to this stump to make it grow straight.

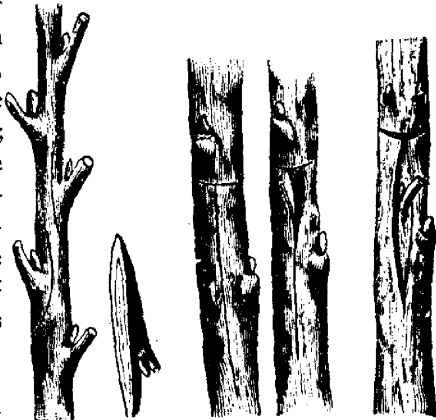


Fig. *a*.

Fig. *b*.

Fig. *c*.

FIG. 1025.—

If budding is done in August or later, rewrap in about ten days, and let the bud and stock alone until spring, then cut off the stock above the bud, and encourage growth. The bud will not start till the following spring, though its union with the stock can readily be distinguished by its plump and fresh appearance.

Buds of different roses, red, white, crimson, etc., may be inserted in a single stock, thereby producing a rose-tree of many colors.

It is not necessary to bud on the wild rose only, but if you have some other single rose you wish to improve, insert a bud or buds of some nice variety, and I think you will be pleased with the result.

Every lady reader should try this mode of propagating, for it is very simple, and easily done, and you can have a rose ready for bloom in the same length of time it would require a cutting to form roots.—Farm and Fireside.



FIG. (d) 1026.—

THE ASH HEAP AND HEN MANURE.

The horticulturist should make an economical disposition of two things that are generally regarded as household nuisances—the ash heap and the droppings of the poultry house. There is nothing that will lighten and loosen a stiff soil so quickly as coal ash siftings. Mr. Allen, the celebrated bulb culturist, of Long Island, thinks there is nothing so good in its mechanical effects and he uses large quantities on his lily beds. Take your ashes every morning as they come from the stoves and before they get wet, sift them through a coal sifter, the coarse part you use on your walks about the premises; the fine, dust-like portion you carry to the henhouse and scatter it over the droppings. It will absorb the gases that arise, keep the floor dry and the air pure—a sort of dry earth system. Every few weeks when the weather permits, the contents of the hen house are wheeled out and spread as a top dressing over the beds of perennials. Will it do any good? Yes, four-fold.²

Firstly, it has charitably aided that ash heap to lose its existence; secondly, your hens shall feel better and your labors shall be rewarded with more eggs; thirdly, it does the soil of that flower bed good by loosening it, and fourthly, it does the plants good by feeding them. Why, next June the pæonias will fairly clap their hands for joy. Did you ever dream that a four-fold blessing lay concealed in your ash heap?—Pa. Hort'l Soc. Report.

THE ABUTILON.



THIS is an interesting genus of annual or shrubby plants, mostly of an ornamental character and widely disseminated, being found in nearly every country, from the West Indies to Siberia, while the difference in geographical range is no less than that of their individual characters. The flowers of one species, *A. esculentum*, are used as a vegetable in Brazil, some of the East Indian species furnish fiber for the manufacture of rope, while the ornamental species furnish some of the grandest objects for the window garden, as well as for the open border. For either place they have no equals when we take into consideration the rare beauty and great productiveness of their flowers. Their mission seems to be to flower, and flower they will under all circumstances—at least as long as they live—and the beauty and number of the flowers are in proportion to the care they receive.

The only objection there can possibly be to them—if that be an objection—is that they grow too freely, usurping the whole window. To obviate this difficulty, the plants to start with should be small, and kept in small pots without shifting. A 4-in pot is sufficiently large for a plant for the window, and this should be constantly in bloom from the time it is 6 inches high until it dies, which it never will do if frost or famine does not consume it. The ornamental varieties are propagated by cuttings, and, as the branches are all terminal flowering, they not infrequently flower on the propagating bench; consequently, plants in full flower in 2-in pots are commonly met in the greenhouse. It is well to start with these for window plants in the fall, gradually shifting them into larger pots when the foliage begins to show a starved appearance. But the change must be gradual, at each shift using a pot but one size larger than the plant previously occupied, and they will bloom the entire winter.

When the weather becomes warm, turn the plants out of the pots into the open border, and their growth will be rampant. With plenty of water and sunshine, and in a deep rich soil, there will be no limit to their flowers. Upon the approach of frost the plant that a year ago was in a thumb pot will now be a strong shrub, fully 4 ft high, altogether too large for any practical purpose. The skillful hand of the hybridizer has worked wonders with the abutilon. The size of the flowers has been wonderfully increased and we now have a large number of varieties, embracing those with self-colored, variegated, or veined; dark rose or crimson, pure yellow of various forms and shades and pure white flowers. A double type has much of merit as a curiosity.

HOW TO IMPROVE A LAWN.

Lawns can be kept green and thickset without the use of stable manure. City and village people who have a few square rods of grass, usually imagine it necessary to keep the plot covered for weeks with highly scented and ill-looking

manure, when the fact is that one half the money's worth of nitrate of soda and powdered phosphate of lime will answer better and create no nuisance. They furnish to the soil, what is most needed, an alkali, phosphoric acid and nitrogen, both of them are inodorous and show their effects immediately on their application.

Boston, Ont.

ANDREW H. WARD.

MANURE FOR FLOWER BEDS.



FRESH compost can only be used with benefit as a mulch in late autumn to prevent the heaving of newly set plants. If compost is to be applied to bulbs or the roots of perennials, it should be at least a year old and thoroughly rotted. A cow and a flower bed travel well together, provided they are kept in separate compartments. The barn yard muck where cows are kept is an excellent plant food; in our estimation it is the best, and whenever we can obtain plenty of it we wish for no other. That part of the enclosure which is free from coarse straw and stable litter, in which the animals thoroughly pulverize their droppings with their feet and incorporate them with the soil underneath contains the correct thing. Scrape this into heaps with hoe or rake, take it to your flower beds and spread it over them in the fall, be liberal with it, don't be afraid, and you will marvel the following summer at the wonders of floral creation. The effect is astonishing. You need no longer lament that your flowers are not as fine as grandmother's were a half century ago. Your plants will receive new life, and their vigorous growth will defy the ravages of the insect world. It will make them more floriferous, and the brilliancy of the colors will surprise you.

The leachings of manure water that accumulate in a depression of the barnyard are a treasure and should be utilized. Carry them to your rose and hydrangea beds after a heavy rain, apply the liquid with a sprinkling can with the rose removed; there let the solution percolate through the soil down to the thread-like, fibrous roots, where nature's alchemist will assimilate them, and mark the result.

If all the barnyard leachings that are now running to waste throughout the country could be utilized in this way, two roses would bloom instead of one, our hydrangeas would have heads twice as large, and other plants would be equally floriferous. Barnyard leachings can be applied with equal benefit to all perennial plants and small fruits. Celery fairly revels in it, and we are safe in saying that a corn stalk would produce twice as much corn.

If we persist in setting out flowering plants and watch them slowly starving to death without making even the feeblest effort to succor them, we will never be successful floriculturists.—Rept. Pa. Hort. Soc., '95.

STORING VEGETABLES FOR WINTER.



ONE of the first requisites for the successful wintering of many vegetables is protection from hard frosts during the latter days of October. This is especially true of carrots and beets. These should be pulled during the month of October, taking only dry days for the work. Pits for their keeping should be narrow and deep, not over two feet wide and three feet deep, if pits are very wide the vegetables may be spoiled by heating. In pitting, cut off all surplus roots and tops and form the heap above the surface of the ground, so that when covered the water will readily escape.

All vegetables stored in pits should be thickly covered by straw for a first coat, then apply two or three inches of dirt, to be followed by six inches more when winter promises to set in. The usual method of burying cabbage is to place it in a shallow trench heads down; running the rows east and west is preferable, as during the winter it can be taken out easier, the south side of the row not being apt to be frozen hard, incline the roots to the south side of the row to facilitate getting the heads out. In storing celery for winter, dig a trench a few inches deeper than the length of the celery and as narrow as can be dug with a spade, pack the celery close in the trench in an upright position, and cover each root with earth to keep it from wilting, cover the tops with straw or leaves, over which place two boards nailed together in the form of an inverted trough, then cover with earth. Potatoes to be kept in first-class eating condition should be excluded from all light. The bins in which they are placed may be kept covered with blankets, and the windows of the room darkened. Turnips and rutabagas may be kept in the same manner as beets and carrots; salsify and parsnips may also be kept or packed in barrels of moist sand in the cellar. For spring use salsify and parsnip should be left in the ground where grown as kept in this way it is of superior flavor. Winter radishes should be kept in boxes of moist sand in the cellar.—Gardening.

Old, Well Rotted Cow Manure.—"What soil do you use for those chrysanthemums?" asked a visitor here the other day. "Sod loam and some old cow manure," we remarked. "Good," he replied, "that's just what I want to see. I've been trying to get old, well-rotted cow manure since a couple of years, and have the greatest difficulty in finding it, so I would like to see what yours is like." We lifted a handful of the soil with some lumps of manure in it and showed it to him, when a painful look of disappointment spread over his face. "Why," he exclaimed, "I can get lots of stuff like that. I thought it had to be dry, earthy fine, many years' old stuff!" No, no, that idea is wrong. Cow manure is old enough for potting or other compost purposes, as soon as it is free enough to handle, to chop up and mix up with soil, without being pasty; just as soon as it loses that wet, sticky nature of fresh manure, it is old enough for garden pot purposes.

THE CALLA LILY.



THE Calla Lily, when properly treated, is a beautiful plant for house-growing. The best method is to procure an earthen jar, suitably decorated on the outside, if desired, by painting or pasting on of flower pictures, or by a paper open-work covering. In this place rich mould, some five or six inches deep, and in this set the calla plant. Now put on the top of this mould a layer of clean, coarse sand, about two inches deep, and on the top of this some small pebbles. Then fill the jar with water, and replace as evaporated, so as always to have the water several inches deep above the pebbles. Place in a warm and sunny window, and the plant will throw up large, luxuriant leaves, to be followed by the magnificent bloom. What is still better, the flower stalks will be sent up in a succession, so as to afford a nearly continuous series of flowers. A few minnows introduced into the water will usually thrive without further care, and will afford a pleasing study.

Tiverton, Ont.

A. H. CAMERON.

FORCING HYACINTHS IN POTS.

For pot culture, the bulbs should be planted as soon as received, a single bulb in a five-inch pot, the top of the bulb to be just below the level of the rim of the pot. The soil should be rich, and it matters little whether it is loamy or sandy, for they will thrive in either. Let the soil be as light or as loose as possible under the bulb, in order that the roots shall have no obstructions to their growth. If the soil is hard packed under the bulbs, the roots will lift the bulbs out, and they cannot be replaced without great injury. After potting the bulbs, plunge the pots in any convenient out-of-the-way place, and cover with soil, coal ashes or almost anything that will keep them dark and cool on top. They will get sufficient heat from beneath to perfect root growth, which is essential to their perfect flowering. Over this covering, coarse manure, leaves or boughs should be placed, sufficient to exclude frost, in order that the pots can be taken out without injury as wanted. In this position they should be left until the middle of December, by which time they will have made considerable top-growth. Then bring into the conservatory or living room any desired number of pots, water thoroughly and give them as light a situation as possible, with as low a temperature as the living room will afford, secure however against frost at night. As the plants advance in growth, give them a warmer and sunny situation, and in six weeks from the time they are brought in, their flowers will be fully developed. At this period it is much better to keep them from the sun and as cool as possible, in order to keep them longer in flower. The hyacinth is one of the few flowers that can be grown in a room without sun; they do better with it, but will bloom very well without, and can be selected for windows where other plants will not perfect their flowers.--C. L. ALLEN, in Amer. Agr't.



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. ✦

REFRIGERATOR SERVICE.—The Dominion Minister of Agriculture has a scheme for a most extended system of Cold Storage service for conveying our perishable products to the British markets. It is said to include refrigerator car service on railways to central places for export to Great Britain. Plans are under consideration for special cars for this work. The scheme includes special cold storage accommodation on shipboard also, so that we have great hope of a new era of prosperity through the enlargement of our markets.

WHY DON'T more of our readers take enough interest in this Journal to write for it? So many of them have items of experience to give, that would be of general interest. Why don't the members of our affiliated Horticultural Societies write about their successes or failures with flowers?

THE DIRECTORS of the Grimsby Horticultural Society met about November 1st and decided to have a Chrysanthemum show next year. A contract is being made with a florist to grow them during the winter, pinching them back, and transplanting them into 5-inch pots, so that members cannot fail in securing bloom from them. Each member is to receive five different varieties.

COAL ASHES are useful as a bed in which to set potted plants, and rooting cuttings; as artificial soil, with plant food added; and for experimental work in nitrogenous fertilizers.

ERRATA.—We regret the mistakes in the announcement of the annual meeting in November number ; the notice was sent the printer too late to have the proof read. Complete programmes have been sent those likely to be interested, and we expect one of the best meetings in the history of the Association.

A PROGRAMME and Prize list is just received of a General Horticultural Exhibition in Hamburg in 1897, open from May until September, inclusive. All communications are to be addressed to the Committee of the General Horticultural Exhibition in Hamburg, of 1897.

INSPECTION OF FRUIT.—The question of inspecting all fruit being imported into Tasmania is being considered by the Government. The proposal is to inspect fruit on the wharf, so as to prevent the importation of scab, codling moth, and scale insects.

THE Dominion apple crop for 1896 has been reckoned at 3,750,000 barrels: the largest importation of apples into England in any one previous year was 1,450,000; and probably twice that quantity will go into the English market this year.

PEARS IN ENGLAND are bringing very good prices. Beurre Clairgeau and Glout Morceau have sold as high as from \$2.50 to \$5.00 per bushel; and that, too, carelessly packed in bushel baskets. The highest prices were for the Glout Morceau. The Fruit Grower (London, England) thinks these pears would have sold much better if properly selected and packed in two layer boxes.

THE QUANTITY of apples shipped at Grimsby station to November 1st of this year was 10,340 barrels, while the total for all last season was only 13,000. It is evident therefore that we shall far outnumber last season's record at this point before the season closes. And this is, no doubt, but an example of all parts of the Province.

GERMAN GOVERNMENT FRUIT DEPOT.—A correspondent of the Dundee Advertiser thus speaks of the institution described in our columns, by our Berlin correspondent, some time since:—"It was established about three years ago, and exists for the purpose of assisting the fruit-growers of Germany. They send samples of their fruit; these are shown to fruit-dealers. A bargain is struck if the parties, through the medium of the Department, can fix a price, and the fruit delivered. This is done free of charge, and entirely with the object of developing the trade. So far it has been appreciated by seller and buyer alike, and has met with entire success. Other depots are to be started, if, in fact, they have not already been established, in different centres throughout the Fatherland."

ADVICES FROM HAMBURG report A 1 Baldwins bringing \$3.00 per barrel in that market. Vienna and Paris also are promising markets for Canadian apples. Mr. Edgar Skelly, of the well known firm of Griffin & Skelly, California, has just returned from a European tour, and states he has great confidence that Austria will yet be one of the best markets for Canadian apples. Perhaps we shall yet command the best apple markets of the world, if we work on right lines, and cease exporting second class apples.

FARMERS' INSTITUTE SPEAKERS.—Arrangements have been made by Superintendent Hodson, for over 450 meetings of Farmers' Institutes, with over 50 speakers. Among the latter we notice the following names:—H. L. Hutt, J. H. Panton, of Guelph, D. W. Beadle, Toronto; Alex. McNeil, Windsor; Alf. Brown, Picton; A. W. Peart, Burlington; James Sheppard, Queenston; E. Morden, Niagara Falls, South; M. Burrell, St. Catharines; W. W. Hillborn, Leamington; G. C. Caston, Craighurst, etc.

MR. JAMES GOLDIE speaking, in a letter, of certain incidents in the life of his father, the late John Goldie, says in Meehan's Monthly, "My father visited this country (Guelph, Ontario, Canada), in 1817, returning to Scotland, I think, in 1818. He came back again in 1819 and remained, I believe, till 1821. In 1824 he made a collection of plants, trees and shrubs for the Botanical Gardens that were then being constructed in St. Petersburg, Russia, and went there with them. He was connected with the gardens for some time. He travelled in that country collecting novelties, and introduced many fine things. He afterwards re-visited Russia and Siberia to investigate the rich botanical wealth there. He came to Canada in 1844 with his family, and resided at Ayr till his death. Nearly all of his journals and notes of travel in the various countries he visited were lost by the burning of his house."

CANADIAN FRUIT FOR HER GRACIOUS MAJESTY. — As intimated in our October number, a collection of some of our finest varieties of apples, pears and grapes have been collected by Messrs. Copp & Heard of Hamilton, and forwarded to the Queen, in order to show what beautiful fruit is grown in this important section of her dominions.

The fruit growers in the Hamilton fruit district responded heartily, and made up a collection of twenty-nine cases, artistically packed in fifty-pound cases. These were on exhibition for a few days at Hamilton, before being forwarded.

Mr. Anthony Copp, of Hamilton, writes:—I have written Sir Donald Smith, that we expect him to present the fruit to Her Majesty, and that he is to have it inspected before presentation. I have also sent him a list of growers and varieties of fruit, with description. The fruit sailed on the 7th November

by the Labrador, to the address of Sir Donald Smith, London. It is a nice little present and I hope will go through safely, and be accepted with pleasure by Her Majesty, and it may lead to greater help from the Government in extending our fruit market abroad.

The following is a list of the varieties of fruit sent, with donor's names :—

J. S. Freeman,	Freeman P.O.	—One 50-lb. box apples—	Canada Red.
" "	" "	" "	Baldwin.
C. G. Davis,	" "	" "	Mann.
" "	" "	" "	Wagener.
G. N. Peer,	" "	" "	Snow.
G. E. Fisher,	" "	Eight varieties	dessert apples.
" "	" "	One 50-lb. box	apples—Northern Spy.
" "	" "	" "	Pomme Grise.
A. W. Peart,	" "	" "	Northern Spy.
T. Ghent,	Burlington	" "	Cranberry Pippin.
W. F. Hopkins,	" "	" "	Talman Sweet.
F. W. Fisher,	" "	" "	Bailey Sweet.
John Ireland,	Nelson	" "	A. G. Russet.
" "	" "	" "	Spitzenburg.
" "	" "	" "	R. I. Greening,
E. Peart,	" "	" "	Northern Spy.
W. B. Robbins,	" "	" "	King of Tompkins.
Lieut. McRoberts,	Fruitland P.O.	" "	Snow.
" "	" "	" "	Northern Spy.
Wm. Orr,	" "	One case of	grapes.
M. Pettitt,	Winona	" Two cases of	grapes.
" "	" "	" Small quantity of	Duchess pears.
Keep Bros.,	" "	" "	quinces.
Mr. Truesdale,	Hamilton	" A few	Ribston Pippins.
L. Woolverton,	Grimsby	" One 50-lb. box	apples—Spitzenburg.
" "	" "	" "	King.
" "	" "	Two "	Northern Spy.
" "	" "	One "	Cranberry Pippin.
" "	" "	" "	Baldwin.
" "	" "	" "	Wagener.

A cable on the 20th ult., stated that this fruit had been received by Sir Donald Smith, for presentation, and that the London Daily Telegraph has devoted an article to its description.

UTILIZING THE WHOLE APPLE CROP.—Between cider making, evaporating, canning, and storing in cold storage chambers, all our apples can be utilized to good advantage, even in a year of abundance like the present. An evaporator

capable of evaporating 50 bushels per day can be bought for \$75 to \$125, and the cost of evaporating will average one and a-half cents a pound, and five or six pounds can be made from a bushel of apples.

When there are other means at hand of using the ordinary stock, it is easy to make up one's mind to store only the very best grade. According to the *American Agriculturist*, immense quantities of the very finest grade of apples are now going into cold storage in New York State, in the belief that the market will be better in March and April. Co-operative cold storage houses should be constructed and operated on the same business lines as co-operative cheese factories, and if fruit growers would thus combine in the marketing of their fruit, English buyers could as easily be attracted to American cold storage houses as to our American cheese markets.

NEW AFFILIATED HORTICULTURAL SOCIETIES are being formed in several places with the assistance of Mr. Thos. Beall, who thoroughly understands the organization. In response to a letter from one of our members, Dr. J. S. MacCallum, of Smith's Falls, Mr. Beall visited that place, and reports the formation of a strong society. Over one hundred names have been sent in to us from that place. Societies are likely to be formed at Orangeville, Thornbury, Meaford and Durham.

THE CHRYSANTHEMUM SHOW at the O. A. C., Guelph, is elegant. On the 18th inst. the writer was shown through the College Greenhouses by the Prof. of Horticulture, Mr. H. L. Hutt, B. S. A., and was surprised at the great extent and variety of the chrysanthemum exhibit. Mr. Hutt has a genius for collecting, and is making his greenhouse collection so varied, that it not only attracts numerous visitors, but is becoming one of the best means of instruction to his students, both concerning the various kinds of flowers, and their respective treatment. He has one exhibition about 120 varieties of chrysanthemums alone; and among them we notice first-class specimens of very showy varieties.

ABOUT the 21st inst. the Canadian High Commissioner, Sir Donald Smith received the following note from the Queen's Private Secretary, Lieut.-Col. Sir Arthur J. Bigge, dated Windsor Castle:—"I am commanded by the Queen to beg you to be good enough to arrange that her Majesty's best thanks be conveyed to those fruit growers of the neighborhood of Hamilton, Ont., who kindly offered, through you, for her Majesty's acceptance, a beautiful consignment of their year's crop, which the Queen is glad to hear has been unusually large and excellent in quality. The cases were received yesterday by the Master of the Household. Their contents were in perfect condition and some of the fruit served at her Majesty's dinner proved excellent. Thanking you for the trouble you have taken to ensure the speedy delivery of the fruit, I am, etc."

THE TARIFF ON FRUIT.—We understand that the Dominion Government has appointed a Commission to visit the principal towns in Ontario, to learn the wishes of the people on the adjustment of the tariff.

Now we wish in this Journal to exclude everything that is partizan; our aim is wholly to consider the advancement of the fruit industry, and not the advantage of any party; but on one thing fruit growers are agreed, whether Grit or Tory, and that is, that our products this year have brought little enough, and that any step that would tend to flood our markets with cheap American grapes and peaches, would be to our hurt.

No doubt some slight adjustments may be made. Our Spy apples sell better in Chicago as a rule, than anywhere, and our Fameuse, in the Southern States; but the duty of 25 cents a bushel is almost prohibitive. Possibly some way may be seen of inducing our Yankee cousins to remove this burden, in view of some concession that will benefit them some way.

We shall be glad to hear from some of our readers on this subject.

BARs TO CANADIAN NURSERY STOCK.—We have received from Sidney, N. S. W., a copy of an Act ordering the most careful inspection of all fruit and nursery, which is imported to that country. The object is to prevent the importation of codlin moth, curculio, San Jose scab, apple scab, etc., into the country. This is right enough, only we doubt if that country is much freer than Canada from these evils, for codlin moth and apple scab have long been common in the apple-growing sections of Australia. But this is not to be compared with the action of the Cape Colony Legislature, according to a clipping from the Victoria (B. C.) Colonist, which reads as follows:—"The importation or introduction of any stone-fruit tree, or any fruit, scion, cutting, graft, root or seed, the growth or product thereof, from the United States of America, or the Dominion of Canada, is absolutely prohibited; and anyone importing or introducing such fruit tree or other article, the growth or product thereof, as aforesaid, shall, upon conviction, be subject to the penalty provided in the body of this proclamation, and in addition thereto the fruit, tree, or other article imported shall forthwith be destroyed."

Mr. John Craig commenting on the above, writes:—"The penalty referred to, and provided elsewhere in this sweeping proclamation, is a fine not exceeding £100, or in default imprisonment not longer than six months. This action seems very arbitrary, but I do not think will affect us very much as our trade with Cape Colony is not likely to be very extensive."

THE ANNUAL MEETING of the Board of Control of the Ontario Fruit Experiment Stations was held at the O. A. C., Guelph, on the 16th, and 17th of November. There were present, Dr. Mills, Professor Hutt, and Messrs. W. E. Wellington, A. H. Pettit, A. M. Smith, and the Secretary. Mr. W. M.

Orr, of Fruitland, was present to give a general report of his work as Director of Experimental Spraying during the year 1896. In many orchards where the result was not very plain to the eye, the careful weighing and measuring of the resultant crop, showed a large percentage of increase in first-class fruit from trees treated, over those not treated. After some discussion, the Board resolved to suggest, that if this work is to be continued in 1897, some experimental work ought to be done with the kerosene emulsion for bark lice, black aphid and thrip, in order to give public instruction concerning the details of its mixture and application.

The Secretary gave his report of the Experimental Exhibit at the Industrial, and also read descriptions of a large number of fruits, accompanied with life-size photographs, which are to be published in the next report. These will enable anyone, even a novice to identify his varieties, and correct misnomers. The work will also be a guide to planters, concerning the value of each variety for his commercial orchard.

The reports from the Stations were also read, and for the most part were passed as satisfactory. In future, however, more detail of the treatment and yield of different varieties will be expected, while descriptions will only be expected of each one's special fruits.

Small Apples Useless.—These are the words of a cable lately received concerning a car-load of apples sent to Edinburgh, in which we shipped a lot of second size Baldwins, in barrels by themselves, not mixed with large ones. Later, we had a letter to say that small sized apples, however sound and otherwise perfect, were useless, and would scarcely pay freight. It would be much better to select out the poorest ones, that will keep, and store them for horse feed during the winter. Mr. H. P. Miller writes in the Rural New Yorker: I believe that it will pay to store the small, unmarketable apples for the stock. We once wintered two colts on apples and hay; for some reason, they would not learn to eat grain. I remember that we then believed that we could not have got them through the winter without the apples. They were allowed all they would eat, and they consumed about 40 bushels during the winter. They may be fed whole to horses without danger, but cows are much less liable to choke if the apples are cut in halves for them. I believe that a safe rule in regulating the amount, is to allow a pound a day for each 100 pounds of animal; this for all kinds of stock except hogs. For them, the quantity may be doubled or trebled, as they are the largest feeders among domestic animals. I have had no experience with cotton-seed meal.

❧ Question Drawer. ❧

The Myrtle.

889. SIR,—I enclose a piece of myrtle, please tell me whether it is the flowering kind. I have had it six years and it has never bloomed.

A. J. P., *Danville, Que.*

Reply by James Fletcher, Central Experimental Farm, Ottawa

The twig you send is from a true myrtle, and this variety is known by gardeners as *Myrtus communis*, variety *angustifolia*. The common myrtle has been a favorite from the remotest ages. Grindon says: "Though now found wild on the shores of the Mediterranean, it came originally from Persia,—how anciently brought thence we may gather from the tradition preserved by Pliny, that the first myrtle that grew in Europe was planted by the tomb of one of the companions of Ulysses. England first possessed the myrtle in 1585, when it was brought from Spain by Sir Francis Carew and Sir Walter Raleigh."

Hall' Honeysuckle.

890. SIR,—Will honeysuckles, Hall's for example, succeed if planted in the fall? Should they have a sunny exposure and rich soil?

R. H. LIGHT, *Kingston.*

We may answer yes, to each of these questions; very tender varieties would do better planted in spring; but Hall's Honeysuckle is hardy, and may be planted in the fall.

Wolf River Apple.

891. SIR,—What is the origin of the Wolf River apple? Is it a winter variety?

HENRY C. SABEAU.

The Wolf River originated in Wisconsin, and is a seedling of the Alexander. It is a fall apple of great size and beauty; not considered quite as hardy as the Alexander.

Cauliflowers not Heading—(See page 403.)

892. SIR,—I could not succeed with my cauliflowers until I put on a quantity of woodashes at the roots. Out of 45 plants cut, 39 gave solid heads, though not large. I applied the ashes the last of August, and cut the last cauliflower the 11th of November.

CATHARINE A. LEE, *Sutton West.*

What To Plant.

892. SIR,—What are the best varieties of winter apples for a commercial orchard? My situation is on the eastern side of the Mountain.

T. B. MURRAY, *Avening.*

In the District Fruit List published by the Ontario Fruit Growers' Association, the following list of winter apples is recommended for your county, viz. :—Pewaukee, Golden Russet, Scott's Winter, La Rue and Wealthy. In your sheltered location you could, no doubt, grow Ontario and Blenheim, and these two with Wealthy would make a good collection. Our next Fruit Experiment Report will be full of valuable information for you.

Best Early Potato.

(See Question 879.)

SIR,—In reply to the inquiry of A. F. concerning the best early potato, I have grown over thirty early varieties, and I find that the new Jersey Queen, and the Early Maine head the list for productiveness on clay soil.

P. F. CLOSSOM, *Highland Creek, Ont.*

* Open Letters. *

The 1896 Apple Crop.

SIR,—Please find herewith enclosed a short editorial from the Journal of Commerce, entitled The 1896 Apple Crop. "Throughout the States of chief commercial production, including New England, New York, etc., the crop of winter apples is very large, according to the special report in this week's American Agriculturist (New York), which places the aggregate yield at a shade under 59,000,000 barrels for all of the United States, against 60,500,000 barrels in 1895 and 57,629,000 barrels two years ago. This authority says that the crop in New England, New York, Michigan and parts of a few other States is simply phenomenal. New England and New York alone have over 16,000,000 barrels against little more than 7,000,000 barrels a year ago, while Michigan is harvesting the greatest crop of fine fruit ever secured in that State. In sharp contrast, the report covering the Central West shows that in very many instances the crop is insufficient to supply home requirements. This is a decided change in the relative position of the crop compared with the distribution of that of a year ago, and because of the shifting there is a marked difference in the supply available for commercial distribution. Five New England States are credited with 8,500,000 barrels, against scant 4,000,000 barrels in '95 and 7,000,000 barrels in '94. The commercial crop of New York is placed at 7,800,000 barrels, or much more than double that of last year and probably the largest on record, while Michigan is given 6,400,000 against 3,750,000 barrels in '95. The crop has fallen badly in southern Ohio, parts of Indiana, Missouri and elsewhere, and the yield is much smaller in these and a number of other Western and Southwestern States. Crop conditions in Canada were almost perfect from the beginning, with the '95 crop among the largest on record. Quality unusually good."

The Journal of Commerce is the most conservative purely commercial newspaper published in this city. You will observe that the total apple crop of 1896 is less than that of

1895. The various facts which I have given you since June vindicate the advice I gave at that time, to establish agencies in Boston, New York and Philadelphia, for the sale of prime Canadian fruit. The western and southwestern fruit is soft, and must be consumed early, or it will decay and be lost. Prime keepers such as you can supply from Canada, of best quality, will command a higher price in January, February, March and April next, than they did for the same months of this year. The exports to Europe far exceed those of last year, and many beautiful but soft apples have been sent abroad, and I believe they will sell for less than cost in Great Britain, while the effect of their exportation will leave this market comparatively bare of first-class sound apples for home consumption from the 1st of January to the 1st of May.

New York, 29th Oct., '96.

FRANCIS WAYLAND GLEN.

Apple Bulletin.

The following quotations which are offered by a shipper of Medina, N. Y., serve the purpose of depressing prices and prevent, in a certain degree, the grower from realizing the value of his fruit. They are as follows:—Baldwins, car lots selected fruit, f.o.b., Chicago, 98 cents; St. Louis, \$1.05; Kansas City and Omaha, \$1.35; Denver, \$2.15, and states that he can fill all orders. These prices would net the grower 65 cents, not allowing for the buyer's profit. Now if he makes ten cents per barrel, we have the grower getting 55 cents, which is an absurd price.

The first car from New York sold by the American Fruit Growers' Union netted the grower, after deducting all charges, such as freight, cartage and commission, 90½ cents for Greenings, 80 cents for Baldwins, 85 cents for Russets, \$1.05 for Spies, and this under the unfavorable conditions of trade caused by warm and stormy weather, and the excitement of a Presidential election.

We look for an improvement over these prices from now on, and advise all growers to co-operate with their local associations and market their fruit through the American Fruit Growers' Union, thus guaranteeing themselves every cent that their fruit will sell for, under the most advanced and proper handling, through the medium of co-operation.

Chicago, Ill., Nov. 5th, 1896.

AMERICAN FRUIT GROWERS' UNION.

The London Fruit Market.

The Fruit Grower, of London, England, says under date Oct. 28th.:

Tomatoes.—Tomatoes show a decided tendency to rise in value. Best fruit is worth 4d. a pound, and this is not to be wondered at; for not only is the weather more favorable for their sale, but the imported samples are scarcer for the week. The smooth skinned varieties of medium size are most sought after by buyers. They are in demand at 4d., and before another week we should not be surprised to find the average coming up to 5d. Good, well-colored fruits are wanted, and speedy advances may be expected.

American Apples.—The arrivals of American apples are by no means large, so far as London is concerned; 1982 bushels came into London ports in one day, and 5,723 bushels another day, the latter being the heaviest for any single day during the past week. As a rule the direct supplies for London have not been heavy of late years; and then again the Americans are not so good by any means as those from Canada. Considering the heavy crop it is rather surprising that these direct shipments have not been heavier.

Canadian Apples.—In one day 8,205 bushels of apples came to London direct from Canada, then 17,750 bushels on the day following, and 15,705 bushels on the third day, making a magnificent total for three days' receipts. The Canadian apple crop this season is immense, and the quality of the fruit all that one could desire. We are pleased to see Canadian apple growers securing the premier position as regards quantity and quality combined. The sales for best fruit have been good, for, in spite of the heavy supplies, 14s., 15s., and 16s. have readily been realized for best samples. Though prices as 4s. 6d., 5s. and 6s. per barrel are quoted, yet in every instance the samples are only medium or poor. The large well-colored fruits have met a quick sale, and such fruit retailed at 2d. and 3d. per pound comes out as equal to 20s. and 30s. per barrel; and that the public should pay these prices considering the immense supplies, proves the popularity of the fruit in London especially.

Fameuse Apples for the States.

Notwithstanding the glut of apples in the United States and the exceptionally low prices ruling there, the noted Fameuse apples of this Province are so prized on the other side of the line that ten or eleven car loads have been shipped from the Huntingdon section to Chicago and Cincinnati at good prices. There is an abundance of Montreal Fameuse, and it is to be hoped the demand will come this way, as we could spare a few thousand bbls. at about \$1.50 per bbl. against \$3 to \$4 per bbl last year. —Montreal Trade Bulletin.

Our Book Table.

IF YOU WANT A BOOK, telling all about how to raise poultry and the money that can be made upon a small or large scale, and all about the Von Culin Incubators, which they send on trial and do not ask you to pay a cent until after you try it, send five cents to the Von Culin Incubator Co., Delaware City, Del., for their latest catalogue. The book is full of engravings and beautifully printed on fine paper. The cover, printed in colors, represents a farm yard with a pretty girl surrounded by all kinds of poultry.

THIRTY-EIGHTH ANNUAL REPORT of the State Horticultural Society of Missouri. An interesting report of 428 pages. L. A. Goodman, Secretary, Westport, Mo.

THE SURVIVAL OF THE UNLIKE, a collection of evolution essays suggested by the study of domestic plants, by L. H. Bailey, Professor of Horticulture at Cornell University; published by The MacMillan Company, 66 Fifth Avenue, New York City. Price \$2.

This book of over 500 pages, is full of interest to the grower of fruits or flowers, who wishes to look deeper than the surface. For example, in the chapter on Acclimatization, the author discusses the question under two heads: (1) Change in the individual plant; (2) Variations in offspring, with numerous examples in proof. In the chapter on Sex in Fruits, he discusses the reasons why certain varieties of pears and apples are self-sterile. Other subjects discussed are such as Why are orchards barren? Do varieties run out? Evolution of the glass-house; Are novelties worth their cost? Evolution of the Petunia, etc. We commend this work to all thoughtful horticulturists.

The Apple Market.

MESSRS. WOODALL & Co., of Liverpool, write under date Nov. 14th:

Although receipts are on a large scale, there is a decrease on last week. The quantity is not more than might be expected in a season of large crops like the present, and now that the arrivals consist of winter stock in sound condition they are not in excess of the demand. The quality of most of the fruit is good, especially Canadian, which proved attractive, and satisfactory results have consequently been realized. The same cannot be said of Boston shipments, which have been variable, and prices show a wide range, as, while some were poor, others were exceptionally fine, Maine especially are beginning to have more color and size. Throughout the week there has been a strong healthy tone at hardening prices, partly assisted by some Continental orders, which may probably continue and be considerably increased, as in some considerable apple growing sections their crops are reported exhausted, and in all others the supply is deficient. This gives assurance of excellent prospects, and with similar or even larger receipts must effectually prevent a recurrence of the disastrous results formerly experienced. At yesterday's sales there was an active demand the market closing at its best, and the advance on good sound ranges from 1/ to 2/ per barrel.

Newtown Pippins.—Arrivals continue to increase, and at yesterday's sales there was a slight decline on ordinary to medium fruit, the demand is good, and up to 24/6 was paid for a small lot of fairly fine. The period is arriving when there should be an increased demand, especially for fine, which will undoubtedly be wanted.

Canadians—

Baldwins.....	9/3 to 12/3	.....	2nds	....	8/ to 9/
Spy.....	10/ " 11/	.....	"	....	8/ " 9/6
Snow.....	11/6 " 14/3	.....	"	....	10/6 " 11/3
Kings.....	12/6 " 15/3	.....	"	....	11/ " 12/
Russets.....	10/6 " 14/	.....	"	....	8/ " 10/
Greenings.....	9/6 " 12/3	.....	"	....	8/ " 9/

SPECKED APPLES.



OLD Father Grump, with thrifty care,
 Had safely stored away
 For winter use his apple crop—
 Enough to last till May.

“We’ll not begin,” said Father Grump,
 “To eat ’em yet awhile ;
 They’ve got to last the winter through—
 “There’s none too big a pile !”

And so they lay, ’neath lock and key,
 Till the ripest showed decay,
 “Begin on ’em,” then the farmer said,
 “Begin on ’em right away !

“We’ll kinder sort ’em out,” said he,
 “And use for sass the wust,
 And every one who goes for ’em
 Must take the specked ones fust.”

And so they used the specked ones first,
 As Farmer Grumps had said,
 But though they ate some every day
 The specked ones kept ahead.

And they not only ate them first,
 But all the winter through
 If that’s their way, I’ve naught to say,
 And naught, I’m sure have you.

Now Farmer Hearty always had
 A well-filled apple bin,
 But, as he stored them in he said,
 “Now listen, we’ll begin

“To eat the best of ’em right off,
 And keep on so each day,
 For some of ’em will not keep long,
 Though some will last till May.

And so his household one and all,
 Enjoyed the fruit while sound ;
 And eating still the ripest first,
 Had some when May came round.